



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 1 of 157

NOTICE is hereby given that the CITY OF TULSA, OKLAHOMA will receive sealed Bids for the following:

**BID # TAC 309E**

**DESCRIPTION: Truck Bodies, Equipment & Accessories**

**(Commodity Code(s): 065-69; 065-45; 055-21)**

You are invited to submit a Bid to supply the Goods and/or Services specified above. Invitations for Bid (IFB) will be posted on the City's website at [www.cityoftulsapurchasing.org](http://www.cityoftulsapurchasing.org) or a hardcopy may be obtained at:

City of Tulsa-Purchasing Division  
175 East 2<sup>nd</sup> Street, 15<sup>th</sup> Floor  
Tulsa Oklahoma 74103

**Bids must be received no later than 5:00 PM (CST) on Wednesday, December 02, 2020, and delivered to:**  
**City Clerk's Office**  
**175 East 2<sup>nd</sup> Street, Suite 260**  
**Tulsa Oklahoma 74103**

Bids must be sealed and either mailed or delivered. No faxed or emailed Bids will be considered. Bids received after the stated date and time **will not be accepted and will be returned to the Bidder unopened.**

The Bid Packet consists of (1) this Notice of Invitation for Bid, (2) the Summary Sheet, (3) Form #1, (4) Form #2, (5) Form #3, (6) Form #4, (7) Form #5, (8) Form #6, (9) the Instructions, Terms and Conditions for Bidders, (10) Special Requirements, (11) Technical Specifications and (12) Exhibit A.

Use this checklist to ensure you have properly read and completed all Forms.

- \_\_\_\_\_ Notice of Invitation for Bid
- \_\_\_\_\_ Summary Sheet
- \_\_\_\_\_ Form #1: Bidder Information Sheet. Must be completed.
- \_\_\_\_\_ Form #2: Purchase Agreement. **Complete legal name in first paragraph and Notice provision in Section 17.i. Original signature required.**
- \_\_\_\_\_ Form #3: Interest Affidavit. Original signature and notarization required.
- \_\_\_\_\_ Form #4: Non-Collusion Affidavit. Original signature and notarization required.
- \_\_\_\_\_ Form #5: Affidavit of Claimant. Original signature and notarization required.
- \_\_\_\_\_ Form #6: Acknowledgment of Receipt of Addenda/Amendments. Must be completed and signed.
- \_\_\_\_\_ Instructions, Terms and Conditions for Bidders
- \_\_\_\_\_ Special Requirements (Offer Period; Insurance and Bonding; References)
- \_\_\_\_\_ Technical Specifications
- \_\_\_\_\_ Exhibit A: Bid Form including Delivery and Pricing. This is your Bid. It must be completed or your Bid will be rejected.

**IMPORTANT NOTE: Write the Bid Number, Bid Description (as listed above), and Bid Opening Date on the lower left corner of the outside of your Bid envelope. You must return the entire completed Bid Packet.**



**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 2 of 157

**SUMMARY SHEET**

**Project Buyer**

If you have any questions or need additional information, contact the assigned Project Buyer:

Ashleigh McCarn

[amccarn@cityoftulsa.org](mailto:amccarn@cityoftulsa.org)

City of Tulsa

175 E. 2nd Street, 15TH Floor

Tulsa, OK 74103

Include **TAC 309E** on the subject line

**Bidder's Notice of Intent to Submit a Bid**

Email the Project Buyer indicating your intent to Bid. Include **TAC 309E** on the subject line of the email. You will receive an email response verifying your notice of intent to bid was received. This same procedure should be followed to request clarification, in writing, of any point in the IFB. Bidders are encouraged to contact the Project Buyer by email if there is anything in these specifications that prevents you from submitting a Bid, or completing the Bid Packet.

Questions and concerns must be received no later than **ten (10) days prior** to the Bid Packet due date.

**Issuing of Addenda**

If you received the notice of this IFB from the City as a result of being registered to sell the commodity code(s) on this Bid, you should also receive notice of any addenda issued. If you are not registered with the City to sell the commodities listed herein, you must register as a supplier on the City of Tulsa Purchasing website ([www.cityoftulsapurchasing.org](http://www.cityoftulsapurchasing.org)) to receive notice of any addenda, or to receive notice of any future IFBs.

**Pre-Bid Conference**

If a pre-Bid conference will be held for this IFB, information on that conference will be inserted below:

No pre-Bid conference will be held for this IFB.

**Bid Packet Submission**

The City requires two completed Bid packets: 1 Original and 1 Copy. Each must be clearly labeled on the front sheet indicating "Original" or "Copy". If a copy on electronic media is also required, the line below will be checked.  
\_\_\_Electronic USB Copy also required.

Responses to this Invitation for Bid must be made on the forms listed on page 1. The entire completed Bid Packet must be returned or your Bid may be rejected. Do not take exception to any portion of this Bid Packet. Do not make any entries except where required. Do not insert any other documents into the Bid Packet.

**Bid Opening**

All Bid openings are public and take place at 8:30 a.m. Thursday, the day after Bids are due. The Bid openings are held in the City of Tulsa Council Meeting Room, 175 East 2<sup>nd</sup> Street, 2<sup>nd</sup> Floor, Tulsa, Oklahoma.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 3 of 157

**FORM #1**  
**BIDDER INFORMATION SHEET**

**Bidder's Exact Legal Name:** \_\_\_\_\_  
(Must be Bidder's company name as reflected on its organizational documents, filed with the state in which bidder is organized; not simply a DBA)

**State of Organization:** \_\_\_\_\_

**Bidder's Type of Legal Entity: (check one)**

- |  |  |
|--|--|
| <input type="checkbox"/> Sole Proprietorship | <input type="checkbox"/> Limited Liability Company     |
| <input type="checkbox"/> Partnership         | <input type="checkbox"/> Limited Liability Partnership |
| <input type="checkbox"/> Corporation         |  |
| <input type="checkbox"/> Limited Partnership | <input type="checkbox"/> Other: _____                  |

**Bidder's Address:** \_\_\_\_\_  
Street City State Zip Code

**Bidder's Website Address:** \_\_\_\_\_ **Email Address:** \_\_\_\_\_

**Sales Contact:**

Name: \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

**Legal or Alternate Sales Contact:**

Name: \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_



**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 4 of 157

**FORM #2 (Page 1 of 4)  
PURCHASE AGREEMENT**

**INSTRUCTIONS:** This document **must** be properly signed and returned or your Bid will be **rejected**. This form constitutes your offer and if accepted by the City of Tulsa will constitute the Purchase Agreement under which you are obligated to perform. Your signature on this document indicates you have read and understand these terms and agree to be bound by them.

**THIS PURCHASE AGREEMENT** is between the CITY OF TULSA, OKLAHOMA, a municipal corporation, 175 East 2<sup>nd</sup> Street, Tulsa, Oklahoma, 74103-3827 (the "City") and:

(Bidder's company name as reflected on its organizational documents, filed with the state in which bidder is organized; not simply a DBA) (the "Seller").

**WITNESSETH:**

WHEREAS, the City has approved certain specifications and advertised for or solicited Bids on the following goods or services:

**TAC 309E Truck Bodies, Equipment & Accessories**

(the "Goods and/or Services"); and

WHEREAS, Seller desires to provide such Goods and/or Services to City, acknowledges that this document constitutes Seller's offer to provide the Goods and/or Services specified below, and further acknowledges that if executed by the City's Mayor, this document will become the Purchase Agreement for such Goods and/or Services.

NOW, THEREFORE, for and in consideration of the terms, covenants and conditions hereinafter set forth, the parties hereto agree as follows:

- Documents Comprising the Agreement.** The Bid Packet includes the Notice of Invitation to Bid, the Summary Sheet, Form #1, Form #2, Form #3, Form #4, Form #5, Form #6, the Instructions, Terms and Conditions for Bidders, the Special Requirements, the Technical Specifications, Exhibit A and any addenda or amendments to the Bid Packet. The Bid Packet is incorporated herein by this reference. In the event of conflicting or ambiguous language between this Purchase Agreement and any of the other Bid Packet documents, the parties shall be governed first according to this Purchase Agreement and second according to the remainder of the documents included in the Bid Packet. Seller may submit as part of its Bid additional materials or information to support the Bid. Additional materials or information submitted by Seller which are not ambiguous and which do not conflict with this Purchase Agreement or the other Bid Packet documents are incorporated herein by this reference.
- Purchase and Sale.** Seller agrees to sell City the Goods and/or Services for the price and upon the delivery terms set forth in Exhibit A hereto. City agrees to pay Seller the price as set forth in Exhibit A based on (a) the quantity actually purchased in the case of goods or services priced by unit, or (b) the total price for a stated quantity of goods or services, upon (i) delivery of the Goods and/or Services to the City, (ii) the City's Acceptance thereof, and (iii) Seller's submission and City's approval of a verified claim for the amount due. City shall not pay any late charges or fees.
- Irrevocable Offer.** Seller understands and acknowledges that its signature on this Agreement constitutes an irrevocable offer to provide the Goods and/or Services. There is no contract unless and until City's Mayor/Mayor Pro Tem executes this Agreement accepting Seller's Bid. No City officer, employee or agent except the Mayor (or Mayor Pro Tem) has the authority to award contracts or legally obligate the City to any contract. Seller shall not provide any Goods and/or Services to City pursuant to this Agreement before this Agreement is executed by City. If Seller provides any Goods and/or Services to City pursuant to this Agreement before this Agreement is executed by City, such Goods and/or Services are provided at Seller's risk and City shall have no obligation to pay for any such Goods and/or Services.
- Term.** The term of this Agreement shall be effective commencing on the date of execution of this Agreement by the Mayor/Mayor Pro Tem of the City of Tulsa and terminating one year from that date. City in its sole discretion may offer Seller an opportunity to renew this Agreement for an additional four(4) one (1) year term(s). Seller understands and acknowledges that any future contracts or renewals are neither automatic nor implied by this Agreement. The continuing purchase by City of the Goods and/or Services set forth in this Agreement is subject to City's needs and to City's annual appropriation of sufficient funds in City's fiscal year (July 1<sup>st</sup> to June 30<sup>th</sup>) in which such Goods and/or Services are purchased. In the event City does not appropriate or budget sufficient funds to perform this Agreement, this Agreement shall be null and void without further action by City.
- Warranties.** Seller shall assure that the Goods and/or Services purchased hereunder are covered by all available and applicable manufacturers' warranties for such Goods and/or Services. Seller expressly agrees that it will be responsible for performing all warranty obligations set forth in the Technical Specifications for the Goods and/or Services covered in this Agreement. Seller also warrants that the Goods and/or Services will conform to the Technical Specifications and Special Requirements, and further warrants that the Goods and/or Services shall be of good materials and workmanship and free from defects for either a minimum of one (1) year from the date of Acceptance or installation by City, whichever is later, or as **specified in the Technical Specifications**, whichever is later. In no event shall Seller be allowed to disclaim or otherwise limit the express warranties set forth herein.
- Warranty Remedies.** City shall notify Seller if any of the Goods and/or Services fails to meet the warranties set forth above, and Seller shall promptly correct, repair or replace such Goods and/or Services at Seller's sole expense. Notwithstanding the foregoing, if such Goods and/or Services shall be determined by City to be defective or non-conforming within the first thirty (30) days after the date of Acceptance by City, then City at its option shall be entitled to a complete refund of the purchase price and, in the case of Goods, shall promptly return such Goods to Seller. Seller shall pay all expenses related to the return of such Goods to Seller.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 5 of 157

**FORM #2 (Page 2 of 4)**  
**PURCHASE AGREEMENT**

7. **Seller Bears Risk.** The risk of loss or damage shall be borne by Seller at all times until the Acceptance of the Goods or Services by City.
8. **No Indemnification by City.** Seller understands and acknowledges that City is a municipal corporation that is funded by its taxpayers to operate for the benefit of its citizens. Accordingly, and pursuant to Oklahoma law, City shall not indemnify nor hold Seller harmless for loss, damage, expense or liability arising from or related to this Agreement, including any attorneys' fees and costs. In addition, Seller shall not limit its liability to City for actual loss or direct damages for any claim based on a material breach of this Agreement and the documents incorporated herein. City reserves the right to pursue all legal and equitable remedies to which it may be entitled.
9. **Indemnification by Seller.** Seller agrees to indemnify, defend, and save harmless City and its officers, employees and agents from all suits and actions of any nature brought against them due to the use of patented appliances, products or processes provided by Seller hereunder. Seller shall pay all royalties and charges incident to such patents.
10. **No Insurance by City.** If City is leasing Goods herein, City shall not be required to obtain insurance for Seller's property. Seller shall be solely responsible for any insurance it deems necessary. City is self-insured for its own negligence, subject to the limits of the Governmental Tort Claims Act (51 O.S. § 151 et seq.).
11. **No Confidentiality.** Seller understands and acknowledges that City is subject to the Oklahoma Open Records Act (51 O.S. §24A.1 et seq.) and therefore cannot assure the confidentiality of contract terms or other information provided by Seller pursuant to this Agreement that would be inconsistent with City's compliance with its statutory requirements thereunder.
12. **Non-Responsive Bids.** Seller understands and acknowledges that if it adds terms and conditions to its Bid that are different from the terms set forth herein that its Bid may be rejected as non-responsive. Furthermore, if City accepts Seller's Bid and awards a contract to Seller based on such Bid, City shall not be bound to any exceptions, changes or additions made by Seller, and any terms and conditions added by Seller which are not expressly agreed to by City in writing will be void and of no force and effect and the parties will be governed according to the document precedence set forth in Section 1 above.
13. **Compliance with Laws.** Seller shall be responsible for complying with all applicable federal, state and local laws, regulations and standards. Seller is responsible for any costs of such compliance. Seller certifies that it and all of its subcontractors to be used in the performance of this Purchase Agreement are in compliance with 25 O.S. Sec. 1313 and participate in the Status Verification System. The Status Verification System is defined in 25 O.S. Sec. 1312 and includes but is not limited to the free Employee Verification Program (E-Verify) available at [www.dhs.gov/E-Verify](http://www.dhs.gov/E-Verify).
14. **Termination.** City, by written notice, may terminate this Agreement, in whole or in part, when such action is in the best interest of City. If this Agreement is so terminated, City shall be liable only for payment for Goods accepted and Services rendered prior to the effective date of termination. City's right to terminate this Agreement is cumulative to any other rights and remedies provided by law or by this Agreement.
15. **Price Changes.** The parties understand and agree that the variables in Seller's cost of performance may fluctuate, but any change in Seller's cost of performance will not alter its obligations under this Agreement, nor excuse performance or delay on Seller's part. If the IFB provides that Seller may include a price escalation provision in its Bid, Seller's price escalation provision will be evaluated by City as part of Seller's Bid price when awarding the Bid.
16. **Right to Audit.** The parties agree that Seller's books, records, documents, accounting procedures, practices, price lists or any other items related to the Goods and/or Services provided hereunder are subject to inspection, examination, and copying by City or its designees. Seller is required to retain all records related to this Agreement for the duration of the term of this Agreement and a period of three years following completion and/or termination of the Agreement. If an audit, litigation or other action involving such records begins before the end of the three year period, the records shall be maintained for three years after the date that all issues arising out of the action are resolved or until the end of the three year retention period, whichever is later.
17. **Notice.** Any notice, demand, or request required by or made pursuant to this Agreement shall be deemed properly made if personally delivered in writing or deposited in the United States mail, postage prepaid, to the addresses specified below.

i. To Seller:

\_\_\_\_\_

\_\_\_\_\_

To CITY:

City Clerk  
CITY OF TULSA, OKLAHOMA  
175 E. 2<sup>nd</sup> Street, Suite 260  
Tulsa, Oklahoma 74103

With a copy to:

Ashleigh McCarn, Senior Buyer  
City of Tulsa  
175 E. 2nd Street, 15TH Floor  
Tulsa, OK 74103



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 6 of 157

**FORM #2 (Page 3 of 4)**  
**PURCHASE AGREEMENT**

18. **Relationship of Parties.** The Seller is, and shall remain at all times, an independent contractor with respect to activities and conduct while engaged in the performance of services for the City under this Agreement. No employees, subcontractors or agents of the Seller shall be deemed to be employees of the City for any purpose whatsoever, and none shall be eligible to participate in any benefit program provided by the City for its employees. The Seller shall be solely responsible for the payment of all employee wages and salaries, taxes, withholding, payments, fringe benefits, insurance premiums, continuing education courses, materials or related expenses on behalf of its employees, subcontractors, and agents. Nothing in this Agreement shall be construed to create a partnership, joint venture, or agency relationship among the parties. No party shall have any right, power or authority to act as a legal representative of another party, and no party shall have any power to obligate or bind another party, or to make any representations, express or implied, on behalf of or in the name of the other in any manner or for any purpose whatsoever.
19. **Third Parties.** This Agreement is between City and Seller and creates no right unto or duties to any other person. No person is or shall be deemed a third party beneficiary of this Agreement.
20. **Time of Essence.** City and Seller agree that time is deemed to be of the essence with respect to this Agreement.
21. **Binding Effect.** This Agreement shall be binding upon City and Seller and their respective successors, heirs, legal representatives and permitted assigns.
22. **Headings.** The headings used herein are for convenience only and shall not be used in interpreting this Agreement
23. **Severability Provision.** If any term or provision herein is determined to be illegal or unenforceable, the remainder of this Agreement will not be affected thereby. It is the intention of the parties that if any provision is held to be illegal, invalid or unenforceable, there will be added in lieu thereof a provision as similar in terms to such provision as is possible to be legal, valid and enforceable.
24. **Governing Law And Venue.** This Agreement is executed in and shall be governed by and construed in accordance with the laws of the State of Oklahoma without regard to its choice of law principles, which shall be the forum for any lawsuits arising under this Agreement or incident thereto. The parties stipulate that venue is proper in a court of competent jurisdiction in Tulsa County, Oklahoma and each party waives any objection to such venue. City does not and will not agree to binding arbitration of any disputes.
25. **No Waiver.** A waiver of any breach of any provision of this Agreement shall not constitute or operate as a waiver of any other provision, nor shall any failure to enforce any provision hereof operate as a waiver of the enforcement of such provision or any other provision.
26. **Entire Agreement/No Assignment.** This Agreement and any documents incorporated herein constitute the entire agreement of the parties and supersede any and all prior agreements, oral or otherwise. This Agreement may only be modified or amended in a writing signed by both parties. Notwithstanding anything to the contrary stated herein or in the attachments to this Agreement, no future agreements, revisions or modifications that may be required under this Agreement are effective or enforceable unless such terms, revisions or modifications have been reduced to writing and signed by City and Seller. Seller may not assign this Agreement or use subcontractors to provide the Goods and/or Services without City's prior written consent. Seller shall not be entitled to any claim for extras of any kind or nature.
27. **Multiple Counterparts.** This Agreement may be executed in several counterparts, each of which shall be deemed an original, but which together shall constitute one and the same instrument.
28. **Interpretive Matters and Definitions.** The following interpretive matters shall be applicable to this Agreement:
- 28.1 Unless the context otherwise requires: (a) all references to Sections are to Sections of or to this Agreement; (b) each term defined in this Agreement has the meaning assigned to it; (c) "or" is disjunctive but not necessarily exclusive; (d) words in a singular include the plural and vice versa. All references to "\$" or to dollar amounts shall be in lawful currency of the United States of America;
- 28.2 No provision of this Agreement will be interpreted in favor of, or against, any of the parties hereto by reason of the extent to which such party or its counsel participated in the drafting thereof or by reason of the extent to which any such provision is inconsistent with any prior draft hereof or thereof;
- 28.3 Any reference to any applicable laws shall be deemed to refer to all rules and regulations promulgated thereunder and judicial interpretations thereof, unless the context requires otherwise;
- 28.4 The word "including" means "including, without limitation" and does not limit the preceding words or terms; and
- 28.5 All words used in this Agreement shall be construed to be of such gender, number or tense as circumstances require.
29. **Equal Employment Opportunity.** Each bidder agrees to comply with all applicable laws regarding equal employment opportunity and nondiscrimination.
30. **Authority to Bind.** The undersigned individual states that s/he has authority to bind Seller to this Agreement, that s/he has read and understands the terms of this Agreement, and that Seller agrees to be bound by this Agreement and its incorporated documents.



**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 7 of 157

**FORM #2 (Page 4 of 4)  
PURCHASE AGREEMENT**

**IMPORTANT NOTE: This document must be signed by the proper person as set forth in Instructions, Terms and Conditions for Bidders, paragraph 4. FAILURE TO SUBMIT PROPERLY AUTHORIZED SIGNATURE MAY RESULT IN YOUR BID BEING REJECTED AS NONRESPONSIVE.**

IN WITNESS WHEREOF, this Agreement has been executed in multiple copies on the dates set forth below to be effective during the period recited above.

Seller Company Name:

Sign Here ►

ATTEST:

Printed Name:

Title:

Corporate Secretary

Date:

Company Name/Address [Please Print] Address City State Zip Code

( ) - ( ) -  
Telephone Number Fax Number Email Address

**CITY OF TULSA, OKLAHOMA,  
a municipal corporation,**

ATTEST:

By:  
Mayor

City Clerk

Date:

APPROVED:

Assistant City Attorney



**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 8 of 157

**FORM #3**

**INTEREST AFFIDAVIT**

STATE OF \_\_\_\_\_ )

)ss.

COUNTY OF \_\_\_\_\_ )

I, \_\_\_\_\_, of lawful age, being first duly sworn, state that I am the agent authorized by Seller to submit the attached Bid. Affiant further states that no officer or employee of the City of Tulsa either directly or indirectly owns a five percent (5%) interest or more in the Bidder's business or such a percentage that constitutes a controlling interest. Affiant further states that the following officers and/or employees of the City of Tulsa own an interest in the Bidder's business which is less than a controlling interest, either direct or indirect.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_  
Signature

Title: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

Notary Commission Number: \_\_\_\_\_

County & State Where Notarized: \_\_\_\_\_

**The Affidavit must be signed by an authorized agent and notarized**



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 9 of 157

**FORM #4**  
**NON-COLLUSION AFFIDAVIT**

(Required by Oklahoma law, 74 O.S. §85.22-85.25)

STATE OF \_\_\_\_\_ )

)ss.

COUNTY OF \_\_\_\_\_ )

I, \_\_\_\_\_, of lawful age, being first duly sworn, state that:  
(Seller's Authorized Agent)

1. I am the authorized agent of Seller herein for the purposes of certifying facts pertaining to the existence of collusion between and among Bidders and municipal officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the Bid to which this statement is attached.
2. I am fully aware of the facts and circumstances surrounding the making of Seller's Bid to which this statement is attached, and I have been personally and directly involved in the proceedings leading to the submission of such Bid; and
3. Neither the Seller nor anyone subject to the Seller's direction or control has been a party:
  - a. to any collusion among Bidders in restraint of freedom of competition by agreement to Bid at a fixed price or to refrain from Bidding,
  - b. to any collusion with any municipal official or employee as to quantity, quality, or price in the prospective contract, or as to any other terms of such prospective contract, nor
  - c. in any discussions between Bidders and any municipal official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

By: \_\_\_\_\_  
Signature

Title: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

Notary Commission Number: \_\_\_\_\_

County & State Where Notarized: \_\_\_\_\_

**The Affidavit must be signed by an authorized agent and notarized**



**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 10 of 157

**FORM #5**

**AFFIDAVIT OF CLAIMANT**

STATE OF \_\_\_\_\_ )

)ss.

COUNTY OF \_\_\_\_\_ )

The undersigned, of lawful age, being first duly sworn, on oath says that this contract is true and correct. Affiant further states that the work, services or materials will be completed or supplied in accordance with the contract, plans, specifications, orders or requests furnished the affiant. Affiant further states that (s)he has made no payment directly or indirectly of money or any other thing of value to any elected official, officer or employee of the City of Tulsa or any public trust of which the City is a beneficiary to obtain or procure the contract or purchase order.

By: \_\_\_\_\_  
Signature

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Title: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

My commission number: \_\_\_\_\_

**The Affidavit must be signed by an authorized agent and notarized**



**Tulsa**  
CITY OF  
A New Kind of Energy.

**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 11 of 157

**FORM #6**

**ACKNOWLEDGMENT OF RECEIPT OF ADDENDA/AMENDMENTS**

I hereby acknowledge receipt of the following addenda or amendments, and understand that such addenda or amendments are incorporated into the Bid Packet and will become a part of any resulting contract.

List Date and Title/Number of all addenda or amendments: (Write "None" if applicable).

---

---

---

---

---

---

---

**Sign Here ►**

Printed Name:

Title:

Date:



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 12 of 157

**INSTRUCTIONS, TERMS AND CONDITIONS FOR BIDDERS**

1. **PURCHASING AUTHORITY.** City issues this Invitation For Bid pursuant to Tulsa City Charter, Art. XII, §14 and Tulsa Revised Ordinances, Title 6, Ch. 4, the provisions of which are incorporated herein.
2. **DEFINITIONS.** The following terms have the following meanings when used in the documents comprising this Bid Packet.
  - A. **"Acceptance"** with respect to a Bid shall mean the City's selection of a Bid, and award of a contract to the Bidder/Seller.
  - B. **"Acceptance"** with respect to delivery of Goods and/or Services provided under a Purchase Agreement shall mean City's written acknowledgement that Seller has satisfactorily provided such Goods and/or Services as required.
  - C. **"Addenda" "Addendum" or "Amendment(s)"** shall mean a clarification, revision, addition, or deletion to this Invitation For Bid by City which shall become a part of the agreement between the parties.
  - D. **"Authorized Agent"** means an agent who is legally authorized to bind the Seller under the law of the State in which the Seller is legally organized. An Authorized Agent must sign all documents in the Bid Packet on behalf of the Seller. Under Oklahoma law, the Authorized Agent for each of the following types of entities is as stated below:
    - **Corporations** – the president, vice president, board chair or board vice chair can sign; others can sign if they have and provide the City with (i) a corporate resolution giving them authority to bind the Seller, and (ii) a recent corporate secretary's certificate indicating the authority is still valid.
    - **General Partnerships** – any partner can sign to bind all partners.
    - **Limited Partnerships** – the general partner must sign.
    - **Individuals** – no additional authorization is required, but signatures must be witnessed and notarized.
    - **Sole Proprietorship** – the owner can sign. Any other person can sign if s/he provides a recent Power of Attorney, signed by the owner, authorizing him/her to bind the sole proprietorship.
    - **Limited Liability Company (LLC)** – The manager as named in the Operating Agreement can sign. Any person authorized by the Operating Agreement or a member can sign providing the person submits a copy of the authorization with a certificate of the members indicating the authorization is still valid.Entities organized in States other than Oklahoma must follow the law of the State in which they are organized.
  - E. **"Bid"** means the Seller's offer to provide the requested Goods and/or Services set forth in Exhibit A and any additional materials or information the Seller chooses to submit to support the Bid.
  - F. **"Bidder"** means the legal entity which submits a Bid for consideration by City in accordance with the Invitation For Bid.
  - G. **"Bid Packet"** consists of the following documents (1) the Notice of Invitation for Bid, (2) the Summary Sheet, (3) Form #1, (4) Form #2, (5) Form #3, (6) Form #4, (7) Form #5, (8) Form #6, (9) the Instructions, Terms and Conditions for Bidders, (10) Special Requirements, (11) Technical Specifications, and (12) Exhibit A.
  - H. **"Bid Submission Date"** shall mean the last date by which the City will accept Bids for an Invitation For Bid.
  - I. **"City"** shall mean the City of Tulsa, Oklahoma.
  - J. **"Days"** shall mean calendar days unless specified otherwise.
  - K. **"Primary Seller"** shall mean the Seller whose Bid City selected as the principal supplier of the Goods and/or Services required under this Agreement.
  - L. **"Project Buyer"** shall mean the City's employee assigned to serve as the contact person for Bidders/Sellers responding to Invitations For Bid or completing contracts herein.
  - M. **"Purchasing Division or Office"** shall mean the City of Tulsa's Purchasing Division, located at 175 East 2<sup>nd</sup> Street, Suite 865, Tulsa, Oklahoma 74103
  - N. **"Secondary Seller"** shall mean the Seller whose Bid City selected as a back-up supplier in the event the Primary Seller is unable to provide all the Goods and/or Services required.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 13 of 157

- O. **"Seller"** shall mean the Bidder whose Bid City selected and awarded a contract.
- P. **"You" or "Your"** shall mean the Bidder responding to this Invitation For Bid or the Seller whose Bid the City selected and awarded a contract.
- Q. **"Website"** shall mean the City of Tulsa's website for the Purchasing Division: [www.cityoftulsapurchasing.org](http://www.cityoftulsapurchasing.org).

3. **QUESTIONS REGARDING INVITATION FOR BID.** Questions regarding any portion of this Invitation For Bid must be submitted in writing (sent by mail, fax or email) to the Project Buyer indicated on the Summary Sheet herein. You should submit questions as early as possible and preferably before the pre-Bid conference. Questions and concerns must be received no later than ten (10) days prior to the Bid Packet due date. Any oral responses to questions before the contract is awarded are not binding on City. At City's discretion, any information or clarification made to you may be communicated to other Bidders that notified City of their intent to Bid if appropriate to ensure fairness in the process for all Bidders. You must not discuss questions regarding the Invitation For Bid with anyone other than the Project Buyer or other Purchasing Division staff or your Bid may be disqualified, any contract recommendation or Acceptance may be rescinded, or any contract may be terminated and delivered Goods returned at your expense and City refunded any payments made.
4. **ORAL STATEMENTS.** No oral statements by any person shall modify or otherwise affect the provisions of this Invitation For Bid and/or any contract resulting therefrom. All modifications, addenda or amendments must be made in writing by City's Purchasing Division.
5. **EXAMINATION BY BIDDERS.** You must examine the specifications, drawings, schedules, special instructions and the documents in this Bid Packet prior to submitting any Bid. Failure to examine such documents and any errors made in the preparation of such Bid are at your own risk.
6. **ADDENDA OR AMENDMENTS TO INVITATIONS FOR BID.** City may addend or amend its Invitation For Bid at any time before the Bid Submission Date, and any such addenda or amendments shall become a part of this Agreement. City will attempt to send a notification (by fax or email) of any addenda or amendments to those Bidders who have responded to the City's Project Buyer of their intent to respond to the Invitation For Bid. However, it is your responsibility to inquire about any addenda or amendments, which will be available from the City's Purchasing Division and its website. You must acknowledge receipt of any addenda or amendments by signing and returning the Acknowledgment of Receipt of Addenda/Amendments form and attaching it to this Invitation For Bid with your Bid. City may reject any Bid that fails to acknowledge any addenda or amendments.
7. **SPECIFICATIONS/DESCRIPTIVE TERMS/SUBSTITUTIONS.** Unless the term "no substitute" is used, the City's references to a brand name, manufacturer, make, or catalogue designation in describing an item in this Bid Packet does not restrict you to that brand or model, etc. The City may make such references to indicate the type, character, quality and/or performance equivalent of the item desired. However, you are required to furnish the exact item described in your Bid unless a proposed substitution is clearly noted and described in the Bid.

The parties recognize that technology may change during the period Bids are solicited and subsequent contracts are performed. Therefore, City may at its option accept changes or substitutions to the specifications for Goods of equal or better capabilities at no additional cost to City. In the case of existing contracts, you shall give City 30 days advance notice in writing of any such proposed changes or substitutions. City shall determine whether such items are acceptable as well as any proposed substitute.

All Goods shall be new unless otherwise so stated in the Bid. Any unsolicited alternate Bid, or any changes, insertions, or omissions to the terms and conditions, specifications, or any other requirements of this Bid, may be considered non-responsive and the Bid rejected.

8. **PRICES/DISCOUNTS.** Prices shall be stated in the units and quantity specified in the Bid Packet documents. In case of discrepancy in computing the Bid amount, you guarantee unit prices to be correct and such unit prices will govern. Prices shall include transportation, delivery, packing and container charges, prepaid by you to the destination specified in the Specifications. Discounts for prompt payment will not be considered in Bid evaluations, unless otherwise specified. However, offered discounts for prompt payment will be taken if payment is made within the discount period.
9. **DELIVERY.** All prices quoted shall be based on delivery F.O.B. Tulsa, Oklahoma or to any other points as may be designated in the Technical Specifications, with all charges prepaid by Seller to the actual point of delivery. Bids must state the number of days required for delivery under normal conditions.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 14 of 157

10. **TAXES.** City is exempt from federal excise and state sales taxes and such taxes shall not be included in the Bid prices.
11. **BID SUBMISSION.** The Bid Packet forms must be prepared in the name of Bidder and properly executed by an Authorized Agent with full knowledge and acceptance of all provisions, in ink and notarized. Bids may not be changed or withdrawn after the deadline for submitting Bids (the "Bid Submission Date"). A Bid is an irrevocable offer and when accepted by City (as evidenced by City's execution of the Purchase Agreement) shall constitute a firm contract.
- A. **BIDS MUST BE SUBMITTED ONLY ON THE BID PACKET FORMS AND SIGNED BY AN AUTHORIZED AGENT. THE ENTIRE BID PACKET MUST BE RETURNED AS RECEIVED WITH ALL FORMS COMPLETED. YOU MAY ATTACH, AFTER EXHIBIT A, ANY DOCUMENTS NECESSARY TO COMPLETELY AND ACCURATELY RESPOND TO THE REQUEST. BIDS MUST BE IN STRICT CONFORMANCE WITH ALL INSTRUCTIONS, FORMS, AND SPECIFICATIONS CONTAINED IN THIS BID PACKET.**
- B. Sealed Bids may be either mailed or delivered, but must be received at:  
City of Tulsa – Office of City Clerk  
175 East 2<sup>nd</sup> Street, Suite 260  
Tulsa, Oklahoma 74103
- C. Bids will be accepted at the above address from 8:00 a.m. to 5:00 p.m., Monday thru Friday except for City holidays. City is not responsible for the failure of Bids to be received by the City Clerk's Office prior to the due date and time.
- D. Late Bids will be **rejected**. The Purchasing Agent, in his sole discretion, may make exceptions only for the following reasons:
1. City Hall closed for business for part or all of the day on the date the response was due;
  2. If the City deems it appropriate due to large-scale disruptions in the transportation industry that may have prevented delivery as required.
  3. If documented weather conditions caused the late delivery. You must provide documentation of such weather to the satisfaction of the Purchasing Agent.
- E. **City will not accept faxed Bids**, nor will City accept Bids faxed to the City Clerk, Purchasing Division or Office, or any other City office or employee.
- F. City is not responsible for any of your costs in preparing the Bid response, attending a pre-Bid conference, or any other costs you incur, regardless of whether the Bid is submitted, accepted or rejected.
- G. All Bids must be securely sealed and plainly marked with the Bid Number, Bid Title, and Bid Opening Date on the lower left corner of the outside of the Bid envelope. Your name and address must also be clearly indicated on the envelope.
- H. If submitting multiple options ("Option(s)") to the Invitation for Bid, each will be considered separately requiring each response to be complete and accurate. Each Option must be clearly marked as Option 1 of 3, Option 2 of 3, etc.
- I. The number of copies you must submit is listed on the Summary Sheet in the front of the Bid Packet. However, at a minimum, there will be (1) an original, clearly labeled as such in 1" red letters on the Bid Packet cover page, and (2) a copy for City's Purchasing Division, clearly labeled as such in 1" red letters on the Bid Packet cover page. If binders are used, they must also be labeled.
- J. Multiple boxes or envelopes are permissible, but must not weigh more than 50 pounds. Each box must be labeled as instructed herein and numbered (i.e., Box 1 of 3; Box 2 of 3). **The original must be in Box #1.**
- K. The original and all copies (either paper or electronic) must be identical in all respects. Bids must be completed and submitted in ink or typewritten. Bids written in pencil will be rejected. Any corrections to the Bids must be initialed in ink.
12. **BID REJECTION OR WITHDRAWAL.**
- A. City may reject any or all Bids, in whole or in part.
  - B. **A Bid may be rejected if it contains additional terms, conditions, or agreements that modify the requirements of this Invitation For Bid or attempts to limit Bidder's liability to the City.**
  - C. A Bid may be rejected if Bidder is currently in default to City on any other contract or has an outstanding indebtedness of any kind to City.
  - D. City reserves the right to waive any formalities or minor irregularities, defects, or errors in Bids.
  - E. Bid withdrawal may only be accomplished by an Authorized Agent requesting the withdrawal in person at the City Clerk's office before the City's close of business on the Bid Submission Date.
13. **BID RESULTS.** A tabulation of Bids received will be made available on the City's Purchasing Division website generally within 5 working days after the Bid Opening Date. After a contract award is recommended to the Mayor, a copy of the Bid summary will be available in the City Clerk's Office. Bid results are not provided in response to telephone or email inquiries.
14. **PURCHASE ORDER.** In the event that the successful Bid is for an amount less than One Hundred Thousand Dollars (\$100,000), and it is determined by the City to be in the best interests of the City, the City, in its sole discretion, may issue a Purchase Order rather than execute the Purchase Agreement to purchase the Goods. If a Purchase Order is issued, however, the terms of the Bid Packet documents, including the Purchase Agreement, will govern the transaction and be enforceable by the City and Bidder/Seller.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 15 of 157

15. **CONTRACT AWARD.** If a contract is awarded, it will be awarded to the Bidder that City determines is the lowest secure Bidder meeting specifications. Such Bid analysis will consider price and other factors, such as Bidder qualifications and financial ability to perform the contract, as well as operating costs, delivery time, maintenance requirements, performance data, history of contract relations with City, and guarantees of materials and equipment, as applicable. A complete list of the factors that are considered is set forth in Tulsa Revised Ordinances, Title 6, Ch. 4, §406E. Unless otherwise noted, City reserves the right to award a contract by item, one or more groups of items, or all the items in the Bid, whichever is in City's best interest.
16. **IRS FORM W-9.** If City selects your Bid and awards a contract to you, you will have ten (10) days from notification of the award to provide City with your complete IRS Form W-9.
17. **NOTICE TO PROCEED.** If City accepts your Bid and executes the Purchase Agreement, you shall not commence work until authorized to do so by the Purchasing Agent or his representative. Receipt of a Purchase Order from the City is notice to proceed.
18. **PAYMENTS.** Invoices should be e-mailed to City of Tulsa – Accounts Payable at:

[apinvoices@cityoftulsa.org](mailto:apinvoices@cityoftulsa.org)

Payment will be made Net 30 days after receipt of a properly submitted invoice or the City's Acceptance of the Goods and/or Services, whichever is later, unless City decides to take advantage of any prompt payment discount included in the Bid.

**THE REST OF THIS PAGE LEFT INTENTIONALLY BLANK**



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 16 of 157

**SPECIAL REQUIREMENTS**

**1. Irrevocable Offer Period.** You understand and acknowledge that the offer submitted as your Bid is firm and irrevocable from the City's close of business on the Bid Submission Date until 365 days after the Bid Opening Date.

**2. General Liability/Indemnification.** You shall hold City harmless for any loss, damage or claims arising from or related to your performance of the Purchase Agreement. You must exercise all reasonable and customary precautions to prevent any harm or loss to all persons and property related to the Purchase Agreement. You agree to indemnify and hold the City harmless from all claims, demands, causes of action or suits of whatever nature arising out of the Goods, Services, labor, or materials furnished by you or your subcontractors under the provisions of the Bid Packet documents.

**3. Liens.** Pursuant to City's Charter (Art. XII, §5), no lien of any kind shall exist against any property of City. Bidder shall deliver all goods to City free and clear of liens. Delivery by Seller to City of goods which are subject to liens under the Purchase Agreement shall be a material breach of the Purchase Agreement and all damages and costs incurred by City as a result of the existence of such liens shall be paid to City by Seller. At City's option, City may return such goods to Seller and Seller shall pay the cost of returning such goods and reimburse City for any payments made for such goods.

**4. Insurance.** If checked "Yes," the following insurance is required: Yes: X No:       

Seller and its subcontractors must obtain at Seller's expense and keep in effect during the term of the Purchase Agreement, including any renewal periods, policies of General Liability insurance in the minimum amounts set forth below and Workers' Compensation insurance in the statutory limits required by law.

Personal injury, each person	\$ 175,000.00
Property damage, each person	\$ 25,000.00
Auto Liability, each occurrence	\$ 1,000,000.00
Personal injury and property damage, each occurrence	\$ 1,000,000.00
Workers' Compensation	(Statutory limits)

**SELLER'S INSURER MUST BE AUTHORIZED TO TRANSACT BUSINESS IN THE STATE OF OKLAHOMA.**

You will have 10 days after notification that your Bid was selected for contract award by City to provide proof of such coverage by providing the assigned Project Buyer shown on the Summary Sheet of this Bid Packet with a Certificate of Insurance. The Certificate of Insurance must be completed with the following information:

- A. Your name
- B. Insurer's name and address
- C. Policy number
- D. Liability coverage and amounts
- E. Commencement and expiration dates
- F. Signature of authorized agent of insurer
- G. Invitation for Bid number

The Seller shall not cause any required insurance policy to be cancelled or to permit it to lapse. It is the responsibility of Seller to notify City of any change in coverage or insurer by providing City with an updated Certificate of Liability Insurance. Failure of Seller to comply with the insurance requirements herein may be deemed a breach of the Purchase Agreement. Further, a Seller who fails to keep required insurance policies in effect may be deemed to be ineligible to bid on future projects, ineligible to respond to invitations for bid, and/or ineligible to engage in any new purchase agreements

**5. Bonding.**

**A. Bid Bond.** If the box is checked "Yes," the Bid Bond is required:

Yes:        No: X

**B. Performance Bond.** If the box is checked "Yes," the Performance Bond is required:

Yes:        No: X



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 17 of 157

**6. References.** If the box is checked "Yes," References are **required(3)**:

Yes: ☒ **X**

No: ☐

**7. Purchase Card:** Is the City of Tulsa Purchasing Card acceptable (This is a Visa):

Yes: ☐

No: ☐

**For each reference, the following information must be included: Company Name, Contact Name, Address, Phone Number, E-Mail Address, and the nature of their relationship with the Bidder.**

Company Name: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Description of Products/Services Provided: \_\_\_\_\_

Company Name: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Description of Products/Services Provided: \_\_\_\_\_

Company Name: \_\_\_\_\_  
Contact Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Description of Products/Services Provided: \_\_\_\_\_

**THE REST OF THIS PAGE LEFT INTENTIONALLY BLANK**



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 18 of 157

**TECHNICAL SPECIFICATIONS**

**SCOPE:**

It is the intent during the agreement period, as nearly as possible, to purchase all the requirements for the items listed in this bid from the firm(s) to which the agreement is awarded.

All equipment bid shall be new and the latest production model. **Brochures and/or specification literature clearly describing the unit(s) and verifying that the unit(s) meet or exceed the requirements of this specification shall accompany each bid proposal. Warranty and delivery information should be provided with the bid proposal.** Any Manufacturer's name and model called out in this IFB is intended to set the quality and design of equipment desired and is not meant to limit bidding on products of equal quality. Any exceptions to or deviations from the specifications set forth in the IFB should be clearly described in the bidder's proposal. During a standard warranty period or for any extended warranty no deductibles, upcharges, overtime, mileage, freight or charges for parts and service shall be charged to the City of Tulsa pertaining to warranty repairs.

For the purposes of bid evaluations, all options will be considered in the overall bid award.

**SPECIFICATIONS:**

In Section 2 (Bidder's Proposal Column); The bidder shall respond to each minimum requirement (section 1) in the space provided under Section 2 whenever asked to "describe", the description may include details such as size, capacities, dimensions, materials used in construction, etc. A full and complete description is required to reasonably evaluate the bid, so all pertinent information is required. When referring to attached literature as a means of not fully describing items, misinterpretations by the evaluator of the bid may occur and result in not having the bid awarded. Your ability to present the City with enough information to reasonably understand the item being bid and whether it meets the specifications stated relies on the written information provided.

**You are requested to describe your proposal in the Bidders column, you may not respond in the space provided as to whether you meet the specifications by responding with terms as "yes", "Meets", "same as", "complies" or "similar" terms. If these terms are utilized, it will result in your bid being considered as Non-Responsive and being rejected.**

You must include descriptive manufacturer's literature verifying the information you provided in the bidder's proposal section. Failure to provide such literature may result in your bid being considered as Non-Responsive and being rejected.

If your bid is an alternate approach and does not fully meet the specifications, completely describe your alternate approach.

The manufacturer shall warrant each piece of equipment and related parts to be of good material and workmanship and to promptly replace any part or parts which by reason of defective materials or workmanship shall fail under normal use, free of negligence or accident, for a minimum of one (1) year from the date of delivery, unless otherwise stated. In addition, if such failures take place outside the dealer's service area, which shall be defined as Tulsa city limits, the seller will be responsible for reimbursing the nearest manufacturer's authorized dealer for services rendered under this warranty.

The seller shall respond within 72 hours, of notification by the City of Tulsa, on when, where and how a warranty issue will be resolved. In the event there is no response within 72 hours, or if the response is not acceptable to the City of Tulsa; the City will provide or arrange for repairs. The seller shall be responsible for reimbursing the nearest manufacturer's authorized dealer in the city of Tulsa for services rendered under this warranty.

**The seller shall have the option to authorize the City of Tulsa to perform minor warranty replacement and repairs and then reimburse the City for its labor and parts utilized to enact the repair. The reimbursement for labor will be the same rate as that of the actual work performed. Standard warranty information is to be supplied with the bid.**



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 19 of 157

**DELIVERY REQUIREMENTS:**

Unless otherwise agreed to in writing; Seller shall transport the vehicles to and from the Seller's location for mounting of equipment and accessories with no additional charges to the City. Seller shall bear the cost of all transportation associated with warranty repairs. If Sellers location is outside of Tulsa County, Seller shall supply the name of the local factory authorized repair facility. The factory authorized warranty repair facility shall be contacted for verification prior to awarding the bid. This information shall be part of the bid evaluation process. Failure to comply will affect the award of bid.

Name: \_\_\_\_\_ Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

The Seller shall deliver all equipment fully assembled and operational with all items such as mounting brackets, fluids such as oil and fuel, batteries, etc. installed upon delivery. No crated or non-operational equipment requiring assembly or adjustments of any kind shall be accepted. Seller will be required to operate the equipment and demonstrate all features and operational modes to the City of Tulsa personnel.

Absolutely no items over 500lbs. may be directly shipped to the City of Tulsa requiring the City personnel to unload from the shipping truck or trailer. The City of Tulsa carries no responsibility for any damages incurred during an unloading occurrence. The City of Tulsa does not have unloading docks or the proper equipment to assist in this area. All unloading shall be the responsibility of the seller and/or shipping entity.

**TESTS AND ACCEPTABILITY OF MATERIAL:**

All items included in the bid are subject to a performance demonstration within 30 days of the bid date by the bidder(s) at the discretion of the City of Tulsa. A like item of the type bid that contains all the safety concerns, horsepower ratings, accessories, dimensions or other features as deemed appropriate by the City of Tulsa may be required to be demonstrated to the City of Tulsa personnel prior to award of the bid to establish if the item meets the requirements & specifications of the City of Tulsa. These demonstrations may be held in direct competition with other bidders whom bid the same items and equipment.

**ITEM 1: Crane, Remote Controlled 2,000 lb.**

Item	Specifications (Minimum)	Bidders Proposal
General Description	This specification shall provide for new Remote-Controlled Crane, the latest current production model. Auto Crane Model 2003 or equivalent. Complete with manufacturer's standard equipment and accessories, fully serviced ready to operate. To include manufacturer's certificate or warranty. (Warranty shall be the standard for the industry as offered to the public.) This crane shall be equipped to meet all Federal and State of Oklahoma Safety Standards and Requirements.	<u>Describe:</u> <u>Make:</u> <u>Model</u> _____ _____ _____ _____ _____ _____ _____ _____
Lifting Capacity	The crane shall have the lifting capacity of 2,000 lb. as follows: 2,000 lbs. at 3-feet. 1,565 lbs. at 4-feet. 1,160 lbs. at 5-feet. 1,000 lbs. at 6-feet.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 20 of 157

	800 Lbs. At 7-feet. 760 Lbs. At 8-feet. 665 Lbs. At 9-feet.	_____ _____ _____
Specifications & Standards	Overall dimensions (LxWxH) 76 ¾-inches x 19-inches x 21" approx. Weight of crane shall not exceed 385 lbs. Lifting lug for transport. Compliance with ANSI B30.5 standards and OSHA regulations concerning crawler locomotives and truck cranes. (OSHA Title 29, Part 1910.180)	<u>Describe</u> _____ _____ _____ _____ _____ _____
Chassis Requirements (City of Tulsa to provide Chassis)	Minimum truck chassis requirements: 8,500 lbs. GVWR (¾ ton or greater truck chassis.)	<u>Describe:</u> _____ _____
Stabilizers	Outriggers shall be installed to increase stability and reduce the load on the truck while lifting.	<u>Describe:</u> _____ _____
Electrical	22-feet of high current battery cable.	<u>Describe:</u> _____
Boom – Lift	Lift angle: 0° to 75° Six (6) working boom positions Lift cylinder manually activated via gas spring.	<u>Describe:</u> _____ _____ _____ _____
Boom Extension	Manually actuated 3-boom positions lockable: A. 5-feet 6-inches B. 7-feet C. 9-feet	<u>Describe:</u> _____ A _____ B _____ C _____
Hoist	Motor – 12V DC series wound, 1.9 HP, heavy duty. Actuator must have industrial grade gear box with worm brake 38:1 worm gear reduction with 7.84:1 spur gear reduction providing non-slip braking. Rated @ 2,000 lbs. last layer capacity. Line speed of 30 ft/min. (single line) with no load. 50-feet. of ¼-inch diameter aircraft cable with 7,000 lbs. breaking strength compliance to ANSI Standards <b>(Consumer grade winch with permanent magnet motor is NOT acceptable)</b>	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 21 of 157

Sheave	Anti-friction, high strength polymer with maintenance free, sealed needle roller bearing	<u>Describe:</u> _____ _____
Swivel Block	Heavy-duty type with hook with latch provision for double line string up.	<u>Describe:</u> _____ _____
Rotation	360° continuous manual rotation braking by means of manual handle.	<u>Describe:</u> _____ _____
Control System	Handheld control to operate crane functions. Weather resistant. Allows all operations of the crane.	<u>Describe:</u> _____ _____
Warranty	Manufacturer shall provide a two-year limited warranty against defects in materials and workmanship from the date of delivery.	<u>Describe:</u> _____ _____ _____
Boom Support	Shall be installed for the boom in a stowed position while in transit.	<u>Describe:</u> _____ _____
Color	Crane shall be painted the same color as the vehicle it is being mounted on.	<u>Describe:</u> _____

Mounting Instructions: Cranes shall be mounted by the supplier in accordance with the industry standard for such, including furnishing and installing all reinforcement needed to secure the crane in a safe manner without damage to the vehicle and its body. The body shall not tilt in any manner after installation.

**NOTE:** Seller must not remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take off is installed. If, during installation, it becomes necessary to remove these plates or cover these numbers, then these numbers and/or plates must be replaced in a visible location.

**ELECTRICAL WIRING:** Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation, all connections, splices and wiring to be protected by all-weather insulation. The insulation material to be of enough quality to insure a life period of five (5) years.

**POWER TAKE OFF (If required):** Must be the latest current model installed and/or adapted to fit the transmission.

Mounting bolts or screws must provide adequate self-locking and seating to insure against oil leaks and must keep housing firmly attached to transmission. A fan belt clutch pump is to be provided for trucks with no PTO opening. Light duty trucks with Allison transmissions to use a Hot Shift PTO.

**PAINT:** All exposed metal shall be primed and painted to match vehicle.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 22 of 157

**Item 2: Crane, Remote Controlled 2,000 lb. (Pedestal Mounted)**

Item	Specifications (Minimum)	Bidders Proposal
General Description	This specification shall provide for new remote-control cranes, the latest current production model. Complete with manufacturer's standard equipment and accessories fully serviced ready to operate. To include manufacturer's certificate or warranty. (Warranty shall be the standard for the industry as offered to the public.) This crane shall be equipped to meet all Federal and State of Oklahoma Safety Standards and Requirements.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Lifting Capacity	The crane shall have the lifting capacity of 2,000 lbs. as follows: 2,000 LBS. @ 3-feet 3-inches. 1,546 LBS. @ 4-feet 2-inches. 1,260 LBS. @ 5-feet 2-inches.	<u>Describe:</u> <u>Make:</u> <u>Model:</u> <hr/> <hr/> <hr/> <hr/>
Specifications & Standards	Overall dimensions (LxWxH) approx. 24-inches x 11-inches x 46 5/8-inches. Weight of crane shall not exceed 240 lbs. Paint – Factory White Compliance with ANSI B30.5 standards and OSHA regulations concerning crawler locomotives and truck cranes. (OSHA Title 29, Part 1910.180)	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
(Chassis only to be provided by City of Tulsa)	Minimum truck chassis requirements: 5,200 lbs. GVWR.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/>
Stabilizers	Stabilizers shall be installed to increase stability and reduce the load on the truck springs while lifting.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/>
Electrical	Battery heavy-duty, deep cycle, maintenance type. 22-feet of high current battery cable.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/>
Boom – Lift	Lift angle from 17-degrees to 50-degrees with two (2) working boom positions, manually activated.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 23 of 157

Boom Extension	Manually activated. 7-foot boom - 3-boom positions: 4-foot 2-inches 5-foot 7-inches 7-foot 0-inches	<u>Describe:</u> _____ _____ _____ _____
Hoist	Hoist unit: 1. Motor – 12V DC series wound, 3/4 HP, heavy duty. 2. Hoist function shall not exceed 35 Amps when lifting maximum load of 2,000 lbs. 3. Hoist must incorporate a spur gear reduction (A worm gear design is NOT acceptable). 4. Hoist shall be equipped with a friction brake capable of holding the rated capacities in the event of power loss to the crane. 5. Line speed of 18 ft./min. (single line) with no load. 6. 25-ft. of 3/16" diameter aircraft cable with 4,200 lbs. breaking strength compliance to ANSI Standards.	<u>Describe:</u> 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ _____ _____
Sheave	Anti-friction, high strength polymer with maintenance free, sealed needle roller bearing.	<u>Describe:</u> _____ _____
Swivel Block	Heavy-duty type with hook with latch provision for double line string up.	<u>Describe:</u> _____ _____
Rotation	325° continuous manual rotation braking by means of manual handle.	<u>Describe:</u> _____ _____
Control System	Handheld control to operate crane functions. Must allow all operations of the crane. Weather resistant.	<u>Describe:</u> _____ _____
Warranty	Manufacturer shall provide a two-year limited warranty against defects in materials and workmanship from the date of delivery.	<u>Describe:</u> _____ _____ _____
Option	(1) Power Rotation & Manual Boom Elevation	<u>Describe:</u> _____

**Mounting Instructions:** Cranes shall be mounted by the supplier in accordance with the industry standard for such, including full and installing all reinforcement needed to secure the crane in a safe manner without damage to the vehicle and its body. The crane shall not tilt in any manner after installation.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 24 of 157

**NOTE:** Seller must not remove identification plates or numbers on the truck. This especially applies to the truck transmission and power take off is installed. If, during installation, it becomes necessary to remove these plates or cover these numbers, then the numbers and/or plates must be replaced in a visible location.

**ELECTRICAL WIRING:** Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation connections, splices and wiring to be protected by all-weather insulation. This insulation material to be of enough quality to insure a period of five (5) years.

**PAINT:** All exposed metal shall be primed and painted to match vehicle.

**Item 3: Crane, Remote Controlled 3,200 lb.**

Item	Specifications (Minimum)	Bidders Proposal																										
General Description	<p>This specification shall provide for new Remote-Control Cranes, the latest current production model. Complete with manufacturer's standard equipment and accessories, fully serviced ready to operate. To include manufacturer's certificate or warranty. (Warranty shall be the standard for the industry as offered to the public.) This crane shall be equipped to meet all Federal and State of Oklahoma Safety Standards and Requirements.</p>	<p><u>Describe:</u></p> <div></div>																										
Crane Rating	<p>The crane shall have the lifting capacity of 3200 lbs. as follows:</p> <table><thead><tr><th><u>REACH</u></th><th><u>LIFTING CAPACITY</u></th></tr></thead><tbody><tr><td>3 FT.</td><td>3,200 Lbs.</td></tr><tr><td>4 FT.</td><td>2,500 Lbs.</td></tr><tr><td>5 FT.</td><td>2,000 Lbs.</td></tr><tr><td>6 FT.</td><td>1,670 Lbs.</td></tr><tr><td>7 FT.</td><td>1,500 Lbs.</td></tr><tr><td>9 FT.</td><td>1,100 Lbs.</td></tr><tr><td>10 FT.</td><td>1,000 Lbs.</td></tr><tr><td>11 Ft.</td><td>900 Lbs.</td></tr><tr><td>12 Ft.</td><td>830 Lbs.</td></tr><tr><td>13 Ft.</td><td>770 Lbs.</td></tr><tr><td>14 Ft.</td><td>710 Lbs.</td></tr><tr><td>15 Ft.</td><td>660 Lbs.</td></tr></tbody></table>	<u>REACH</u>	<u>LIFTING CAPACITY</u>	3 FT.	3,200 Lbs.	4 FT.	2,500 Lbs.	5 FT.	2,000 Lbs.	6 FT.	1,670 Lbs.	7 FT.	1,500 Lbs.	9 FT.	1,100 Lbs.	10 FT.	1,000 Lbs.	11 Ft.	900 Lbs.	12 Ft.	830 Lbs.	13 Ft.	770 Lbs.	14 Ft.	710 Lbs.	15 Ft.	660 Lbs.	<p><u>Describe:</u></p> <div></div>
<u>REACH</u>	<u>LIFTING CAPACITY</u>																											
3 FT.	3,200 Lbs.																											
4 FT.	2,500 Lbs.																											
5 FT.	2,000 Lbs.																											
6 FT.	1,670 Lbs.																											
7 FT.	1,500 Lbs.																											
9 FT.	1,100 Lbs.																											
10 FT.	1,000 Lbs.																											
11 Ft.	900 Lbs.																											
12 Ft.	830 Lbs.																											
13 Ft.	770 Lbs.																											
14 Ft.	710 Lbs.																											
15 Ft.	660 Lbs.																											
Specifications & Standards	<p>Overall dimensions (LxWxH) approx. 110-inches x 19.50-inches x 24-inches.</p> <p>Weight of crane shall not exceed 680 lbs.</p> <p>Paint- Factory White.</p> <p>Compliance with ANSI B30.5 standards and OSHA regulations concerning crawler locomotives and truck</p>	<p><u>Describe:</u></p> <div></div>																										



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 25 of 157

	cranes. (OSHA Title 29, Part 1910.180).	
(Chassis Only to be provided by City of Tulsa)	Minimum truck requirements: Chassis 11,000 lbs. GVW Approx.	<u>Describe:</u> _____ _____ _____
Stabilizers	Outriggers shall be installed to increase stability and reduce the load on the truck springs while lifting.	<u>Describe:</u> _____ _____
Electrical	Twenty-two (22) ft of high current battery cable.	<u>Describe:</u> _____ _____
DC Power Unit	Electro-hydraulic system consists of an electric motor driving hydraulic pump which provides fluid power to: 1. Boom Lift / Lower. 2. First Section Boom Extension / Retraction (on PRX version only). 3. Electric motor – 12V DC series wound. Hydraulic: 1. Gear pump, .065 cu. in/rev. displacement 2. 1.5 gal. nominal-capacity reservoir. 3. System: Set full by-pass relief @ 2,200 psi. 4. Output: 1.0 GPM minimum @ 1,750 psi. @ 150 amps max.	<u>Describe:</u> _____ _____ 1 _____ 2 _____ 3 _____ Hydraulic 1 _____ 2 _____ 3 _____ 4 _____ _____
Boom – Lift	1. Hydraulically actuated. 2. Lift angle from -5-degrees to 75-degrees. 3. Lift cylinder: 4. Double acting for smooth boom operation. 5. Counterbalance valve incorporated preventing unintentional boom dropping in the event of a hose failure. 6. Load sensing in lift circuit: Pressure switch type sensing 7. (Audible sensors are not acceptable.) 8. In overload condition, disable only hoist up, boom extend and boom down functions. Other functions shall remain operable.	<u>Describe:</u> 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____ _____ _____ _____
Boom Extension	Hydraulically actuated by means of extension cylinder (see information below) from 7-feet to 11-feet and manually actuated from 11-feet to 15-feet. <u>Extension cylinder:</u> Trunnion mounted inside boom to protect from	<u>Describe:</u> _____ _____ _____ _____ _____



**CITY OF  
Tulsa**  
A New Kind of Energy.

**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 26 of 157

	external damage. Double acting for smooth operation and incorporates a counterbalance valve to prevent unintentional boom retraction in the event of a hose failure	<hr/> <hr/> <hr/> <hr/> <hr/>
Hoist	<u>Hoist unit:</u> 1. Motor – 12-Volt DC series wound, 1.9 HP, heavy duty. Actuator must have industrial grade gear box with worm brake. 2. 38:1 worm gear reduction with 7.84:1 spur gear reduction. 3. Rated @ 1,600 lbs. last layer capacity. 4. Line speed of 30-feet. /min. (single line) with no load 5. 62-feet. of 7/32-inch diameter aircraft cable with 5,600 lbs. breaking strength compliance to ANSI Standards. Consumer grade winch with permanent magnet motor is NOT acceptable.	<u>Describe:</u> <hr/> 1 <hr/> <hr/> 2 <hr/> <hr/> 3 <hr/> <hr/> 4 <hr/> <hr/> 5 <hr/> <hr/> <hr/> <hr/>
Sheave	Anti-friction, high strength polymer with maintenance free, sealed needle bearings.	<u>Describe:</u> <hr/> <hr/> <hr/>
Anti-two-block Preventer	A bail type to reduce crown to hook distance. (Hanging block two-block sensor is NOT acceptable.) When activated, shall disable hoist up, boom down and extend out functions. Bail should be located on the left side of the boom to protect it from tree limbs, etc. while traveling. Cable shall be contained in a high impact plastic case with a spring-loaded cable reel.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Swivel Block	Heavy-duty type with hook with latch. Provision for double line string up.	<u>Describe:</u> <hr/> <hr/> <hr/>
Rotation	360° continuous rotation. 40:1 worm gear set. Provision for adjusting backlash between worm & gear. (Non-adjustable gear set is NOT acceptable.) Turntable style slew bearings. Cycle speed – 34 sec. no load.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Hydraulic Valve System	Bang-bang control with manual overrides Main valve – Mono-block type with individual	<u>Describe:</u> <hr/> <hr/> <hr/>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 27 of 157

	cartridge valves for the crane functions for easy accessibility and serviceability. See more information in the DC Power Unit Section previously.	
Control System	Handheld control to operate crane functions. Weather resistant. Allows all operations of the crane.	<u>Describe:</u> _____ _____ _____
Boom Support	Shall be installed for the boom in a stowed position while in transit.	<u>Describe:</u> _____ _____ _____
Telescopic Outriggers	Manual In/Out Hydraulic Up/Down Outrigger Assy. for curbside crane.	<u>Describe:</u> _____ _____ _____
Warranty	Manufacturer shall provide a two-year limited warranty against defects in materials and workmanship from the date of delivery.	<u>Describe:</u> _____ _____ _____
Options	1. Outriggers: Power up/down, power in/out outriggers. 2. Control System-Wireless. Allows all operations of the crane.	<u>Describe:</u> 1 _____ 2 _____ _____

**MOUNTING INSTRUCTIONS:**

Cranes shall be mounted by the supplier in accordance with the industry standard for such, including furnishing and installing all reinforcement needed to secure the crane in a safe manner without damage to the vehicle and its body. The body shall not tilt in any manner after installation.

**NOTE:** Seller must not remove identification plates or numbers on the truck. This especially applies to the truck transmission power take off is installed. If, during installation, it becomes necessary to remove these plates or cover these numbers, then numbers and/or plates must be replaced in a visible location.

**ELECTRICAL WIRING:**

Wiring to be loom and properly secured to frame to prevent sagging. Upon completion of installation, all connections, splices wiring to be protected by all-weather insulation. This insulation material to be of enough quality to insure a life period of five (5) year

**Item 4: Crane, Remote Controlled 5,000 lb.**

Item	Specifications (Minimum)	Bidders Proposal
General Description	This specification shall provide for new Remote-Control Cranes, the latest current production model.	<u>Describe:</u> _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 28 of 157

	Complete with manufacturer's standard equipment and accessories, fully serviced ready to operate. To include manufacturer's certificate or warranty (Warranty shall be the standard for the industry as offered to the public.) This crane shall be equipped to meet all Federal and State of Oklahoma Safety Standards and Requirements.	
Lifting Capacity:	The crane shall have the lifting capacity of 5,000 lbs. as follows: 5,000 lbs. @ 5 feet. 3,125 lbs. @ 8 feet. 2,500 lbs. @ 10 feet. 2,083 lbs. @ 12 feet. 1,785 lbs. @ 14 feet. 1,562 lbs. @ 16 feet. 1,388 lbs. @ 18 feet. 1,250 lbs. @ 20 feet.	<u>Describe:</u> 
Specifications & Standards	Overall dimensions (LxWxH) 151.44" x 23" x 33.20" (with antenna down) Weight of crane shall not exceed 1,390 lbs. Compliance with ANSI B30.5 standards and OSHA regulations concerning crawler locomotives and truck cranes. (OSHA Title 29, Part 1910.180)	<u>Describe:</u> 
(Chassis only to be provided by City of Tulsa)	Minimum truck chassis of 14,500 lbs. GVWR. 300,000 in-lbs. RBM required.	<u>Describe:</u> 
Stabilizers	Outriggers shall be installed to increase stability and reduce the load on the truck springs while lifting Manual in & out, power up and down outrigger assy. For curb-side crane	<u>Describe:</u> 
Paint	Paint: Factory White to match body.	<u>Describe:</u> 
Boom – Lift	Hydraulically actuated A. Lift angle from –5° to 75° <u>Lift cylinder:</u> Double acting for smooth boom operation. Counterbalance valve incorporated preventing unintentional boom dropping in the event of a hose failure.	<u>Describe:</u> 



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 29 of 157

	<p><u>Load sensing in lift circuit:</u>  Pressure transducer type sensing  (Audible sensors are not acceptable).  Automatically reduce rotation speed while under load.  In overload condition, disable only hoist up, boom extend and boom down functions. Other functions shall remain operable.</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Extension	<p>Hydraulically actuated:  A. Extend from 10 to 20 feet.  <u>Extension cylinder:</u>  Trunnion mounted inside boom to protect from external damage.  Double acting for smooth boom operation and  Incorporates a counterbalance valve to prevent unintentional boom retraction in the event of a hose failure.</p>	<p><u>Describe:</u></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Hoist	<p>Hydraulically motor-driven planetary gear reduction with a load holding brake  Rated @ 2,500 lbs. last layer capacity  Line speed of 60 feet/min. (single line) with no load.  80-ft of 5/16-inch diameter aircraft cable with 9,800 lbs. breaking strength</p>	<p><u>Describe:</u></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Sheave	<p>Anti-friction, high strength polymer with maintenance free, sealed needle bearings</p>	<p><u>Describe:</u></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Anti-two-block Preventer	<p>A bail type to reduce crown to hook distance.  (Hanging block two-block sensor is not acceptable.)  When activated, shall disable hoist up, boom down and extend out functions  Located on the left side of the boom to protect it from tree limbs, etc. while traveling  Cable shall be contained in a high impact plastic case with a spring-loaded cable reel</p>	<p><u>Describe:</u></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Rotation	<p>Hydraulically actuated  370° non-continuous rotation  Two speeds  (automatically switched under load):  99 sec. Unloaded, 197 sec. loaded.  Sealed turntable style (worm gear) slew bearings.  Home switch for stowing position</p>	<p><u>Describe:</u></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 30 of 157

Hydraulic System	8-gpm flow @ 2,750 psi. (A hydraulic power source shall be provided if an adequate system is not already on the vehicle.) Full proportional control with manual overrides. Main valve: Mono-block type with individual cartridge valves for the crane functions for easy accessibility and serviceability. The proportional cartridge shall control the speed of each crane function.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____
Control System	Handheld remote control to operate crane functions that allows all operations of the crane. Controller shall have 4-digit LED readout providing the operator with feedback to allow explanation of current operating status.	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Boom Support	Shall be installed for the boom in a stowed position while in transit.	<u>Describe:</u> _____ _____
Hydraulic Reservoir	Standard 10-gallon. hydraulic reservoir with strainer, return filter and sight gauge with hoses and fittings. (15.5-inches W x 11.4-inches D X 15.4-inches H). Sizes approx.	<u>Describe:</u> _____ _____ _____ _____ _____
Warranty	Manufacturer shall provide a two-year limited warranty against defects in materials and workmanship from the date of delivery	<u>Describe:</u> _____ _____ _____ _____
Options	1. Power in/out, power up/down outriggers for curb-side crane.	<u>Describe:</u> 1 _____ _____

**MOUNTING INSTRUCTIONS:** Cranes shall be mounted by the Seller in accordance with the industry standard for such including furnishing and installing all reinforcement need to secure the crane in a safe manner without damage to the vehicle and its body. The body shall not tilt in any manner after installation.

**NOTE:** Seller MUST NOT remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take-off is installed. If, during installations, it becomes necessary to remove these plates or cover these numbers, then these numbers and/or plates must be replaced in a visible location.

**ELECTRICAL WIRING:** Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, splices and wiring to be protected by all-weather installation. This installation material to be of enough quality to insure a life period of five (5) years.





<p>gvw to 33,000 gvw), front and rear.</p> <p>G. Trucks with contractor's beds (10,000 gvw to 18,000 gvw), front and rear.</p> <p>H. Trucks with contractor's beds (19,000 gvw to 33,000 gvw), front and rear.</p> <p>I. Trucks with stake body flatbeds (10,000 gvw to 18,000 gvw, front and rear.</p> <p>J. Trucks with stake body flatbeds (19,000 gvw to 33,000 gvw), front and rear.</p> <p>K. Heavy cab &amp; chassis trucks, <b>front only!</b> (33,000 gvw to 120,000 +gvw).</p> <p>L. <b><u>Dump bodies and service bodies. Rear only mount:</u></b>          The amber strobe system described herein shall be fully assembled, installed and operational at the top and in each side, post facing rearward on the rear of 5 cu. Yard, and up, dump bodies, steel, plastic, rip rap, dump bodies and utility service bodies. All lights shall be mounted so as not to be easily damaged during the normal course of work. The strobe system shall be the same as or equal to the Whelen model vtx609c or acceptable equal, led ultra-small vertex self-contained hemispheric light assemblies in an amber lens for installation of one each in extra rear lights on the dump bodies and service bodies. The LED lights are approx. 1" tall and mounted behind amber lensed lights. Assembly to contain 9 ft of wiring with an inline combination lamp driver and flasher.  <b><u>Any system bid which is not the Whelen system specified must be reviewed and approved by City of Tulsa prior to bidding. Contact the buyer with questions. Contact the buyer with any questions.</u></b>          The control center module mounted in the cab will have user selectable flash patterns.</p> <p>M. Not installed walk out the door price for item 1 above; Whelen vtx609c with wiring.</p> <p>N. Not installed walk out the door price for item 2 above; Whelen 500 series tir6 model 50c03zcr with wiring.</p>	<p>G</p> <p>H</p> <p>I</p> <p>J</p> <p>K</p> <p>L</p> <p>M</p> <p>N</p>
--	---

### Item 6: Tool Boxes

Item	Specifications (Minimum)	Bidders Proposal
		Describe:



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 33 of 157

<b>General Description</b>	<ol style="list-style-type: none"> <li>1. Construction: All Steel, 14 Gauge, full arc welds.</li> <li>2. Handles: Stainless Steel Paddle Handles with Key locks, stainless steel Hinges.</li> <li>3. Keys: Two (2) sets per box shall be furnished.</li> <li>4. Lids: Spring Assist.</li> <li>5. Doors: Double Panel (14 gauge), Chain supported.</li> <li>6. Hinges: Tamper Proof.</li> <li>7. Tool Trays: Shall be included.</li> <li>8. Color: Manufacturer's Standard White powder coat finish.</li> </ol>	<div style="border-bottom: 1px solid black; margin-bottom: 2px;">1</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">2</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">3</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">4</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">5</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">6</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">7</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">8</div>
<b>Item Description</b>	Manufacturer's Model # for Reference purposes only. All items shall meet or exceed.	<u>Describe:</u> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div>
<b>Options</b>	<ol style="list-style-type: none"> <li>A. Double lid cross box, Approx. 59-3/4-inches L x 69-1/2-inches Overall L. x 16-1/2-inches D x 20-inches W. For full size pickups (Fleetside). RKI model ST63 or equal.</li> <li>B. Double lid (wide deep) cross box. Approx. 59-3/4-inches L x 69-1/2-inches Overall L. x 25-1/2-inches D x 30-inches W. For full size pickups. (Fleetside type). RKI model ST63WD or equal</li> <li>C. Double lid cross box. Approx. 59-3/4-inches L x 69-1/2-inches Overall L. x 16-1/2-inches D x 30-inches W. For full size pickups. (Fleetside Type). RKI model ST63W or equal.</li> <li>D. Double lid cross box. Approx. 37-1/2-inches L x 62-1/2-inches Overall L x 17-inches deep x 20-inches W. For mid-size trucks (Fleetside), RKI model ST56U or equal.</li> <li>E. Single lid box. Approx. 69-7/8-inches L x 17-1/4-inches D x 20-inches W. For full size pickups (Fleetside), RKI model C63 or equal.</li> <li>F. Single lid box. Low profile. Approx. 63-inches L x 13.5-inches D x 19.25-inches W. For Mid-size trucks (Fleetside). UWS model UWSTBS63ALPBLK or equal.</li> <li>G. Single lid box. Approx. 62-1/2-inches L x 17-1/4-inches D x 20-inches W. For mid-size pickups (Fleetside). RKI model C56 or equal.</li> <li>H. Upper side box. Approx. 78-inches L x 16-1/2-inches D x 12-1/2-inches W. Two Doors. RKI model US78C or equal</li> <li>I. Upper side box. Approx. 90-inches L x 16-1/2-inches D x 12-1/2-inches W. Two door. RKI model</li> </ol>	<u>Describe:</u> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">A</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">B</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">C</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">D</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">E</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">F</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">G</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">H</div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; margin-bottom: 2px;">I</div>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 34 of 157

- US90C or equal.
- J. Upper side box. Approx. 96-inches L x 16-1/2-inches x 12-1/2-inches W. Two door. RKI model US96C or equal.
- K. Underbody box. Approx. 24-inches L x14-inches D x 16-inches W. One door. Frame mounted and welded to crossmembers. RKI model H241416 or equal.
- L. Underbody box. Approx. 24-inches L x18-inches D x 18-inches W. One door. Frame mounted and welded to crossmembers. RKI model H241818 or equal.
- M. Underbody box. Approx. 36-inches L x14-inches D x 16-inches W. One door. Frame mounted and welded to crossmembers. RKI model H361416 or equal.
- N. Underbody box. Approx. 36-inches L x18-inches D x 18-inches W. One door. Frame mounted and welded to crossmembers. RKI model H361818 or equal.
- O. Underbody box. Approx. 48-inches L x18-inches D x 18-inches W. One door. Frame mounted and welded to crossmembers. RKI model H481818 or equal.
- P. Underbody box. Approx. 60-inches L x18-inches D x 18-inches W. One door. Frame mounted and welded to crossmembers. RKI model H601818 or equal.
- Q. Tool box. Approx. 96-inches L x 18-inches D x 18-inches W. Two doors. Mounted on top of flatbed or stacked. RKI model H961818 or equal.
- R. Over wheel well tool box. Approx. 51-inches L x 13-3/16-inches D x 8-inches -13-11/16-inches W. RKI 50S or equal.
- Window Grills and Racks.
- S. RKI model numbers.
1. Model WG-3 (For mid-size pickups. Ranger, Colorado, Tacoma)
  2. Model WG-10 (For full size wide pickups. F150, Silverado, 1500 Ram)
  3. Model WG-11 (For service body beds.
  4. Model RG-10 Bow type bracket (For 1/2 -ton trucks)
  5. Model RG-11 Bow type bracket (For Super Duty Trucks)
  6. Model LR049US Bow type tubular bracket (For Service body type beds)

J	
K	
L	
M	
N	
O	
P	
Q	
R	
S	
1	
2	
3	
4	
5	
6	



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 35 of 157

**Item 7: Fire Extinguisher**

Item	Specifications (Minimum)	Bidders Proposal
Fire Extinguisher	Furnish and install a 2 ½ lb., size 1, type ABC, fire extinguisher in cab of vehicle.	Describe: Make: Model:

**Item 8: Safety Triangles**

Item	Specifications (Minimum)	Bidders Proposal
Safety Triangles	Furnish a set of reflective safety triangles in cab of vehicle. Set to include three (3) reflective triangles in a carrying case.	Describe: Make: Model:

**Item 9: Backup Alarm**

Item	Specifications (Minimum)	Bidders Proposal
Backup Alarm	Furnish and install a 97db backup alarm, PSE model D50H or equal on pickups, vans, SUV's, flatbed trucks, contractor bed trucks, dump body trucks, utility service bodies, etc.	Describe: Make: Model:

**Item 10: Electric Brake Controller**

Item	Specifications (Minimum)	Bidders Proposal
Electric Brake Controller	Furnish and install an electric brake controller in cab of vehicle with a 6 way round pin (NOT RV SLOTTED) light connector at rear of vehicle. Vehicles will range from pickups to large trucks. Kelsey Model 81741B or equal.	Describe: Make: Model:

**Item 11: Trailer Light Connector 6 or 7 way**

Item	Specifications (Minimum)	Bidders Proposal
------	--------------------------	------------------



<p>Trailer Light Connector</p>	<p>Furnish and install a round pin, 6-way female light connector at the rear of the following vehicles. Each female connector socket installation shall also include a 6 to 7-way electrical adaptor, Velvac model 591010 or equal, enabling the vehicle to connect to either 6 or 7-way plugs.</p> <p>Installation to include all material required to mount the female connector. On utility service bodies, contractor's beds, flatbeds, dump bodies, etc. Mount the electrical connector high enough and to the left of center so as not to be damaged by sharp turns by the trailer.</p> <p>Velvac model BLO55052 or 7-way Velvac model #593083 or equal.</p> <p>A.</p>	<p><u>Describe:</u></p> <p><u>Make:</u></p> <p><u>Model:</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Options:</p>	<p>A. Cars.</p> <p>B. Pickups.</p> <p>C. Vans.</p> <p>D. SUV's.</p> <p>E. Utility Service Bodies.</p> <p>F. Contractor's Beds.</p> <p>G. Flatbeds.</p> <p>H. Dump Bodies.</p> <p>I. 6-Way to 7-way adaptor.</p>	<p><u>Describe:</u></p> <p><u>A</u> _____</p> <p><u>B</u> _____</p> <p><u>C</u> _____</p> <p><u>D</u> _____</p> <p><u>E</u> _____</p> <p><u>F</u> _____</p> <p><u>G</u> _____</p> <p><u>H</u> _____</p> <p><u>I</u> _____</p>

### Item 12: Hitch, Receiver type

Item	Specifications (Minimum)	Bidders Proposal
Receiver Hitch	<p>Furnish and install a receiver type hitch with tongue and a two (2") inch (or 2 5/16" ball when specified). To include all materials and related items to mount the hitch.</p> <p>Include a 6-way female connector, round 6 pin truck application, Velvac model BL055052 or equal.</p> <p>Include a 6 to 7-way adaptor plug.</p> <p><b>The largest hitch allowed such as a 10,000 lb hitch shall be installed whenever the GVW and vehicle type allows.</b></p>	<p><u>Describe:</u></p> <p><u>Make:</u></p> <p><u>Model:</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p>A. Cars, Class I, 2,000 lb.</p> <p>B. Vans, Class II, 3,500 lb.</p>	<p><u>Describe:</u></p> <p>A _____</p> <p>B _____</p>





**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 38 of 157

Options:	<p>A. Pintle hitch &amp; tongue including an 8,000 lb. receiver hitch mounted on 6,000 lb. pickups. (A hitch may not be installed on the new Ford 6,000 GVW pickups if a lift gate is utilized due to mounting problems.)</p> <p>B. Pintle Hitch and Tongue including a 10,000 lb. receiver hitch mounted on 8,500 GVW Pickups.</p> <p>C. Pintle Hitch w/3,500 lb. Capacity Receiver Hitch w/Tongue &amp; Ball on SUV'S.</p> <p>D. Pintle Hitch and Tongue including a 3,500 lb. receiver hitch mounted on vans.</p> <p>E. Pintle Hitch w/a 10,000 lb. Receiver Installed on Flatbeds, Contractor Bodies, Utility Service Bodies. Include reinforcement material plus all mounting hardware.</p> <p>F. Pintle Hitch w/ a mounted on tongue only, NO HITCH.</p>	<p><u>Describe:</u></p> <p>A _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>B _____</p> <p>_____</p> <p>_____</p> <p>C _____</p> <p>_____</p> <p>D _____</p> <p>_____</p> <p>E _____</p> <p>_____</p> <p>_____</p> <p>F _____</p> <p>_____</p> <p>_____</p>
----------	--	---

**Item 14: Pintle Hitch Holland-Model PH210 Air Actuated**

Item	Specifications (Minimum)	Bidders Proposal
Air Pintle Hitch	<p>Furnish and install a Holland Model PH210 or acceptable equal air operated pintle hitch with a capacity of 90,000 lb. Gross Trailer Capacity and 18,000 lb. Vertical Load and include two Crosby 341, 1-inch weldless link trailer rings. To be installed on Flatbed trucks, Contractor and Utility Service bodies, and rear of Dump Trucks with air brakes. Include all materials required to mount or reinforce the hitch to dump trucks, flatbeds, utility bodies, etc.</p> <p>A 7-way electrical connector shall be provided and air supply with glad hands. Mount glad hands approx. 2-feet left and right of center in such a fashion that a trailer will not damage them in case of a sharp turn. The electrical connection shall be mounted up and left of center to avoid any damage from sharp turns. On dump trucks they must not hinder the dumping of materials.</p>	<p><u>Describe:</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

**Item 15: Lift Gates**

Item	Specifications (Minimum)	Bidders Proposal
------	--------------------------	------------------





	vans, utility service bodies.	
D.	1,300 lb. Dump thru type Liftgate for 1-ton walkthrough vans, panel vans, delivery and cube vans, utility service bodies.	<u>Make:</u> <u>Model:</u>
E.	1,300 lb. Standard Type Liftgate for stake bodies and contractor beds.	<u>Make:</u> <u>Model:</u>
F.	1,300 lb. Dump Thru type Liftgate for stake bodies and contractor beds.	<u>Make:</u> <u>Model:</u>
G.	1,600 lb. Standard type Liftgate for 1-ton walkthrough vans, panel vans, delivery and cube vans, utility service bodies.	<u>Make:</u> <u>Model:</u>
H.	1,600 lb. Dump thru type Liftgate for 1-ton walkthrough vans, panel vans, delivery and cube vans, utility service bodies.	<u>Make:</u> <u>Model:</u> <u>Describe:</u>
I.	1,600 lb. Standard type Liftgate for stake bodies and contractor dump beds.	<u>Make:</u> <u>Model:</u>
J.	1,600 lb. Dump thru type Liftgate for stake bodies and contractor dump beds.	<u>Make:</u> <u>Model:</u>

**Item 16: Light Bar Assembly, Non-Emergency, Low profile**

[illegible]



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 41 of 157

	<p>reach of the driver. Unit shall be mounted so that <b><u>no holes</u></b> are drilled into the top of the cab.</p> <p>Electrical wiring is not to be less than 12 gauge.  Size: Approx. 2-1/2-inchesH x 48-inchesW x 12-inches D</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Options:	<p>Lens: The light colors on the bar shall be two different configurations;</p> <p>16A. Work Vehicle Installed: Model IW8AAAA,  Front: Red on the corners, Amber, Amber Clear, Clear, Amber &amp; Amber.  Rear: Red on the corners, Blue, Amber, Blue, Blue, Amber &amp; Blue.</p> <p>16B. Work Vehicle <b>Not</b> Installed, walk out the door price: Model IW8AAAA:  Front: Red on the corners, Amber, Amber Clear, Clear, Amber &amp; Amber.  Rear: Red on the corners, Blue, Amber, Blue, Blue, Amber &amp; Blue.</p> <p>16C. Security Vehicle Installed: Model IW8RRRR  Clear, Amber, Amber, Amber, Amber &amp; Clear.</p> <p>16D. Security Vehicle <b>Not</b> Installed, walk out the door price: Model IW8RRRR  Clear, Amber, Amber, Amber, Amber &amp; Clear.</p>	<p><u>Describe:</u></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p>16A</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p>16B</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p>16C</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p>16D</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

**Item 17: Non-Emergency 8 Light Traffic Advisor**

Item	Specifications (Minimum)	Bidders Proposal
General Description	<p>When specified Vehicles shall have one (1) Whelen model TA852L (or equal) low-profile Traffic Advisor directional light bar with eight (8) Amber colored LED lamp groups.  Size: 1-7/16-inchesH x 2 9/16-inchesW x 43 7/8-inches L</p> <p><u>Installation</u></p> <p>A. The unit is to be wired through a relay to the battery and fused with an appropriate spade type in-line</p>	<p><u>Describe:</u></p> <p>Make: <hr/></p> <p>Model: <hr/></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p>A <hr/></p> <hr/> <hr/>

[illegible]

### **Item 18: Bed Liners**

Item	Specifications (Minimum)	Bidders Proposal
General Description	All prices to include installation. <b>Options:</b> Drop-In Style Bed liner: Made of a hard plastic. Furnish and install full ¼-inch thick bed liner in pickup bed including tailgate liner. 18A. Full Size 8 ft Bed 18B. Full Size Short 6 ft Bed 18C. Compact or Mid-Size Long Bed 18D. Compact or Mid-Size Short Bed  Rubber Mat Material: Minimum contoured ¼” thick non-skid rubber bed mats (like mud flap material) for floor of pickup bed. 18E. Full Size 8 ft Bed 18F. Full Size Short 6 ft Bed 18G. Compact or Mid-size Long Bed 18H. Compact or Mid-size Short Bed  Spray-In Bed Liner:	<u>Describe:</u>       18A 18B 18C 18D       18E 18F 18G 18H     

[illegible]

**Item 19: Winch, 8,000 lb.**

Item	Specifications (Minimum)	Bidders Proposal
General Description	<p>Furnish and install a 12-volt front mounted, line pull of 8,000 lb. with 95 ft. (minimum) of 5/16-inch galvanized aircraft cable with replaceable clevis hooks. Warn, model M8, winch or equal.</p> <p>To be installed using Westin grill guard or equal on the following types of vehicles. Include all mounting materials and related items. F150 Model WES57-93835; F250 and up Model WES57-93095 or equal.</p> <p>Options:</p> <p>19A. Pickups 6,000 GVW to 9,500 GVW.</p> <p>19B. Heavy Duty Trucks from 9,600 GVW to 17,500 GVW.</p> <p>19C. Mounted in Bed of Heavy-Duty Trucks from 9,600 GVW to 17,500 GVW.</p>	<u>Describe:</u>
		19A
		19B
		19C

### Item 20: Inverter

Item	Specifications (Minimum)	Bidders Proposal
Equipment General	Current year model power inverter equal to a 2400-	Describe: Make:_____



[illegible]

## **Item 21: Chains Trailer Safety**

[illegible]





**CITY OF  
Tulsa**  
A New Kind of Energy.

**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 47 of 157

F. Class V (not to exceed 30,000 lb.) Qty (2) S341 1-  
inch weldless sling link Working Load  
Limit=10,800 lb. – UL=64,800 lb.

F

**CITY OF TULSA STANDARD NO. 000085**

Appendix 701-A

Trailer Safety Chain Specifications by Part

Hook Detail

All hooks will be Crosby Grade 8 Alloy Steel Latching Clevis Hooks, (heat treated), which meets the new NACM and proposed ASTM and Euronorm Standards for Grade 8 Chain fittings. The hooks are anti-fouling due to carefully designed contours and are individually Proof Tested at 2 1/2 times the Working Load Limit, with certification, packed with each hook. These hooks are also fatigue rated. The Ultimate Load is 4 times the Working Load Limit. Crosby Part #S314A. (Domestic Only, Crosby or Equal and Certificate of Compliance Required).

Chain Detail

All Chain will be equal to Crosby Spectrum 8 Alloy Chain. Proof loaded a 2 1/2 times Working Load Limit, and a minimum Ultimate Load of 4 times the Working Load Limit. Purchasing information, (Domestic Only, Crosby or Equal and Certificate of Compliance Required).

Connecting Link Detail

Crosby Lok-A-Loy Alloy Connecting Link, Quenched and Tempered are individually Proof Tested Forged Alloy Steel. The Ultimate Load is 4 times the Working Load Limit. Purchasing information, (Domestic Only, Crosby or Equal and Certificate of Compliance Required).

Weldless Sling Links

Crosby Forged Carbon Steel, Quenched and Tempered. The Ultimate Load is 6 times the Working Load Limit. These links must be equal to the Crosby S341. Purchasing information (Domestic Only, Crosby or Equal and Certificate of Compliance Required).

Containment Unit for Weldless Links

The steel strips which will be made in accordance with Attachment "I" will contain the Weldless Sling Links to the trailer and pulling vehicle.

Weldless Link Holding Device

The weldless link is 1 inch in diameter. A steel strip will be heated and formed over a 1-1/4 inch round bar. The steel strip will then be placed over weldless link and welded on all three sides up to where the steel strip fits over weldless link. The weld strength should be a minimum of 60,000 pounds per square inch. The steel strip dimensions will be : 3/8 inch thick, 8 inches long and 2-1/2 inches wide and should be Grade: A36 material.





**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 48 of 157

**Item 22: Conspicuity Tape**

Item	Specifications (Minimum)	Bidders Proposal
General	Install Conspicuity tape on the rear of all vehicles that are not having bodies installed. 12-feet minimum of tape.	<u>Describe:</u> <hr/> <hr/> <hr/>

**Item 23: Stake Bodies**

Item	Specifications (Minimum)	Bidders Proposal
General Description	This specification shall provide for steel stake bodies, new, the latest current production mode. Complete with manufacturer's standard equipment and accessories, fully serviced ready to operate. To include manufacturer's certificate or warranty and be bid less all applicable State and Federal Taxes. (Warranty shall be the standard for the industry as offered to the public.) This body shall be equipment to meet all Federal and State of Oklahoma Safety Standards and Requirements. No dealer advertisement shall be affixed to the bed. Conspicuity Reflective tape shall be applied to rear of all bodies for safety.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Type:	Heavy-Duty quality	<u>Describe:</u> <hr/>
Mainsills	Structural channel Mainsills as follows: 1. 8-feet 6-inches to 9-feet 6-inches Bodies to have minimum 4-inches 2. 10-feet 6-inches to 14-feet 6-inches Bodies to have minimum 6-inches 3. 15-feet 6-inches to 20-feet 6-inches Bodies to have minimum 7-inches 4. 22-feet 6-inches to 24-feet 6-inches Bodies to have minimum 8-inches	<u>Describe:</u> <hr/> 1 <hr/> <hr/> 2 <hr/> <hr/> 3 <hr/> <hr/> 4 <hr/> <hr/>
Crossmembers	11-gauge formed crossmembers on approximately 12-inch centers on stake bodies 14-feet. or longer, and 16-inch centers for bodies shorter than 14-feet.	<u>Describe:</u> <hr/> <hr/> <hr/>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 49 of 157

End Rails & Side Rails	11-gauge steel thickness x approx. 6-inches equipped with 2X4 stake pockets reinforced. Welded and smoothed 45 deg corners	Describe: _____ _____ _____
Floor	3/16-inch Thick, Steel Treadplate	Describe: _____
Lights and Reflectors	Dual Wheel, Standard lighting, recessed and in accordance with all State of Oklahoma and Federal laws governing highway safety. Install Conspicuity tape on the rear on the bed. 12-feet minimum.	Describe: _____ _____ _____ _____
Warranty	Platforms, bulkheads and side assemblies will be covered by a minimum of 12 months manufacturer's warranty.	Describe: _____ _____ _____

**MOUNTING INSTRUCTIONS:** Mounting shall be consistent with normal practice for bodies of this type.

**NOTE:**

Seller must NOT remove identification plates or numbers on the truck. This especially applies to the truck transmission when take off is installed. If, during installations, it becomes necessary to remove these plates or cover these numbers, then these numbers and/or plates must be replaced in a visible location.

**ELECTRICAL WIRING:**

Wiring is to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, spl and wiring to be protected by all-weather insulation. This insulation material to be of sufficient quality to insure a life period of five years.

**POWER TAKE-OFF:** (If required) must be the latest current model installed and/or adapted to fit the transmission. Mounting screws must provide adequate self-locking and sealing to insure against oil leaks and must keep housing firmly attached to transmission.

**PAINT:** All exposed metal shall be primed and painted. The bed shall be sprayed or dipped with a protective metal primer, then painted Factory White to match vehicle.

**NOTE:** Bed Widths to be minimum 94" wide

**SIZES:**

**Bidders Fill out sections in Yellow**

Item	Approx Length	Approx. Cab to Axle	Bidders Proposal	
A	8'6"	56"	Actual Length: _____	Make: _____
			Cab to Axle Required: _____	Model: _____
B	9'6"	60"	Actual Length: _____	Make: _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 50 of 157

			<u>Cab to Axle Required:</u>	<u>Model:</u>
C	10'6"	84"	<u>Actual Length:</u>	<u>Make:</u>
			<u>Cab to Axle Required:</u>	<u>Model:</u>
D	12'6"	84"	<u>Actual Length:</u>	<u>Make:</u>
			<u>Cab to Axle Required:</u>	<u>Model:</u>
E	14'6"	108"	<u>Actual Length:</u>	<u>Make:</u>
			<u>Cab to Axle Required:</u>	<u>Model:</u>
F	16'6"	120"	<u>Actual Length:</u>	<u>Make:</u>
			<u>Cab to Axle Required:</u>	<u>Model:</u>
G	18'6"	120"	<u>Actual Length:</u>	<u>Make:</u>
			<u>Cab to Axle Required:</u>	<u>Model:</u>
H	20'6"	150"	<u>Actual Length:</u>	<u>Make:</u>
			<u>Cab to Axle Required:</u>	<u>Model:</u>
I	22'6"	150"	<u>Actual Length:</u>	<u>Make:</u>
			<u>Cab to Axle Required:</u>	<u>Model:</u>
J	24'6"	165"	<u>Actual Length:</u>	<u>Make:</u>
			<u>Cab to Axle Required:</u>	<u>Model:</u>

Options:		<u>Describe:</u>
		1 _____
	1. Stakes 14-Gauge roll formed Steel contractor sides, Approx. 14-inches high, Removable	2 _____
	2. Stakes 14-Gauge roll formed Steel city stake sides, Approx. 40-inches high, Removable	3 _____
	3. Floor Wood, 2-inch Nominal Tongue & Groove Southern Pine, Pressure treated	4 _____
	4. Floor; 1-3/8-inch Apitong Wood Floor	5 _____
	5. Floor: 3/16-inch Thick, Smooth Steel	6 _____
	6. Bulkhead: 12-Gauge Steel, reinforced with full visibility window, and side wings. (Expanded metal window protection)	7 _____
	7. Tail Roller 4" Dia. x 49" Long mounted on roller bearings	8 _____
	8. Solid Tail Pipe – solid tail pipe on bed 4" Dia. x approx. 49" Long. Pipe with no bearings to form a rounded surface for items to slide over edge of bed. Solid mount.	_____
		_____
		_____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 51 of 157

	<p>9. Lift Gate, Hydraulic, 1300 lb. capacity.</p> <p>10. Reinforcement for Electric Hoist curbside rear up to 3200 lb. Crane. (Shall include spring reinforcement if necessary to correct any side tilt of body)</p> <p>11. Reinforcement for hydraulic Hoist curbside rear up to 5,000 LB Crane (Shall include spring reinforcement if necessary to correct any side tilt of body)</p>	<p>9 _____</p> <p>10 _____</p> <p>_____</p> <p>_____</p> <p>11 _____</p> <p>_____</p> <p>_____</p>
--	--	--

**Item 24: Contractors Body**

Item	Specifications (Minimum)	Bidders Proposal
General	<p>This specification shall provide for steel hydraulic dump beds new, the latest current production model. Complete with manufacturer's standard equipment and accessories, fully serviced, ready to operate. To include manufacturer's certificate or warranty. (Warranty shall be the standard for the industry as offered to the public.) This body shall be equipment to meet all Federal and State of Oklahoma Safety Standards and Requirements.</p> <p>No dealer advertisement shall be affixed to the bed. Conspicuity Reflective tape shall be applied to rear of all bodies for safety.</p>	<p><u>Describe:</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
Type	Heavy-Duty Contractor's Dump Body	<p><u>Describe:</u></p> <p>_____</p>
Mainsills	6-inch 8.2 lb./ft. Structural Channel Mainsills	<p><u>Describe:</u></p> <p>_____</p>
Crossmembers	11-Gauge formed crossmembers on approximately 12-inch centers	<p><u>Describe:</u></p> <p>_____</p>
End Rails & Side Rails	11-Gauge steel thickness equipped with 2x4 stake pockets reinforced. Welded and smoothed 45-deg. Corners. Install 14-inch high steel sides.	<p><u>Describe:</u></p> <p>_____</p> <p>_____</p> <p>_____</p>
Lights and Reflectors	Dual wheel, standard lighting recessed and in accordance with all State of Oklahoma and Federal laws governing highway safety. Install Conspicuity tape on the rear on the bed. 12-feet minimum.	<p><u>Describe:</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 52 of 157

Floor	2-inch x 6-inch tongue and grooved kiln dried number 1 dense Southern Pine, Pressure treated.	<u>Describe:</u>  
Bulkhead	Full visibility type. 12-gauge galvalume steel, and 10-gauge side support gussets. Expanded metal window. 40-inches high.	<u>Describe:</u>  
Tailgate/ Liftgate	<p>Dump thru power gate. To be an integral part of the total unit. A vertical lift capacity of 1,600 lb. Gate should have the following features:</p> <p>A. 150- amp heavy duty circuit breaker w/manual trip switch to protect battery and electrical system.</p> <p>B. Control lever- inside of the upright curbside rear.</p> <p>C. Audible safety alarm.</p> <p>D. Chrome plated cylinder shaft.</p> <p>E. Hydraulics: Hydraulics are totally enclosed. Electric/hydraulic power unit has a built-in relief valve to prevent overloading. In-line flow control valve-controls the speed of the oil.</p> <p>F. Drop-away platform.</p> <p>G. Liftgate housing: 8-ga. Steel front, 10-ga. Steel rear. Upright housing: 10-ga. Steel upright.</p> <p>H. Reinforced single-wall platform with torsion spring: 12-ga. Smooth steel load skin. Outer platform edge protection tube 7/8-inch dia. "D" hole pins with snap rings for arm pins.</p> <p>I. Liftgate cable: 5/16-inch dia. 6-inch x 36-inch stranded cable.</p> <p>J. Dump-thru tailgate release handle: single lever dump-thru tailgate release mechanism located on driver's side of truck.</p>	<u>Describe:</u>  A  B  C  D  E  F  G  H  I  J  
Hoist	<p>NTEA Class B Hoist with standard double acting cylinder</p> <p>A. Cylinder bore: 4-inch</p> <p>B. Cylinder stroke: 15¼-inch</p> <p>C. Cylinder shaft is chromed SW85 steel, 85,000 PSI yield strength</p> <p>D. Maximum operating pressure: 3250 PSI</p> <p>E. 50 degree dumping available</p> <p>F. 9-inch mounting height</p> <p>G. 4-GPM direct mount gear pump, open center valve mounted to a 15-quart capacity reservoir, self-centering locking sealed cable control with pedestal stand.</p>	<u>Describe:</u>  A  B  C  D  E  F  G  



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 53 of 157

Mounting Instructions:	Mounting shall be consistent with normal practice for bodies of this type.	Describe: _____ _____
Warranty	Body will be covered by a minimum of 12-month manufacturer's warranty. Bidder shall provide a manufacturer's written 5-year warranty covering repair or replacement of the hoist and air cylinder for defective material and/or workmanship.	Describe: _____ _____ _____ _____ _____

**NOTE:**

Seller must **NOT** remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take-off is installed. If, during installations, it becomes necessary to remove these plates or cover these numbers, then these numbers and/or plates must be replaced in a visible location.

**ELECTRICAL WIRING:**

Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, splices and wiring to be protected by all-weather insulation. This insulation material to be of sufficient quality to insure a life period of five (5) years.

**POWER TAKE-OFF:**

(If required) must be the latest current model installed and/or adopted to fit the transmission. Mounting bolts or screws must provide adequate self-locking and sealing to insure against oil leaks and must keep housing firmly attached to transmission.

**PAINT:**

All exposed metal shall be primed and painted. The bed shall be sprayed or dipped with a protective metal primer, then be painted Factory White to match vehicles.

**Bidders fill out sections in Yellow**

Item	Approx Length	Approx. Cab to Axle	Bidders Description	
A	8'6"	56"	Actual Length: _____	Make: _____
			Cab to Axle Required: _____	Model: _____
B	9'6"	60"	Actual Length: _____	Make: _____
			Cab to Axle Required: _____	Model: _____
C	10'6"	84"	Actual Length: _____	Make: _____
			Cab to Axle Required: _____	Model: _____
D	12'6"	84"	Actual Length: _____	Make: _____
			Cab to Axle Required: _____	Model: _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 54 of 157

E	14'6"	108"	Actual Length:	Make:
			Cab to Axle Required:	Model:
F	16'6"	120"	Actual Length:	Make:
			Cab to Axle Required:	Model:

Options	1. Floor: 3/16-inch Thick Steel, Treadplate 2. Floor: 3/16-inch Thick Steel, Smooth 3. Contractors Sides: 14-inch high x 14-gauge solid steel sides with tail gate, removeable.	Describe:

**Item 25: Service Body, Utility Type**

Item	Specifications (Minimum)	Bidders Proposal
General	This specification shall provide for new steel utility service body, the latest current production model. Complete with manufacturer's standard equipment and accessories, fully serviced ready to operate. To include manufacturer's certificate of warranty. (Warranty shall be the standard for the industry as offered to the public.) This body shall be equipped to meet all Federal and State of Oklahoma Safety Standards and Requirements. No dealer advertisement shall be affixed to the body. Conspicuity Reflective tape shall be applied to rear of all bodies for safety.	Describe: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
Type	Heavy duty utility service body installed. Note: All Body parts are to be electrically welded into one integral unit	Describe: _____ _____ _____
Understructure	1. 7-gauge minimum, high strength steel formed cross members front and rear of body. 2. 7-gauge minimum, high strength steel formed intermediate cross members. 3. 4 full-length 14-gauge formed "hat" channel longitudinal for full-length floor support.	Describe: 1 _____ 2 _____ 3 _____ _____
Floor	12-gauge tread plate floor.	Describe: _____ _____



Doors	<ol style="list-style-type: none"> <li>1. Double panel doors with 20-gauge galvanized outer panel and 20-gauge galvanized inner panel.</li> <li>2. Stainless steel rod door pins</li> <li>3. Stainless steel pillow blocks with self-lubricating bushings (3) per door.</li> <li>4. Stainless steel paddle latches, lockable.</li> <li>5. Heavy-duty chain or cable supports on horizontal doors.</li> <li>6. Gas shocks door retainers on vertical doors.</li> <li>7. Automotive neoprene door seal.</li> </ol>	<u>Describe:</u> 1  2 3  4 5  6 7
Body	<ol style="list-style-type: none"> <li>1. Full 14-gauge galvanized construction.</li> <li>2. Seamless fender panel.</li> <li>3. 4 front 16-gauge galvanized shelving is adjustable on 2-foot centers.</li> <li>4. Shelving is slotted for adjustable dividers on 2-inch centers.</li> <li>5. Approx. 20 adjustable dividers for compartment shelving.</li> <li>6. 2 rear 16-gauge Galvanized shelves adjustable on 4-inch centers.</li> <li>7. Nylon coated stainless steel cables to support tailgate.</li> <li>8. Body fully undercoated per OSHA and NFDA specifications.</li> <li>9. 5-year manufacturer's standard warranty. Does not apply to normal wear and tear.</li> <li>10. 12-gauge A40 galvanized step type rear bumper with treadplate surface. Full-step recessed for a pintle hitch or ball hitch plate safety type bumper. Bumper to include reinforcement for a 5,000 lb. trailer capacity.</li> </ol>	<u>Describe:</u> 1 2 3 4 5 6 7 8 9 10
Compartments	Four (4) to six (6) Compartments per side approx. 15-inch deep on 8,600 GVW and 20-inc Deep on 108-inch body, Eight (8) compartments on 132-inch body with long horizontal compartment over wheel house and rear compartment on both street side and curb side.	<u>Describe:</u>     
Lights and Reflectors	Standard lighting recessed and in accordance with all State of Oklahoma and Federal laws governing highway safety. Install Conspicuity tape on the rear on the bed. 12-feet minimum.	<u>Describe:</u>    



Bidder to fill out the portion in Yellow below.

DIMENSIONS					
	Model Length Requested	Approx. Overall Height	Approx. Cab to Axle	Chassis Size	Wheel Well Type
A.	96" "H" Model (See Notes)	40"	56"	8,500 GVW	Single
<b>A.</b>	Bidder Fill Out This Row: Bidders <u>Make:</u> Bidders <u>Model:</u>	Actual HT. <u>                    </u>	Actual CA <u>                    </u>	Actual Chassis Size <u>                    </u>	Actual Wheel well Type <u>                    </u>

B.	96" "V" Model (See Notes)	40"	56"	8,500 GVW	Single
B.	Bidder Fill Out This Row: Bidders Model:	Actual HT.	Actual CA	Actual Chassis Size	Actual Wheel well Type



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 57 of 157

C.	96" "Low Profile" Model (See Notes)	36"	56"	8,500 GVW	Single
C.	Bidder Fill Out This Row: Bidders Make: _____ Bidders Model: _____	Actual HT. _____	Actual CA _____	Actual Chassis Size _____	Actual Wheel well Type _____
D.	108" Model	44"	60"	10,000 GVW	Dual
D.	Bidder Fill Out This Row: Bidders Make: _____ Bidders Model: _____	Actual HT. _____	Actual CA _____	Actual Chassis Size _____	Actual Wheel well Type _____
E1.	108" "Low Profile" Model (See Notes)	36"	60"	10,000 GVW	Single Available
E2.	108" "Low Profile" Model (See Notes)	36"	60"	10,000 GVW	Dual Available
E1.	Bidder Fill Out This Row: Bidders Make: _____ Bidders Model: _____	Actual HT. _____	Actual CA _____	Actual Chassis Size _____	Actual Wheel well Type _____
E2.	Bidder Fill Out This Row: Bidders Make: _____ Bidders Model: _____	Actual HT. _____	Actual CA _____	Actual Chassis Size _____	Actual Wheel well Type _____
F.	132" Model	44"	84"	10,000 GVW	Dual
F.	Bidder Fill Out This Row: Bidders Make: _____ Bidders Model: _____	Actual HT. _____	Actual CA _____	Actual Chassis Size _____	Actual Wheel well Type _____

**NOTE: Models with "H" designation to have Full height vertical compartments front and rear with a horizontal center compartment over wheel well.**  
**Models with a "V" designation to have full height compartments front with a center horizontal compartment extending to the rear of body and an 18" vertical compartment rear.**

**Options**

OPTIONS	Describe:
1. <u>Bumper w/liftgate cutouts</u> When a liftgate is installed, the bumper shall be notched out to allow the lift gate arms to operate through the bumper. The edges of notched portion shall be ground smooth and dressed so no sharp edges or metal is protruding.	1 _____ _____ _____ _____ _____
2. <u>Top-Pak</u> Integral top opening lid each side. All	2 _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 58 of 157

	Galvannealed Steel, Weather-Proof Seal and Adjustable Storage dividers. Compartment runs full length of body, 4" deep.	
3.	<u>High Roof:</u> With Heights from Floor to Roof 54-inch, 60-inch or 72-inch with (2) 4-inch diameter gravity air vents, water proof. All panel assemblies.	3
	3A. 108-inch body with 54-inch high roof.	3A
	3B. 108-inch body with 60-inch high roof.	3B
	3C. 108-inch body with 72-inch high roof.	3C
	3D. 132-inch body with 54-inch high roof.	3D
	3E. 132-inch body with 60-inch high roof.	3E
	3F. 132-inch body with 72-inch high roof.	3F
	3G. Roll up rear door with high roof.	3G
	3H. Pair of conduit doors, one (1) on each side with high roof.	3H
	3I. Overhead mounted Ladder Rack.	3I
	3J. Side mounted Ladder Rack.	3J
4.	<u>Crane Base</u> Right rear curbside corner reinforcement for 108-inch and 132-inch long bodies only, up to a 3,200 lb. crane, 16,000 ft. lb. capacity. <u>Include any spring reinforcing to correct any body tilt.</u>	4
5.	<u>Additional Shelving for 108-inch Body Dividers</u> and shelving shall be 18-gauge G60 minimum spangle galvanized steel, slotted on 2-inch centers for dividers, removable, lock in place and include the following: 1 set (4/set) 17-inch deep divided trays for front vertical cabinet (2 ea. side). 1 set (4/set) 17-inch deep trays, 2 <sup>nd</sup> vertical cabinet from cab, driver's side. 1 set (3/set) 17-inch deep trays for horizontal cabinet on driver's side. 1 set (3/set) 12-inch deep trays for horizontal cabinet on curb side. 2 sets (3/set) 17-inch deep trays for rear cabinet, driver & curbside (1 set each side). 4 drawers in 2 <sup>nd</sup> cabinet from cab, curbside: two (2) 4-inch drawers on top and (2) 6-inch deep drawers on bottom. 35 dividers for 17-inch deep trays. 18 dividers for 12-inch deep trays.	5
6.	<u>Additional Shelving for 132-inch Body:</u> Dividers and shelving shall be 18-gauge G60 minimum	6



**Picture depicts drawer configuration vs extra shelving pkg.**





**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 60 of 157

**Item 26: Crane Body 38,000 Ft/lb.**

Item	Specifications (Minimum)	Bidders Proposal
General	This specification shall provide for new 38K series crane body, the latest current production model. Complete with manufacturer's standard equipment and accessories, fully serviced ready to operate. To include manufacturer's certificate or warranty. (Warranty shall be the standard for the industry as offered to the public.) This body shall be equipped to meet all Federal and State of Oklahoma Safety Standards and Requirements. No dealer advertisement shall be affixed to the body. Conspicuity Reflective tape shall be applied to rear of all bodies for safety.	Describe: _____ _____ _____ _____ _____ _____ _____ _____ _____
Model	Auto Crane or equivalent. 84 Inch CA, 38,000 ft. lbs. Series Crane Body or acceptable equal, installed on 11,000 GVW TO 27,500 GVW Trucks (City of Tulsa will supply the cab and chassis). <b><u>The truck will very likely require a 90" Cab to Axle to allow room for the exhaust bracket if mounted on International trucks.</u></b>	Describe: _____ _____ _____ _____ _____ _____ _____ _____
Capacity	Capable of handling up to 38,000 ft-lb. of crane moment load in all positions of rotation. Be stable with full-load crane with rear outriggers fully deployed when mounted on adequate chassis as specified NO front corner outriggers are required for stability. <b><u>CRANE IS NOT INCLUDED IN SPECIFICATION.</u></b>	Describe: _____ _____ _____ _____ _____ _____ _____ _____
Structural Requirements	Overall dimensions (LxWxH) Approx. 132-inches x 94-inches x 48-inches. Inside vertical compartment height: 46-inches. For taller compartment height, see "Drop Well" in the options section. Inside vertical crane compartment height: Approx. 43-inches. Overall compartment depth: Approx. 22-inches (20-inches inside dimension) Weight (approximate): 2400 lb. for 46-inch tall. Minimum truck chassis of 11,400 lbs. GVWR, 34-inch frame rail width and heavy-duty reinforced frame. Compartment storage space: 126.55 cu. ft. for 46-	Describe: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____



**City of Tulsa,  
Oklahoma**  
Page 61 of 157

2-7-17

[illegible]



**City of Tulsa,  
Oklahoma**  
Page 63 of 157

Compartment 5:	Approx. 31-inches wide x 20-inches deep x 48-inches height. Six (6) drawer parts cabinet. Three drawers shall be 4-inches high and Three drawers shall be 6-inches high. Each drawer shall have adjustable dividers.	Describe: _____ _____ _____ _____
Compartment 6:	Approx. 24-inches wide x 20-inches deep x 48-inches height. One shelf with divider.	Describe: _____ _____ _____
Compartment 7:	Approx. 52-inches wide x 20-inches deep x 23-inches height. Divided tray for small parts.	Describe: _____ _____ _____
Compartment 8:	Approx. 25-inches wide x 20-inches deep x 48-inches height. Open space with three (3) material hooks. (Install shelf brackets minus shelves)	Describe: _____ _____ _____
Lights and Reflectors	Dual wheel, standard lighting recessed and in accordance with all State of Oklahoma and Federal laws governing highway safety. Install Conspicuity tape on the rear on the bed. 12-feet minimum.	Describe: _____ _____ _____ _____
Optional Features: (Price separately on Pricing page.)	<ol style="list-style-type: none"> <li>Shelving package for 38K Body, consisting of: <ol style="list-style-type: none"> <li>11 adjustable shelves</li> <li>1 shelf with small parts dividers</li> <li>1 shelf with book dividers</li> <li>3 material hooks</li> </ol> </li> <li>Tool tray 500-lb. rollout capacity, Latch closed</li> <li>Drop well – to increase front compartments to 60-inches tall for storage of gas bottles</li> <li>Bottle holders for secure storage of gas bottles</li> <li>Compartment lighting – Rope light in each compartment with switch in Compartment 4.</li> <li>Flood light – quartz type, 100,000 candle power, 2 lights with switch in compartment 4</li> <li>Crane boom support – adjustable to stowed boom angle</li> <li>Bumper: 24-inch workbench type with: Vise plate and storage compartment with lock. 10-ga. A40-galvanneal steel top plate Adhesive-back skid tapes for slip resistance Integral full body-width step with galvanized steel open tread floor grating</li> </ol>	Describe: <ol style="list-style-type: none"> <li>1 A B C D</li> <li>2</li> <li>3</li> <li>4</li> <li>5</li> <li>6</li> <li>7</li> <li>8</li> </ol>



**Tulsa**  
CITY OF  
A New Kind of Energy.

**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 64 of 157

	and a plate of sufficient thickness and strength to mount an approximate 16,000 lb. capacity pintle type hitch.	
9.	Bumper: 12-inch type with: 10-ga. A40-galvanneal steel top plate Adhesive-back skid tapes for slip resistance Integral full body-width step with galvanized steel open tread floor grating	9
10.	Furnish and install a 16,000 lb. Ball combination pintle hitch such as a Buyers or Kernis model with a 2 5/16-inch ball mounted to rear of body. Include all materials required for mounting. Provide a 6 way round pin plug connector.	10
11.	Valve key brackets shall be mounted above compartments on street side of vehicle. Brackets shall be mounted level, in a manner that provides use of entire length of body for longer keys. Brackets shall have a minimum of six (6) slots for keys and must provide positive locking mechanisms for securing keys.	11
12.	Ladder brackets shall be installed in interior of bed of truck on street side. Brackets shall be level to accommodate a twelve-foot ladder.	12







**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 67 of 157

Overall compartment depth: 22-inches approx.

Weight (approximate): 3,940 lbs. For 58-inches Tall

Minimum truck chassis of 20,500 lb. GVWR, 34-inch frame rail width and heavy-duty reinforced frame.  
(Truck Chassis to be provided by City of Tulsa)

Compartment storage space: 160 cu. ft. for 58-inches Tall

Cargo Area: 49.63-inch floor width. (without wheel wells)

11-ga. A40 galvaneal tread plate for: One-piece floor bulkhead plate. Sides with integral compartment tops.

**Tie Downs:** Six (6) heavy-duty tie downs in floor, 900-lb. rating each.

**Drip rail** – full length of body with integral gutter.

**Door hinges & pins:** Internal, stainless steel. Hinges to be adjustable.

**Door latches:** Compression style T-handle with adjustable cam.

**T-handle:** Black powder coated / black housing. Zinc die cast with high impact BKV 133 plastic latch housing. Low profile design with large gripping surface. Stainless steel, spring loaded padlock eye. Compression mechanism is supported by a roller bearing for smooth actuation. Tamper resistant locking mechanism. Double-sided key. Individual body keying.

**Door retainers:** Adjustable spring-loaded assemblies Zinc plated components.

**Door frame gasket:** 80-durometer sponge and solid rubber. Bulge size .62-inches wide x .75-inches tall. Withstand 1 ½ ft-lb. impact @ -20° F. Heat resistance 150° F max. Self-extinguishing. Passes Federal Spec. FSS-302

**Tailgate:** Pickup truck style, double paneled. 14-gauge A40 galvaneal steel outer panel. 10-gauge



	<p>A40 galvaneal steel inner panel. Paddle latch (chrome plated). Internal latching mechanism is zinc plated.</p> <p><b>Grab handle(s):</b> Two (2) heavy duty type handles with chrome plated finish.</p> <p><b>Marker lights:</b> Must meet Federal Transportation Standards.</p> <p><b>Stop/Turn/Tail Light:</b> Flush mounted, 4-inch round, 7-diode LED. Meet federal lighting requirements.</p> <p><b>Back-up Light:</b> Flush mounted, 4-inch round, white. Meet federal lighting requirements.</p> <p><b>Fender Area:</b> Fenderettes – Molded high impact ABS.</p> <p><b>Prime / Paint:</b> Primed inside and outside with universal weathering polyurethane primer. Full undercoating.</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Compartments	Crane Service body shall have twelve (12) compartments that will be structured according to the descriptions that follow. For convenience the compartments shall be referenced herein by alpha characters A thru L, (StreetSide A-F, Curb Side G-L). All Compartments shall have interior lights with control switch in cab.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Compartment A:	36-inches wide x 47-inches deep x 58-inches height. Transverse open space free of trays, shelves or dividers. (Install shelf brackets minus shelves).	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/>
Compartment B:	36 3/8-inches wide x 21 1/8-inches deep x 58-inches height standard with two (2) adjustable shelves	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/>
Compartment C:	21 3/16-inches wide x 21 1/8-inches deep x 58-inches height. Three (3) adjustable shelves.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/>
Compartment D	47 5/8-inches wide x 21 1/8-inches deep x 31-inches height. One shelf with dividers.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 69 of 157

Compartment E:	27 3/8-inches wide x 21 1/8-inches deep x 58-inches height. Open space with three (3) material hooks. (Install shelf brackets minus shelves)	<u>Describe:</u> _____ _____ _____
Compartment F:	Manufacturer's Standard, Open Space, full width compartment. Door hinged on side to open to the right. Greaseable hinge.	<u>Describe:</u> _____ _____ _____
Compartment G	36-inches wide x 47-inches deep x 58-inches height. Transverse box with water pump rollout tray. (See drawings I, II & III for details). Tray shall be designed and constructed to support minimum 150 lb. load and shall have spring mechanism to support portion of load while tray is being raised and lowered. Stop guides shall be included on tray rollout to prevent tray from leaving track. Pump tray to be at bottom of compartment closest to the ground, 2 compartment vents included.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
Compartment H:	36 3/8-inches wide x 21 1/8-inches deep x 58-inches height. Twelve (12) drawer parts cabinet. Six drawers shall be 4-inches high and six drawers shall be 6-inches high. Each drawer shall have adjustable dividers.	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Compartment I:	21 3/16-inches x 21 1/8-inches deep x 58-inches height. Standard 60-inch shelf with three (3) adjustable shelves.	<u>Describe:</u> _____ _____ _____ _____
Compartment J:	47 5/8-inches wide x 21 1/8-inches deep x 31-inch height. Divided tray for small parts.	<u>Describe:</u> _____ _____ _____
Compartment K:	26 1/4-inches wide x 21 1/16-inches deep x 58-inch height. Open compartment with three (3) material hooks. This compartment provides crane reinforcement with no obstruction in usable space. Install shelf brackets minus shelves.	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Compartment L:	36-inches wide x 54-inches length x 18-inches height. Top opening lid with gas prop lid holder. Two (2) full length dividers.	<u>Describe:</u> _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 70 of 157

Rear Bumper:	Install a steel fabricated rear 12-inch heavy duty bumper. Bumper to be boxed in with a recess area to allow up to 90,000 lb. air pintle hitch to be mounted. Provide a method for safety hooks to be utilized. Provide a step on one side of the bumper to allow climbing onto the bumper and then into the bed of the body. Include a grab handle on the body for use with the step.	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Lights and Reflectors	Dual wheel, standard lighting recessed and in accordance with all State of Oklahoma and Federal laws governing highway safety. Install Conspicuity tape on the rear on the bed. 12-feet minimum.	<u>Describe:</u> _____ _____ _____ _____
Additional Information	<ol style="list-style-type: none"><li>1. All slide out trays and trays in boxes to have heavy duty latches and rollers.</li><li>2. Bed floor, tailgate, and bumper to have a non-skid surface applied.</li><li>3. A retractable step to be installed on rear bumper and under tool box area for easy accessibility.</li><li>4. Conspicuity Reflective Safety Tape material shall be added to the rear portions of all bodies for safety.</li></ol>	<u>Describe:</u> 1 _____ 2 _____ 3 _____ 4 _____ _____
Shelving:	<ol style="list-style-type: none"><li>1. Shelving package consisting of: (11) adjustable shelves. (1) shelf with small parts dividers. (1) shelf with book dividers. (3) material hooks.</li><li>2. Tool tray in driver's side, front compartment. 500-lb. rollout capacity Latch closed.</li><li>3. Drop well – to increase front compartments to 60-inches tall for storage of gas bottles, 2<sup>nd</sup> compartment curbside.</li><li>4. Bottle holders for secure storage of gas bottles 2<sup>nd</sup> compartment curb side.</li><li>5. Compartment lighting – rope light.</li><li>6. Flood light – quartz type, 100,000 candle power- 2 lights, curbside.</li><li>7. Crane boom support – adjustable to stowed boom angle.</li><li>8. Bumper- 24" workbench type with vise plate and storage. Compartment. 10-ga. A40-galvanneal steel. Rhino type non-skid spray on surface. Door latches – matching body door latches (See spec. in "Door</li></ol>	<u>Describe:</u> 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____ _____ _____ _____ _____



**CITY OF  
Tulsa**  
A New Kind of Energy.

**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 71 of 157

	Latches" section listed previously.) Door hinged on side to open to the right. Greaseable hinge. Interior latch protection.	
<b>Options:</b>	<ol style="list-style-type: none"> <li>1. <u>Shelving</u>: Shelving package consisting of: (11) adjustable shelves (1) shelf with small parts dividers (1) shelf with book dividers (3) material hooks</li> <li>2. <u>Tool Tray</u>: Tool tray in driver's side, front compartment. 500-lbs rollout capacity Latch closed.</li> <li>3. <u>Drop Well</u>: Drop well – to increase front compartments to 60-inches tall for storage of gas bottles, 2nd compartment curbside.</li> <li>4. <u>Bottle Holders</u>: Bottle holders for secure storage of gas bottles 2nd compartment curb side.</li> <li>5. <u>Compartment Lights</u>: Compartment lighting – rope light both sides.</li> <li>6. <u>Flood Lights</u>: Flood light – quartz type, 100,000 candle power- 2 lights, curbside</li> <li>7. <u>Additional Lighting</u>: A minimum of four (4) Extra Lights shall be provided at rear of body if rear portion of body is sprayed with Rhino type lining.</li> <li>8. <u>Crane Support</u>: Crane boom support – adjustable to stowed boom angle.</li> <li>9. <u>Bumper</u>: 24" workbench type with vise plate and storage compartment 10-ga. A40-galvanneal steel. Rhino type non-skid spray on surface. Door latches – matching body door latches (See spec. in "Door Latches" section listed previously). Door hinged on side to open to the right. Greaseable hinge. Interior latch protection.</li> <li>10. <u>Valve Key Brackets</u>: Valve key brackets shall be mounted above compartments on street side of vehicle. Brackets shall be mounted level, in a manner that provides use of entire length of body for longer keys. Brackets shall have a minimum of six (6) slots for keys and must provide positive locking mechanisms for securing keys.</li> <li>11. <u>Ladder Brackets</u>: Ladder brackets shall be installed in interior of bed of truck on street side. Brackets shall be level to accommodate a twelve (12) foot ladder.</li> <li>12. <u>Pintle Hitch</u>: 16,000 lb. Buyers or Kernis 2-5/16-inch Ball Combination Pintle Hitch. Include glad hands and 6- way light connection with 7-way adapter.</li> <li>13. <u>Air Pintle Hitch</u>: Hitch: 90,000 lb. Holland PH210</li> </ol>	<p><u>Describe:</u></p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p>



**CITY OF  
Tulsa**  
A New Kind of Energy.

**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 72 of 157

- air operated pintle hitch. Provide glad hands and electrical 7-way connection at rear of truck.
14. Delete Drawers: Delete drawers in lieu of open compartment "H".
15. Slide Out Shelf: Delete standard shelving in compartment "D" and "J" and add a 250 lb. capacity slide out shelf and split doors on the outside in place of the single door.
16. Spray-On Liner: A black spray on liner type non-skid surface material shall be applied to the following to prevent rust. The outside compartment panels will not be sprayed with non-skid liner but will be painted white to match the truck.
- 16A. Cargo area including bed floor, tailgate, sides and bulkhead.
- 16B. Rear Bumper, rear body partitions where lights are mounted, and tops of all tool boxes.
17. Lift gate: A 1,600 lb. standard type lift gate. Same as Item 15G. Mounted at rear of body. Frame height 40-inches approx.
18. Labor to Mount: Lift gate Option 17 above to Crane Body. (Only if the Crane and out-riggers options are selected)

14

15

16

A

B

17

18

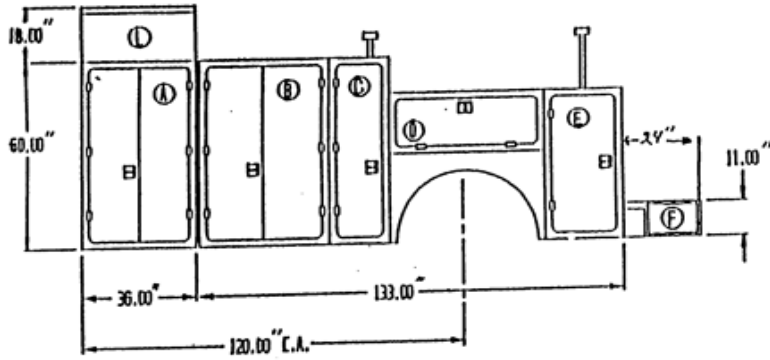
Ref: Crane Body 50K. Revised Sept 2020



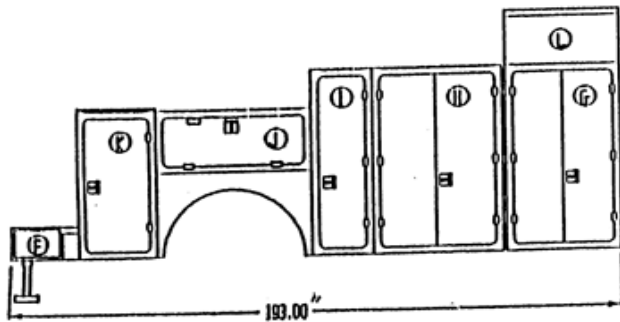
**CITY OF  
Tulsa**  
A New Kind of Energy.

**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

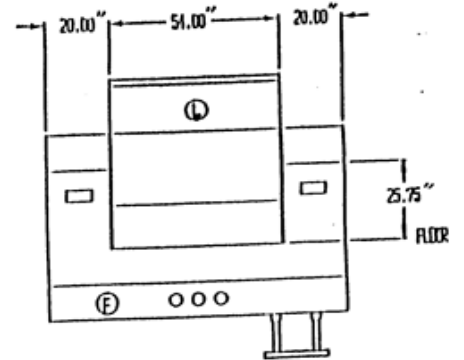
**City of Tulsa,  
Oklahoma**  
Page 73 of 157



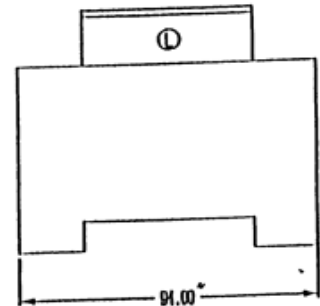
**STREET SIDE**



**CURB SIDE**



**REAR OF BODY**



**FRONT OF BODY**

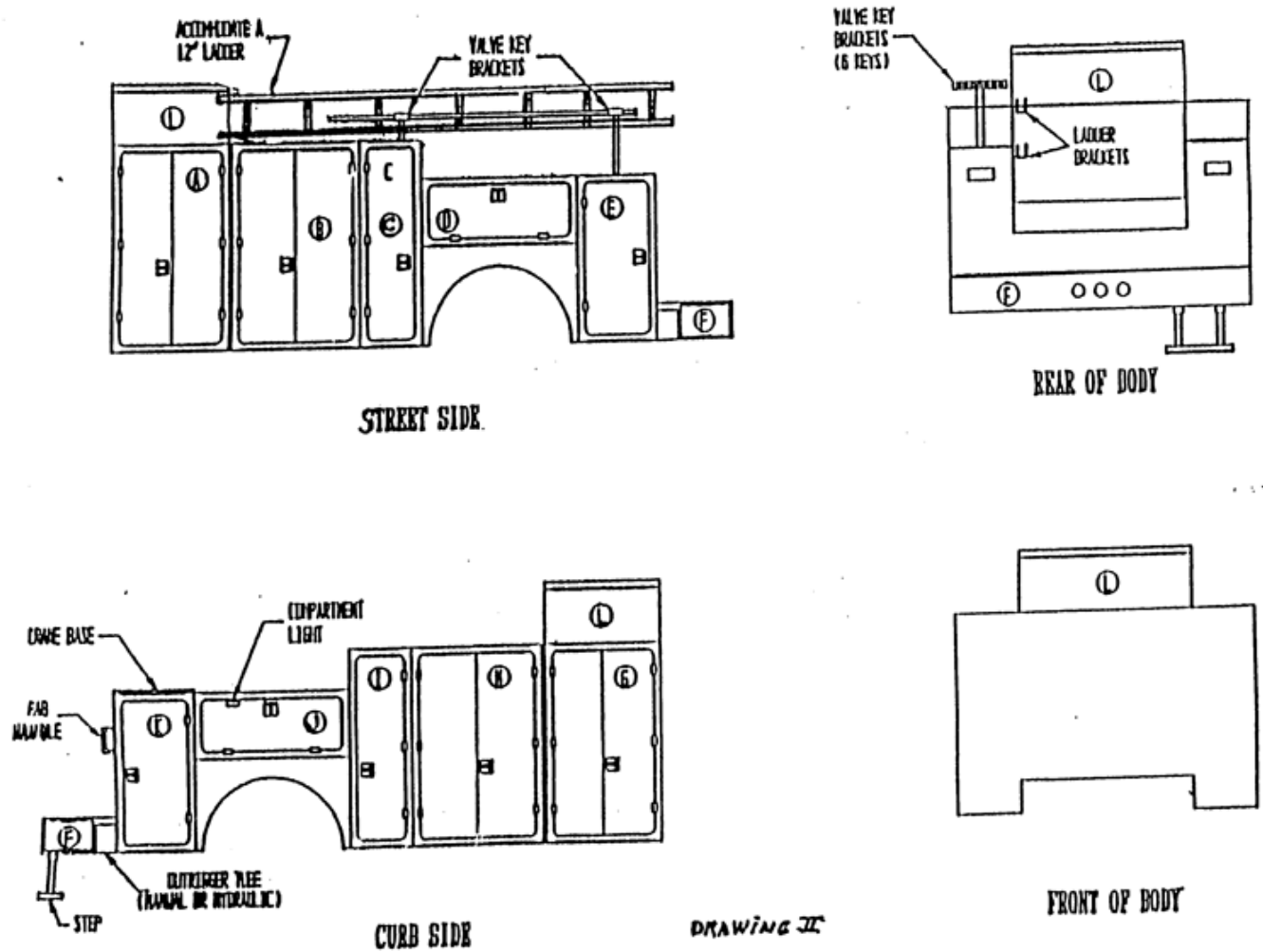
*DRAWING I*

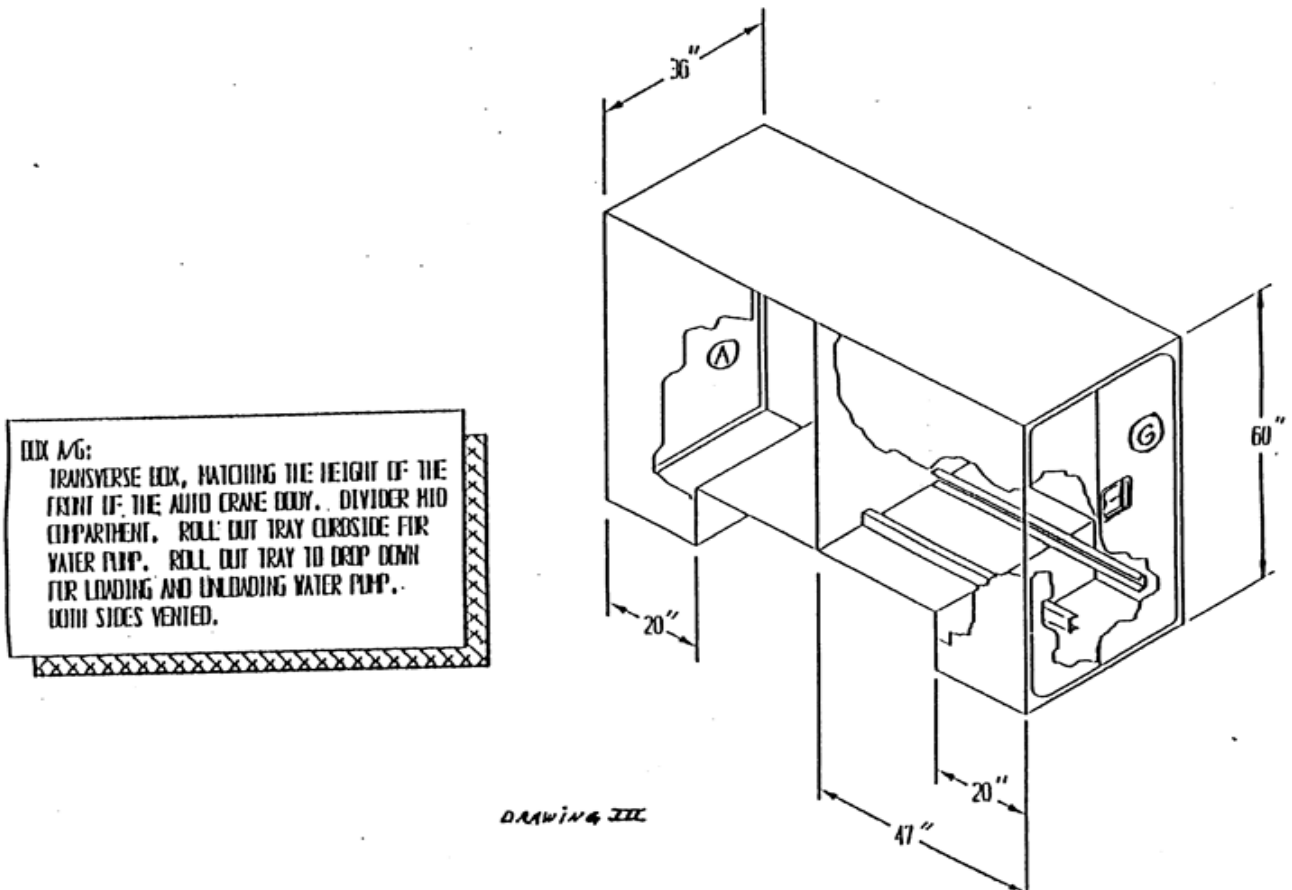


CITY OF  
**Tulsa**  
A New Kind of Energy.

**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 74 of 157





**Item 28: 5 Cubic Yard Capacity-84"CA- Dump Body**

Item	Specifications (Minimum)	Bidders Proposal
General Description	This specification shall provide for a New latest current production model, <b><u>Western/Crossmember less Style</u></b> , steel, hydraulic dump beds for a transmission mounted PTO and an 84" CA. Complete with manufacturer's standard equipment and accessories, fully serviced ready to operate. To include manufacturer's certificate or warranty and be bid less all applicable State and Federal Taxes. This body shall be equipment to meet all Federal and State of Oklahoma Safety Standards and Requirements. No dealer advertisement shall be affixed to the bed.	<u>Describe:</u>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 76 of 157

Body Size: Capacity:	Five (5) Cubic Yard Water Level with six (6) Cubic yard Front and Tailgate.	Describe: Make Model
Length:	10-Feet.	Describe: _____
Width Inside:	87-Inches.	Describe: _____
Body Head Height:	40-inches approx.	Describe: _____
Tail Gate Height:	32-Inches approx.	Describe: _____
Side Height:	26-Inches, 4-bend(boxed) top rail, continuous steel with dirt shedding top.	Describe: _____ _____
Steel Specification:	7 Gauge floor, 10 gauge sides and ends. With Made od A1011 Steel.	Describe: _____ _____
Floor:	Six (6-inch) approx. radius floor to sidewall for easy cleanout.	Describe: _____ _____
Longitudinals:	9-inch, 7-gauge A1011 Channel Steel.	Describe: _____
Corner Posts Rear:	2 Each, Approx. 12 3/4-Inches, full depth with extra braces with 2 spreader chains, dirt shedding top.	Describe: _____ _____
Corner Posts Front:	Full depth, Approx. 8-inches wide with 4-inch radius, dirt shedding top.	Describe: _____ _____
Grab Handles:	Two (2), one on each side of gate.	Describe: _____
Rub Rails:	Full length 30-degrees Minimum Slope.	Describe: _____
Light Reflectors:	Four (4), one each corner, 2 front and 2 rear, Interstate Commerce Commission approved. Install Conspicuity tape across the rear of the bed. 12-feet minimum.	Describe: _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 77 of 157

Control Lever:	Locking lever pedestal control with 1/4-inch sealed cable.	<u>Describe:</u> _____ _____ _____
Banjo Eyes:	Four (4), 2 Each Side 3/8-inch steel, 4-3/8-inch x 5-inch and extend beyond Rear Post.	<u>Describe:</u> _____ _____ _____
Side Board Gussets:	Four (4) Each, 6-inches High x 3-inches Wide.	<u>Describe:</u> _____ _____ _____
Side Boards Extensions:	Install 2-inch Oak boards tapered from front to rear of bed. Boards to be tapered so that the area from the front of the bed to allow smooth operation of a roll up type tarp system.	<u>Describe:</u> _____ _____ _____ _____ _____
Tail Gate:	Double Acting with 2 Vertical Braces and 1 horizontal brace, sloped, dirt shedding at the top	<u>Describe:</u> _____ _____ _____
NOTE:	When Tailgate is hinged from the bottom, it must not have a gap where material can fall out	<u>Describe:</u> _____ _____ _____
Tail Gate Hardware:	1-inch. Grease zerk lubricated top hardware; 1-inch lower hardware pivoting on 1 1/4-inch (C1045) shaft, zerk lubricated on both ends.	<u>Describe:</u> _____ _____ _____
Air Tailgate:	Air operated tailgate release with in cab control. The unit shall have an air activated tailgate latch, utilizing a 3-1/2-inch x 8-inch non-tie rod cylinder. The pneumatic cylinder shall be retracted when the latch is closed and shall be located at the rear of the bed to minimize the necessary linkage. The linkage shall be specifically designed to operate with the pneumatic cylinder.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____
Tie Down Rail:	Full length both sides to be 5/8-inch reinforcing bar, 3-inch high from extreme top outer edge of Rub Rail.	<u>Describe:</u> _____ _____ _____
Folding Ladder	Qty of Two (2) 20-inch, four-inch wide metal grip strut steps attached on the front right-hand side of the body. Install a slide out, two (2) rung ladder, mounted under the body just below the steps. The slide out ladder shall be on a hinged mechanism that has a positive latch system and will be locked in storage	<u>Describe:</u> _____ _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 78 of 157

	mode or when retracted out will hinge down and be locked in a stable configuration for safe utilization and accessible from the ground. The steps and the 2 rungs, ladder will allow access from the ground to the top of the body.	
Lights:	All lights to be LED, plus stop/turn lights flush mounted in the rear corner pillars. Shock resistant, rubber mounted. Factory stop/turn/back up lights installed outside truck frame rails and protected with expanded metal. All lights must meet Federal Motor Vehicle Safety Standards.	<u>Describe:</u> 
Light Wiring:	Joints soldered and shrink wrapped, in a plastic convoluted loom protective covering.	<u>Describe:</u> 
Mud Flaps:	Qty of 2 - One on each side, 24-inch X 30-inch Non-Sail Type. To be without any advertisement. One each mounted on each side to the rear of the tires, Non-Sail type and prevented from becoming entangled in the tires.	<u>Describe:</u> 
Electric Tarp Kit	Donovan 7000ELD electric tarp kit or approved equal with control box, and a wind deflector- 16-gauge galvanized steel. A 3/16" removeable plate shall be installed over the top of the tarp roll up mechanism to protect it from damage.	<u>Describe:</u> 
Safety Strut:	All dump beds must be equipped with safety strut to hold bed in the "UP" position while repairs are being made.	<u>Describe:</u> 
Spreader Tie Down "D" Rings	Install (4) 1/2-inch dia. "D" Rings on lower rub rail; 2 on each side with one mounted 24" from the front and one mounted 24" from the rear of body. Must have the capability of ratcheting the spreader chains from a standing position on the ground.	<u>Describe:</u> 
Cab Shield:	Full Cab Shield - Full Width of Bed.	<u>Describe:</u> 
Trailer Tow Pkg.:	Complete trailer package for pulling air brake trailers. To include air lines plumbed to rear of frame from the factory source (To be supplied by the truck	<u>Describe:</u> 



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 79 of 157

	manufacturer). Furnish and install glad hands and 7-way electrical connector at rear of frame ready to use with a 6 to 7-way adaptor. Air couplers and electrical connections are to be mounted as high as possible in the hinge area and plumbed in such a way as to not interfere with dumping of the bed or sand spreader operation and to avoid contact when pulling trailers.	
Pintle Hitch:	Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a 90,000 lb. air pintle hitch, Holland PH210 or equal. Trailer safety rings are Crosby weldless links per Item 21 of this bid to match capacity of hitch. Air lines to have quick disconnect fittings behind air operated pintle hitch so hitch may be removed during certain operations of the dump truck such as spreader operations.	Describe: _____ _____ _____ _____ _____ _____ _____
Strobes, Front & Rear:	Furnish and install LED strobes on each side in rear corner pillars and front grill area of truck per Item 5, options 5K and 5L of this bid.	Describe: _____ _____ _____ _____
Warranty:	Body manufacturer shall provide a written 5-year warranty covering repair or replacement of the body, hoist and air cylinder for defective material and/or workmanship. Warranty shall include all freight and labor for repairs or replacement. Warranty shall also include adherence of primer to all metal surfaces not including inside or understructure of dump bodies. The manufacturer's warranty <b>must</b> be submitted with bid.	Describe: _____ _____ _____ _____ _____ _____ _____
Note:	Warranty labor and parts replacement must be handled by an in-state authorized dealer, who can provide immediate replacement without charge or delay. "See Specification Header at beginning of bid specifications".	Describe: _____ _____ _____ _____ _____
Hydraulic Hoist, Frame, Pump:	Minimum of a Class 50	Describe: Pump Make: _____ Pump model: _____ Hoist Make: _____ Hoist Model: _____
Body Hoist:	Scissor Type.	Describe: _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 80 of 157

Dumping Angle:	50 Degrees.	<u>Describe:</u> _____
Hydraulic Pump:	Gear type 6 GPM @ 1000 RPM & 2250 PSI. Pump to be mounted directly on PTO.	<u>Describe:</u> _____ _____ _____
Shaft Bearings:	Roller Bearing, Antifriction	<u>Describe:</u> _____
Oil Reservoir:	Capacity 10 gallons, approx., with filtered return line, shut off valve on suction port.	<u>Describe:</u> _____ _____ _____
Low Hydraulic Fluid Warning Light	<b>Must install in the cab a Low Hydraulic Fluid Warning Light within easy view of driver.</b>	<u>Describe:</u> _____ _____ _____
Hoist to Be:	Class 50 Min., power up/power down. National Truck Equipment Association approved.	<u>Describe:</u> _____ _____ _____
Controls:	Locking lever pedestal controls with <u>Body Up</u> audio and visual alarm. A locking device to lock controls in neutral position shall be provided. Control and valve connected with a 1/4-inch sealed cable.	<u>Describe:</u> _____ _____ _____ _____
Power Take-Off:	Direct driven from transmission to hydraulic pump. PTO to have enabler capability (i.e. "Hot Shift" Type) with electronic "overspeed protection" to prevent PTO from turning at more RPM than system is designed to handle. Must be geared to allow continuous operation at 0-30 MPH. Electronic dash mounted controls with engagement light, no levers or cables, must be able to shift PTO while truck is in motion 15 to 20 MPH.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____
Over-Speed Protection for P.T.O.	Fully adjustable from 300 to 3000 RPM.	<u>Describe:</u> _____
Options	1. <u>Central Hydraulic System with Quick Disconnect:</u> Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor. (see specification below) ** Air controls option for feathering the bed not required if installing a Central Hydraulic System with Quick Disconnect.	<u>Describe:</u> 1 _____ _____ _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 81 of 157

	<p>2. <u>Spread Apron:</u> 12-inch Spread Apron, 10 ga. Steel.</p> <p>3. <u>Ball Hitch:</u> Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a Buyers or Kernis K300 2 5/16-inch ball hitch rated at 16,000 LB. Trailer safety rings are Crosby weldless links per Item 21 to match capacity of hitch.</p> <p>4. <u>Tool Box:</u> Frame mounted tool box, 36-inches x 18-inches x 18-inches, Rawson-Koenig H361818 or equal.</p> <p>5. <u>Side Boards:</u> A. In place of the 2" Oak Boards, install Rumber type material 2-inch boards tapered from front to rear of bed so that the area from the front of the bed to the rear to allow smooth operation of a roll up type tarp system. B. In place of the 2" Oak Boards, install 10-gauge "C" channel reinforced every 3-feet, bolted in place tapered from front to rear of bed to allow smooth operation of a roll up type tarp system.</p> <p>6. <u>Air Controls:</u> Air operated controls for raising and lowering dump bed. Controls shall be of the type to enable operator to feather the bed down. <b>Note; This system not required if installing a Central Hydraulic System with Quick Disconnect.</b></p> <p>7. <u>Steps:</u> Quantity of two (2), 20-inch steps, 4-inches wide, metal grip strut located on the right front side corner of the body. No folding ladder.</p>	<p>2 _____</p> <p>3 _____</p> <p>4 _____</p> <p>5 _____</p> <p style="padding-left: 20px;">A _____</p> <p style="padding-left: 20px;">B _____</p> <p>6 _____</p> <p>7 _____</p>
--	---	---

TAIL LIGHTS:

Tail lights of vehicle are to be mounted on the outside of the truck frame. Tail lights shall be installed within a protected bracket to prevent them from being knocked off accidentally. Lens should be protected with expanded metal.

MOUNTING INSTRUCTIONS:

The front mounting brackets on each side of the frame shall be drilled and bolted, not welded to the truck frame. The hydraulic pump shall be direct mounted to the Power take off.

The rear end of the truck frame to be cut the least amount to allow the bed to reach maximum dumping position. The truck frame shall be cut at a right angle or square cut rather than tapered. (The trimmed material must be left in the truck bed.)

The following requirements will be necessary if there is no safeguard to prevent the bed from being raised too high or beyond the return point of the hydraulic hoist cylinders:

Safety bed stop blocks of enough thickness to provide this protection must be mounted behind the bed hinges between the bed and truck frame.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 82 of 157

**NOTE:**

Bed Seller must **NOT** remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take off is installed. If, during installations, it becomes necessary to remove these plates or cover these numbers, then these numbers and/or plates must be replaced in a visible location.

**ELECTRICAL WIRING:**

Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, splices and wiring to be protected by all-weather insulation. This insulation material to be enough quality to insure a life period of five (5) years.

**\*POWER TAKE OFF:**

Must be the latest current model installed and/or adapted to fit the transmission. Mounting bolts or screws must provide adequate self-locking and sealing to insure against oil leaks and must keep housing firmly attached to transmission.

**PAINT:**

All exposed metal shall be primed and painted. The bed shall be sprayed or dipped with a protective metal primer, then be painted Factory White to match vehicle. The inside of the bed shall be painted at least one foot down the sides. Paint load space of the body from the top down approximately 12-inch Tool boxes, reservoirs and hitches will be painted black.

**PARTS:**

Bidder shall furnish upon request a list of established manufacturer's authorized locations where an adequate stock of current parts and service are available.

**MANUALS AND PARTS BOOKS:**

Successful bidder shall furnish two (2) operator's instruction manuals for each unit, in addition, two (2) parts books and two (2) illustrated repair manuals shall be furnished to each Division purchasing one or more bodies. The operators, parts and service manuals may be on CD rom.

**SERVICE POLICY:**

Manufacturer's standard service policy shall be furnished, complete and unaltered, with each unit delivered. Manufacturer shall be responsible that satisfactory services (by other than the dealer selling unit) are rendered upon presentation of proper service policy service policy papers.

**\*\*Hydraulic Central Control System for Snow and Ice Equipment:**

Install a Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor.

The sand spreader system shall contain a 3/4-inch pressure line for the spinner and a 3/4-inch pressure line for the conveyor and a single 1-inch return line. These lines will be hard piped from the hoist area to the rear of the truck. The spinner quick connect shall be an Eaton #5602-12-12S or acceptable equal. The conveyor quick connect shall be an Eaton #5601-12-12S or acceptable equal. The return quick connect shall be an Eaton #5602-16-16S or acceptable equal. All quick connects must be compatible with existing quick connects of same size being utilized in the current fleet of trucks so all sand spreaders units are compatible with any truck utilized. All quick connects are to be mounted on the rear curbside of the dump body approximately 10-inches from the rear (contact a City of Tulsa representative for an exact location. All quick connects to have a protective cover. These quick connects shall be mounted so they will not interfere with dumping of the bed or with use of the Pintle Hitch.

The Hydraulic Valving shall be as follows. The circuit design shall include Load-Sensing communication from all valves. The valves shall be solenoid operated carriage style with a common manifold and rated IP69. There shall be a flow priority to insure operation of the cylinder functions whenever the spreader is operating, and pump flow is critically low. All cylinders shall have proportional flow control on the power sequence to afford cylinder speed control. Pressure relief valves shall have an independent stem adjustable pressure protection included for the manifold inlet, the spreader, the down-side of all double acting cylinders and plow angle cylinders. The plow lift valves shall be capable of four- way control and have a flow capacity of 15 gallons per minute(gpm). The raise side of the circuit shall be rated for zero leakage. The plow angle valves shall be capable of four- way control and have a flow capacity of 15 gpm. Load Locking check valves) or Motor Spool design) shall be included as required to support the angling mechanism used. The dump hoist valves shall have a four -way control and have a flow capacity of 30 gpm. Counter balance control valves shall be included. The spreader proportional control valves for the auger, conveyor, and spinner motors shall have flow capacities of 15/7 gpm respectively. These valves shall be pressure compensated and parallel in their circuit architecture.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 83 of 157

The System Controls commands to the system valves shall be digitally encoded and sent over the vehicles electrical system using only a 12-volt DC and ground connection at each end of the system.

The valve driver modules shall be housed in Deutsch boxes employ Deutsch connectors at solenoids or acceptable equal giving IP69 environmental rating. The valve driver modules shall be equipped with current sensing control to offset thermal changes in solenoid performance and to detect open or short circuit conditions and protect against the latter by automatic interruption of current to the shorted output.

Cylinder momentary push button switches will provide on-off style control of the plow and dump body operations. Program settings will provide effective and independent flow trims for plow up-down, plow angle and dump up-down.

A two-axis cylinder proportional joystick with dead man switch and pushbutton selection of equipment shall be provided. The joystick shall employ dual redundant hall-effect mechanisms, eliminating the wear of potentiometer or other contact mechanisms. In the event of failure of one hall-effect output a program adjustment to system controller will allow selection of the alternate channel. The same controller will also provide electronic adjustment of one degree from center for operation, minimum valve drive at minimum joystick deflection, and maximum valve drive at maximum joystick deflection. Adjustments for degrees from center operation and the minimum valve drive at minimum joystick deflection will be independent for the plow and dump. The joystick shall plug to the control panel as its only connection point. Connection of the joystick will render the pushbutton cylinder controls inoperable. Conversely, disconnection of the joystick will reactivate the pushbutton controls. Selection of the equipment function by pushbuttons on the head of the joystick will illuminate an equipment identity label on the control panel. No operation of the joystick can take place without holding the dead man switch.

The spreader controls modes of operation shall provide a selectable automatic and manual control. There shall be a Blast operation with programmable selection of level and time. A Pause operation shall be available to momentarily disable the spreader operation. A feedback sensor shall not be required to achieve accurate and consistent operation of the spreader functions.

High brightness LED numerical displays will be used to indicate one of 11 reference controls positions for the spinner and auger (manual mode). In Auto operation the auger display will indicate "pounds per mile" if the system has been calibrated for such. The system shall display fault occurrences of shorted or open outputs at the valves with indication of which circuit is responsible.

All controls will be mounted in the truck cab. The joystick shall be mounted on a pedestal style mechanism beside the driver at a level and location that is comfortable to operate, allowing the driver to operate at a glance without taking his eyes completely off the road. The Control display panel shall be mounted in the dash area and at a level easily viewed by the driver.

An integral valve/tank enclosure assembly shall be mounted to the frame rail of the vehicle. The reservoir and dry compartment shall be made of 7-gauge mild powder coated steel and the lid assembly shall be made of 10-gauge mild powder coated steel painted black to match the frame rails.

The bottom portion of the valve/tank integral design shall house a minimum of 35 gallons of hydraulic oil with temperature/sight gauge mounted on the front face. The reservoir shall be properly baffled with a drain plug in the bottom and provision in the top for an in-tank, glass type return line filter. There shall also be a fill tube vented cap assembly that will also serve as a clean out port. The filter will be a minimum of 10 micron and the element shall be easily removed for replacement.

The top portion of the valve/tank assembly will be dry with a rubber seal that will provide protection when the lid assembly is in place. This area will house the tube/vented cap, return line in-tank filter, the solenoid control valve manifold, and the PLC electronic command modules.

The solenoid control manifold valve will mount in the enclosure against the back wall allowing for all cylinder and spreader hose connections to be mounted directly to this assembly. The back of the manifold assembly will be bolted to the back wall in a way to prevent outside contamination and to allow for the O ring fittings for hose connections to the direct entry eliminating the need for internal cylinder and spreader hose plumbing. The valve/tank assembly shall be narrow or stepped from the frame of the vehicle to allow for ample room for installation and servicing of the hoses.

The PLC modules will be contained to the back wall of the enclosure and will allow for easy servicing. The wiring from the manifold cartridge solenoids will plug into these two modules and the power, ground, and ground speed control conductors will exit the enclosure with a strain relief sealed connector.

The lid will set on a perimeter gasket and will be retained with four over-center chrome latches for easy access and removal. The entire valve/tank enclosure will be mounted to the frame in a cradle fabricated by the installer to properly support the assembly.

**Item 29: 5 Cubic Yard Stainless Steel Dump Body-84-inchCA**

Item	Specifications (Minimum)	Bidders Proposal
General Description:	This specification shall provide for new, the latest current production model. <b><u>Western/Crossmemberless Style</u></b> Stainless Steel, hydraulic dump beds, complete with manufacturer's	<u>Describe:</u>     



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 84 of 157

	standard equipment and accessories, fully serviced ready to operate. To include manufacturer's certificate. (Warranty shall be the standard for the industry as offered to the public.) This body shall be equipment to meet all Federal and State of Oklahoma Safety Standards and requirement. No dealer advertisement shall be affixed to the bed.	_____ _____ _____ _____ _____ _____
Body Size: Capacity:	Five (5) Cubic Yard Water Level with six (6) Cubic yard Front and Tailgate.	<u>Describe:</u> _____ Make _____ Model _____
Length:	10-Feet.	<u>Describe:</u> _____ _____
Width Inside:	87-Inches.	<u>Describe:</u> _____ _____
Body Head Height:	40-inches approx.	<u>Describe:</u> _____ _____
Tail Gate Height:	32-Inches approx.	<u>Describe:</u> _____ _____
Side Height:	26 Inches, 4-bend(boxed) top rail, continuous Stainless Steel with dirt shedding top.	<u>Describe:</u> _____ _____ _____
Steel Specification:	7-Gauge Stainless Steel floor, 10-gauge Stainless Steel sides and ends. With Made od A1011 Steel.	<u>Describe:</u> _____ _____ _____
Longitudinals:	9-inch, 7-gauge A1011 Channel Steel.	<u>Describe:</u> _____ _____
Corner Posts Rear:	2 Each, Approx. 14-Inches, full depth with extra braces with 2 spreader chains, dirt shedding top.	<u>Describe:</u> _____ _____ _____
Grab Handles:	Two (2), one on each side of gate.	<u>Describe:</u> _____ _____
Light Reflectors:	Four (4), one each corner, 2 front and 2 rear, Interstate Commerce Commission approved. Install Conspicuity tape on the rear on the bed. 12-feet minimum	<u>Describe:</u> _____ _____ _____ _____ _____
Control Lever:	Locking lever pedestal control with 1/4-inch sealed cable.	<u>Describe:</u> _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 85 of 157

Banjo Eyes:	Four (4), 2 Each Side 3/8-inch steel, 4-3/8-inch x 5-inch and extend beyond Rear Post.	Describe: _____ _____
Side Board Gussets:	Four (4) Each, 6-inches High x 3-inches Wide.	Describe: _____
Side Boards Extensions:	Install 2-inch Oak boards tapered from front to rear of bed. Boards to be tapered so that the area from the front of the bed to allow smooth operation of a roll up type tarp system.	Describe: _____ _____ _____ _____
Tail Gate:	Double Acting with 2 Vertical Braces and 1 horizontal brace, sloped, dirt shedding at the top	Describe: _____ _____
NOTE:	When Tailgate is hinged from the bottom, it must not have a gap where material can fall out	Describe: _____ _____
Tail Gate Hardware:	1-inch. Grease zerk lubricated top hardware; 1-inch lower hardware pivoting on 1 1/4-inch (C1045) shaft, zerk lubricated on both ends.	Describe: _____ _____ _____
Air Tailgate:	Air operated tailgate release with in cab control. The unit shall have an air activated tailgate latch, utilizing a 3-1/2-inch x 8-inch non-tie rod cylinder. The pneumatic cylinder shall be retracted when the latch is closed and shall be located at the rear of the bed to minimize the necessary linkage. The linkage shall be specifically designed to operate with the pneumatic cylinder.	Describe: _____ _____ _____ _____ _____ _____ _____
Tie Down Rail:	Full length both sides to be 5/8-inch reinforcing bar, 3-inch high from extreme top outer edge of Rub Rail.	Describe: _____ _____
Ladder	Rigid with two (2) 20-inch, four-inch wide metal grip strut steps attached on the front right-hand side of the body.	Describe: _____ _____ _____
Lights:	All lights to be LED, plus stop/turn lights flush mounted in the rear corner pillars. Shock resistant, rubber mounted. Factory stop/turn/back up lights	Describe: _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 86 of 157

	installed outside truck frame rails and protected with expanded metal. All lights must meet Federal Motor Vehicle Safety Standards.	
Light Wiring:	Joints soldered and shrink wrapped, in a plastic convoluted loom protective covering.	<u>Describe:</u> _____ _____ _____
Mud Flaps:	Qty of 2 - One on each side, 24-inch X 30-inch Non-Sail Type. To be without any advertisement. One each mounted on each side to the rear of the tires, Non-Sail type and prevented from becoming entangled in the tires.	<u>Describe:</u> _____ _____ _____ _____ _____
Electric Tarp Kit	Donovan 7000ELD electric tarp kit or approved equal with control box, and a wind deflector- 16-gauge galvanized steel. A 3/16" removeable plate shall be installed over the top of the tarp roll up mechanism to protect it from damage.	<u>Describe:</u> _____ _____ _____ _____ _____
Safety Strut:	All dump beds must be equipped with safety strut to hold bed in the "UP" position while repairs are being made.	<u>Describe:</u> _____ _____ _____ _____
Spreader Tie Down "D" Rings	Install (4) 1/2-inch dia. "D" Rings on lower rub rail; 2 on each side with one mounted 24" from the front and one mounted 24" from the rear of body. Must have the capability of ratcheting the spreader chains from a standing position on the ground.	<u>Describe:</u> _____ _____ _____ _____ _____
Cab Shield:	Full Cab Shield - Full Width of Bed.	<u>Describe:</u> _____ _____ _____
Trailer Tow Pkg.:	Complete trailer package for pulling air brake trailers. To include air lines plumbed to rear of frame from the factory source (To be supplied by the truck manufacturer). Furnish and install glad hands and 7-way electrical connector at rear of frame ready to use with a 6 to 7-way adaptor. Air couplers and electrical connections are to be mounted as high as possible in the hinge area and plumbed in such a way as to not interfere with dumping of the bed or sand spreader operation and to avoid contact when pulling trailers.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____ _____
Pintle Hitch:	Reinforced trailer hitch mounted on a 5/8-inch plate,	<u>Describe:</u> _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 87 of 157

	gusseted, with a 90,000 lb. air pintle hitch, Holland PH210 or equal. Trailer safety rings are Crosby weldless links per Item 21 of this bid to match capacity of hitch. Air lines to have quick disconnect fittings behind air operated pintle hitch so hitch may be removed during certain operations of the dump truck such as spreader operations.	
Strobes, Front & Rear:	Furnish and install LED strobes on each side in rear corner pillars and front grill area of truck per Item 5, options 5K and 5L of this bid.	<u>Describe:</u> _____ _____ _____
Warranty:	Body manufacturer shall provide a written 5-year warranty covering repair or replacement of the body, hoist and air cylinder for defective material and/or workmanship. Warranty shall include all freight and labor for repairs or replacement. Warranty shall also include adherence of primer to all metal surfaces not including inside or understructure of dump bodies. The manufacturer's warranty <b>must</b> be submitted with bid.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____
Note:	Warranty labor and parts replacement must be handled by an in-state authorized dealer, who can provide immediate replacement without charge or delay. "See Specification Header at beginning of bid specifications".	<u>Describe:</u> _____ _____ _____ _____ _____
Hydraulic Hoist, Frame, Pump:	Minimum of a Class 50	<u>Describe:</u> Pump Make: _____ Pump model: _____ Hoist Make: _____ Hoist Model: _____
Body Hoist:	Scissor Type.	<u>Describe:</u> _____
Dumping Angle:	50 Degrees.	<u>Describe:</u> _____ _____
Hydraulic Pump:	Gear type 6 GPM @ 1000 RPM & 2250 PSI. Pump to be mounted directly on PTO.	<u>Describe:</u> _____ _____ _____
Shaft Bearings:	Roller Bearing, Antifriction	<u>Describe:</u> _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 88 of 157

Oil Reservoir:	Capacity 10 gallons, approx., with filtered return line, shut off valve on suction port.	Describe: _____ _____ _____
Low Hydraulic Fluid Warning Light	<b>Must install in the cab a Low Hydraulic Fluid Warning Light within easy view of driver.</b>	Describe: _____ _____ _____
Hoist to Be:	Class 50 Min., power up/power down. National Truck Equipment Association approved.	Describe: _____ _____ _____
Controls:	Locking lever pedestal controls with <u>Body Up</u> audio and visual alarm. A locking device to lock controls in neutral position shall be provided. Control and valve connected with a 1/4-inch sealed cable.	Describe: _____ _____ _____ _____ _____
Power Take-Off:	Direct driven from transmission to hydraulic pump. PTO to have enabler capability (i.e. "Hot Shift" Type) with electronic "overspeed protection" to prevent PTO from turning at more RPM than system is designed to handle. Must be geared to allow continuous operation at 0-30 MPH. Electronic dash mounted controls with engagement light, no levers or cables, must be able to shift PTO while truck is in motion 15 to 20 MPH.	Describe: _____ _____ _____ _____ _____ _____ _____ _____
Over-Speed Protection for P.T.O.	Fully adjustable from 300 to 3000 RPM.	Describe: _____ _____
Options	<ol style="list-style-type: none"> <li>1. <u>Central Hydraulic System with Quick Disconnect:</u> Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor. (see specification below) ** Air controls option for feathering the bed not required if installing a Central Hydraulic System with Quick Disconnect.</li> <li>2. <u>Spread Apron:</u> 12-inch Spread Apron, 10 ga. Stainless Steel.</li> <li>3. <u>Ball Hitch:</u> Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a Buyers or Kernis K300 2 5/16-inch ball hitch rated at 16,000 LB. Trailer safety rings are Crosby weldless links per Item 21 to match capacity of hitch.</li> <li>4. <u>Tool Box:</u></li> </ol>	Describe: 1 _____ _____ 2 _____ _____ 3 _____ _____ 4 _____ _____



<p>Frame mounted tool box, 36-inches x 18-inches x 18-inches, Rawson-Koenig H361818 or equal.</p> <p>5. <u>Side Boards:</u></p> <p>A. In place of the 2" Oak Boards, install Rumber type material 2-inch boards tapered from front to rear of bed so that the area from the front of the bed to the rear to allow smooth operation of a roll up type tarp system.</p> <p>B. In place of the 2" Oak Boards, install 10-gauge "C" channel reinforced every 3-feet, bolted in place tapered from front to rear of bed to allow smooth operation of a roll up type tarp system.</p> <p>6. <u>Air Controls:</u></p> <p>Air operated controls for raising and lowering dump bed. Controls shall be of the type to enable operator to feather the bed down.</p> <p><b>Note; This system not required if installing a Central Hydraulic System with Quick Disconnect.</b></p>	<p>_____</p> <p>_____</p> <p>5 _____</p> <p>A _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>B _____</p> <p>_____</p> <p>_____</p> <p>6 _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
---	--

TAIL LIGHTS:

Tail lights of vehicle are to be mounted on the outside of the truck frame. Tail lights shall be installed within a protected bracket to prevent them from being knocked off accidentally. Lens should be protected with expanded metal.

**MOUNTING INSTRUCTIONS:**

The front mounting brackets on each side of the frame shall be drilled and bolted, not welded to the truck frame. The hydraulic pump shall be direct mounted to the Power take off.

The rear end of the truck frame to be cut the least amount to allow the bed to reach maximum dumping position. The truck frame shall be cut at a right angle or square cut rather than tapered. (The trimmed material must be left in the truck bed.)

The following requirements will be necessary if there is no safeguard to prevent the bed from being raised too high or beyond the return point of the hydraulic hoist cylinders:

Safety bed stop blocks of sufficient thickness to provide this protection must be mounted behind the bed hinges between the bed and truck frame.

NOTE:

Bed Seller must NOT remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take off is installed. If, during installations, it becomes necessary to remove these plates or cover these numbers, then these numbers and/or plates must be replaced in a visible location.

ELECTRICAL WIRING:

Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, splices and wiring to be protected by all-weather insulation. This insulation material to be enough quality to insure a life period of five (5) years.

\*POWER TAKE OFF:

Must be the latest current model installed and/or adapted to fit the transmission. Mounting bolts or screws must provide adequate self-locking and sealing to insure against oil leaks and must keep housing firmly attached to transmission.

PAINT:



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 90 of 157

All exposed metal shall be primed and painted. The bed shall be sprayed or dipped with a protective metal primer, then be painted Factory White to match vehicle. The inside of the bed shall be painted at least one foot down the sides. Paint load space of the body from the top down approximately 12-inch Tool boxes, reservoirs and hitches will be painted black.

**PARTS:**

Bidder shall furnish upon request a list of established manufacturer's authorized locations where an adequate stock of current parts and service are available.

**MANUALS AND PARTS BOOKS:**

Successful bidder shall furnish two (2) operator's instruction manuals for each unit, in addition, two (2) parts books and two (2) illustrated repair manuals shall be furnished to each Division purchasing one or more bodies. The operators, parts and service manuals may be on CD rom.

**SERVICE POLICY:**

Manufacturer's standard service policy shall be furnished, complete and unaltered, with each unit delivered. Manufacturer shall be responsible that satisfactory services (by other than the dealer selling unit) are rendered upon presentation of proper service policy service policy papers.

**\*\*Hydraulic Central Control System for Snow and Ice Equipment:**

Install a Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor.

The sand spreader system shall contain a 3/4-inch pressure line for the spinner and a 3/4-inch pressure line for the conveyor and a single 1-inch return line. These lines will be hard piped from the hoist area to the rear of the truck. The spinner quick connect shall be an Eaton #5602-12-12S or acceptable equal. The conveyor quick connect shall be an Eaton #5601-12-12S or acceptable equal. The return quick connect shall be an Eaton #5602-16-16S or acceptable equal. All quick connects must be compatible with existing quick connects of same size being utilized in the current fleet of trucks so all sand spreaders units are compatible with any truck utilized. All quick connects are to be mounted on the rear curbside of the dump body approximately 10-inches from the rear (contact a City of Tulsa representative for an exact location. All quick connects to have a protective cover. These quick connects shall be mounted so they will not interfere with dumping of the bed or with use of the Pintle Hitch.

The Hydraulic Valving shall be as follows. The circuit design shall include Load-Sensing communication from all valves. The valves shall be solenoid operated carriage style with a common manifold and rated IP69. There shall be a flow priority to insure operation of the cylinder functions whenever the spreader is operating, and pump flow is critically low. All cylinders shall have proportional flow control on the power sequence to afford cylinder speed control. Pressure relief valves shall have an independent stem adjustable pressure protection included for the manifold inlet, the spreader, the down-side of all double acting cylinders and plow angle cylinders. The plow lift valves shall be capable of four- way control and have a flow capacity of 15 gallons per minute(gpm). The raise side of the circuit shall be rated for zero leakage. The plow angle valves shall be capable of four- way control and have a flow capacity of 15 gpm. Load Locking check valves) or Motor Spool design) shall be included as required to support the angling mechanism used. The dump hoist valves shall have a four -way control and have a flow capacity of 30 gpm. Counter balance control valves shall be included. The spreader proportional control valves for the auger, conveyor, and spinner motors shall have flow capacities of 15/7 gpm respectively. These valves shall be pressure compensated and parallel in their circuit architecture.

The System Controls commands to the system valves shall be digitally encoded and sent over the vehicles electrical system using only a 12-volt DC and ground connection at each end of the system.

The valve driver modules shall be housed in Deutsch boxes employ Deutsch connectors at solenoids or acceptable equal giving IP69 environmental rating. The valve driver modules shall be equipped with current sensing control to offset thermal changes in solenoid performance and to detect open or short circuit conditions and protect against the latter by automatic interruption of current to the shorted output.

Cylinder momentary push button switches will provide on-off style control of the plow and dump body operations. Program settings will provide effective and independent flow trims for plow up-down, plow angle and dump up-down.

A two-axis cylinder proportional joystick with dead man switch and pushbutton selection of equipment shall be provided. The joystick shall employ dual redundant hall-effect mechanisms, eliminating the wear of potentiometer or other contact mechanisms. In the event of failure of one hall-effect output a program adjustment to system controller will allow selection of the alternate channel. The same controller will also provide electronic adjustment of one degree from center for operation, minimum valve drive at minimum joystick deflection, and maximum valve drive at maximum joystick deflection. Adjustments for degrees from center operation and the minimum valve drive at minimum joystick deflection will be independent for the plow and dump. The joystick shall plug to the control panel as its only connection point. Connection of the joystick will render the pushbutton cylinder controls inoperable. Conversely, disconnection of the joystick will reactivate the pushbutton controls. Selection of the equipment function by pushbuttons on the head of the joystick will illuminate an equipment identity label on the control panel. No operation of the joystick can take place without holding the dead man switch.





**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 92 of 157

Length:	14-Feet.	<u>Describe:</u> _____
Width Inside:	87-Inches.	<u>Describe:</u> _____
Head Height:	60-Inches.	<u>Describe:</u> _____
Tail Gate Height:	42-Inches.	<u>Describe:</u> _____
Side Height:	34-Inches, 4-bend (boxed) top rail, continuous steel with dirt shedding top	<u>Describe:</u> _____ _____ _____
Steel Thickness:	7-Gauge floor, 10-gauge sides and ends. With Made od A1011 Steel.	<u>Describe:</u> _____ _____ _____
Floor:	Approx. 8-inch Radius floor to sidewall for easy cleanout.	<u>Describe:</u> _____ _____ _____
Longitudinals:	9-inch, 7-gauge, A1011 channel steel.	<u>Describe:</u> _____ _____ _____
Corner Posts Rear:	2 Each, Approx. 12 3/4-Inches, full depth with extra braces with 2 tailgate chains, dirt shedding top.	<u>Describe:</u> _____ _____ _____
Corner Posts Front:	2 each full depth, Approx. 8-inch wide with 4-inch radius, dirt shedding top.	<u>Describe:</u> _____ _____ _____
Tail Gate Chains:	2 each.	<u>Describe:</u> _____ _____ _____
Grab Handles:	Two (2), one on each side of gate.	<u>Describe:</u> _____ _____ _____
Rub Rails:	Full length sloping.	<u>Describe:</u> _____ _____ _____
Clearance Lights:	Federal Motor Vehicle Safety Standard, LED clearance lights plus LED Stop/turn lights flush mounted in the rear corner pillars, shock resistant rubber mounted. Wiring-joints soldered and shrink wrapped with loom covering.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 93 of 157

Light Wiring:	Joints soldered and shrink wrapped, in a plastic convoluted loom protective covering.	<u>Describe:</u> _____ _____ _____
Base Weight:	Show base weight of body (without hoist & accessories).	<u>Describe:</u> _____ _____ _____
Reflectors:	Six (6), 2 each side, 2 rear mounted on 3-inch dia. end gate. Must be ICC approved, Federal #108, Lighting to apply. <u>NOTE:</u> These reflectors must be housed type with screw or bolt type mounting, stick-on type is not acceptable. Install Conspicuity tape on the rear on the bed. 12-feet minimum	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____
Tail Gate:	Double Acting with fully welded 6 panel-type bracing and offset hardware.	<u>Describe:</u> _____ _____ _____
Note:	When Tailgate is hinged from the bottom, it must not have a gap where material can fall out	<u>Describe:</u> _____ _____ _____
Banjo Eyes:	4, 2 Each Side 3/8-inch steel, 4-3/8-inches x 5-inches and extend beyond Rear Post.	<u>Describe:</u> _____ _____ _____
Side Board Braces:	5 Inch Box Type	<u>Describe:</u> _____ _____ _____
Side Board Gussets:	4 Each, 6-inch High, 3-inch Wide	<u>Describe:</u> _____ _____ _____
Side Board Extensions:	Install 2-inch Oak boards tapered from front to rear of bed. Boards to be tapered so that the area from the front of the bed to allow smooth operation of a roll up type tarp system. The tailgate is completely filled.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____
NOTE:	All channel Iron used in mounting these extensions must be assembled so the flanges are turned to the inside of the bed. This is to eliminate edges which might collect materials, on the outside of the bed.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____
Brackets:	2, 30-inches x 5-inches, 1/8-inchthick Steel. (See Manufacturer's Instructions)	<u>Describe:</u> _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 94 of 157

Mud Flaps:	2 - One on each side, 24-inches X 30-inches Non-Sail Type. To be without any advertisement. One each mounted on each side at the rear of the duals, Non-Sail type and prevented from becoming entangled in the tires.	<u>Describe:</u>     
Tail Gate Hardware:	Upper offset Tailgate Hinges shall be of plate steel. Lower tailgate pins shall be 1-1/4-inches diameter minimum. Lower body hardware shall be of the overhead type hooks and retain the 1-1/4-inch Pins in supports on each side of the hook.	<u>Describe:</u>     
Note:	When Tailgate is hinged from the bottom, it must not have a gap where material can fall out	<u>Describe:</u>   
Folding Ladder	Qty of Two, 20-inch, four (4) inch wide metal grip strut steps attached on the front right- hand side of the body. Install a slide out, (2) rung ladder, mounted under the body just below the steps. The slide out ladder shall be on a hinged mechanism that has a positive latch system and will be locked in storage mode or when retracted out will hinge down and be locked in a stable configuration for safe utilization and accessible from the ground. The steps and the 2 rung ladder will allow access from the ground to the top of the body.	<u>Describe:</u>          
Tarp Tie Down Rails:	Full length both sides to be 5/8-inch reinforcing bar, 3-inches high from extreme top outer edge of Rub Rail.	<u>Describe:</u>   
Mounting Height:	Not to exceed 12 3/8-inches from Top of Truck frame to floor of body.	<u>Describe:</u>   
Cab Shield:	Full Cab Shield - Full Width of Bed.	<u>Describe:</u>  
Safety Strut:	All dump beds must be equipped with Safety Strut to hold bed in the "UP" position while repairs are being made. (ONE EACH SIDE).	<u>Describe:</u>    
Spreader Tie	Install four (4) 1/2-inch dia. "D" Rings on lower rub rail;	<u>Describe:</u>  



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 95 of 157

Down "D" Rings	Two (2) on each side with one mounted 24-inches from the front and one mounted 24-inches from the rear of body. Must have the capability of ratcheting the spreader chains from a standing position on the ground.	
Trailer Tow Pkg.:	Complete trailer package for pulling air brake trailers. To include air lines plumbed to rear of frame from the factory source (To be supplied by the truck manufacturer). Furnish and install glad hands and 7-way electrical connector at rear of frame ready to use with a 6 to 7-way adaptor. Air couplers and electrical connections are to be mounted as high as possible in the hinge area and plumbed in such a way as to not interfere with dumping of the bed or sand spreader operation and to avoid contact when pulling trailers.	<u>Describe:</u>
Pintle Hitch:	Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a 90,000 lb. air pintle hitch, Holland PH210 or equal. Trailer safety rings are Crosby weldless links per Item 21 of this bid to match capacity of hitch. Air lines to have quick disconnect fittings behind air operated pintle hitch so hitch may be removed during certain operations of the dump truck such as spreader operations.	<u>Describe:</u>
Strobes, Front & Rear:	Furnish and install LED strobes on each side in rear corner pillars and front grill area of truck per Item 5, options 5K and 5L of this bid.	<u>Describe:</u>
Electric Tarp Kit	Donovan 7000ELD electric tarp kit or approved equal with control box. A wind deflector: 16-gauge galvanized steel. A 3/16-inch removeable plate shall be installed over the top of the tarp roll up mechanism to protect it from damage.	<u>Describe:</u>
Warranty:	Body manufacturer shall provide a written 5-year warranty covering repair or replacement of the body, hoist and air cylinder for defective material and/or workmanship. Warranty shall include all freight and labor for repairs or replacement. Warranty shall also include adherence of primer to all metal surfaces not including inside or understructure of dump bodies. The manufacturer's warranty <b>must</b> be submitted with	<u>Describe:</u>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 96 of 157

	bid.	
<u>Note:</u>	Warranty labor and parts replacement must be handled by an in-state authorized dealer, who can provide immediate replacement without charge or delay. "See Specification Header at beginning of bid specifications".	<u>Describe:</u> _____ _____ _____ _____
Hydraulic Hoist, Pump & Control Valve:	Class 110	<u>Describe:</u> Pump Make: _____ Pump model: _____ Hoist Make: _____ Hoist Model: _____
Cylinder:	Show inside diameter & piston diameter and stroke _____ " 1st active sleeve, _____ " 2nd, _____ " 3rd, _____ " and base tube _____ " stroke, single acting, self-adjusting V-type packing interior guide bushing – chrome plated cylinder.	<u>Describe:</u> 1 <sup>st</sup> _____ 2 <sup>nd</sup> _____ 3 <sup>rd</sup> _____ Base Tube _____ Stroke _____
Hoist Capacity	37-Tons.	<u>Describe:</u> _____
Dump Angle:	50 Degrees Maximum.	<u>Describe:</u> _____
Auto Bleed System:	An internal spring assisted device to automatically remove air from the cylinder and hydraulic lines whenever the cylinder is extended and retracted. The device shall not bleed air directly to atmosphere and shall use hydraulic fluid to push air out of the cylinder and back to tank.	<u>Describe:</u> _____ _____ _____ _____ _____
Oil Reservoir:	Capacity: 28-gallons, shut off valve on the suction port Reservoir located outside of frame.	<u>Describe:</u> _____ _____
Low Hydraulic Fluid Warning Light	<b>Must install in the cab a Low Hydraulic Fluid Warning Light within easy view of driver.</b>	<u>Describe:</u> _____ _____ _____
Rear Pivot Hinges	Double shear type - 2 hinge pins 1-3/4-inches x 8-inches.	<u>Describe:</u> _____ _____ _____
Hydraulic	15-GPM @ 2000 PSI @ 1000 RPM. Pump to be	<u>Describe:</u> _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 97 of 157

Pump	mounted directly on PTO.	
Relief Valve:	Built into valve.	<u>Describe:</u> _____
Shaft Bearings:	Roller Bearings Standard.	<u>Describe:</u> _____
Control Valve:	4 Position (raised, hold, feather, and lower) direct mounted on the reservoir.	<u>Describe:</u> _____ _____ _____
Controls:	Locking lever pedestal control with <u>Body Up</u> audio and visual alarm. A locking device to lock controls in neutral position shall be provided. Connect lever and valve with a 1/4-inch sealed cable. Valves to be Gresen model V-20.	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Power Take-Off:	Direct driven from transmission to hydraulic pump. PTO to have enabler capability (i.e. "Hot Shift" Type) with electronic "overspeed protection" to prevent PTO from turning at more RPM than system is designed to handle. Must be geared to allow continuous operation at 0-30 MPH. Electronic dash mounted controls with engagement light, no levers or cables, must be able to shift PTO while truck is in motion 15 to 20 MPH.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____
Over Speed Protection for PTO	Fully adjustable from 300 to 3000 RPM	<u>Describe:</u> _____ _____

**TAIL LIGHTS:**

Tail lights of vehicle are to be mounted on the outside of the truck frame. Tail lights shall be installed within a protected bracket to prevent them from being knocked off accidentally. Lens should be protected with expanded metal.

**MOUNTING INSTRUCTIONS:**

The front mounting brackets on each side of the frame shall be drilled and bolted, not welded to the truck frame. The hydraulic pump shall be direct mounted to the Power take off.

The rear end of the truck frame to be cut the least amount to allow the bed to reach maximum dumping position. The truck frame shall be cut at a right angle or square cut rather than tapered. (The trimmed material must be left in the truck bed.)

The following requirements will be necessary if there is no safeguard to prevent the bed from being raised too high or beyond the return point of the hydraulic hoist cylinders:

Safety bed stop blocks of enough thickness to provide this protection must be mounted behind the bed hinges between the bed and truck frame.





<p>system.</p> <p>6. <u>Air Controls:</u> Air operated controls for raising and lowering dump bed. Controls shall be of the type to enable operator to feather the bed down. ** This system not required if installing a Central Hydraulic System with Quick Disconnect.</p> <p>7. <u>Flooring:</u> 1/4-inch thick steel floor in lieu of 7-gauge.</p> <p>8. <u>Step:</u> Qty of two (2), 20-inch steps, 4-inches wide metal grip strut located on the right front side corner of the body. No folding ladder.</p>	<p>6</p> <p>7</p> <p>8</p>
--	----------------------------

Ref: Dump Body 10 Yard

### Hydraulic Central Control System for Snow and Ice Equipment:

Install a Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor.

The sand spreader system shall contain a 3/4" pressure line for the spinner and a 3/4" pressure line for the conveyor and a single 1" return line. These lines will be hard piped from the hoist area to the rear of the truck. The spinner quick connect shall be an Eaton #5602-12-12S or acceptable equal. The conveyor quick connect shall be an Eaton #5601-12-12S or acceptable equal. The return quick connect shall be an Eaton #5602-16-16S or acceptable equal. All quick connects must be compatible with existing quick connects of same size being utilized in the current fleet of trucks so all sand spreaders units are compatible with any truck utilized. All quick connects are to be mounted on the rear curbside of the dump body approximately 10" from the rear (contact a City of Tulsa representative for an exact location. All quick connects to have a protective cover. These quick connects shall be mounted so they will not interfere with dumping of the bed or with use of the Pintle Hitch.

The Hydraulic Valving shall be as follows. The circuit design shall include Load-Sensing communication from all valves. The valves shall be solenoid operated carriage style with a common manifold and rated IP69. There shall be a flow priority to insure operation of the cylinder functions whenever the spreader is operating, and pump flow is critically low. All cylinders shall have proportional flow control on the power sequence to afford cylinder speed control. Pressure relief valves shall have an independent stem adjustable pressure protection included for the manifold inlet, the spreader, the down-side of all double acting cylinders and plow angle cylinders. The plow lift valves shall be capable of four-way control and have a flow capacity of 15 gpm. The raise side of the circuit shall be rated for zero leakage. The plow angle valves shall be capable of four-way control and have a flow capacity of 15 gpm. Load Locking check valves) or Motor Spool design) shall be included as required to support the angling mechanism used. The dump hoist valves shall have a four-way control and have a flow capacity of 30 gpm. Counter balance control valves shall be included. The spreader proportional control valves for the auger, conveyor, and spinner motors shall have flow capacities of 15/7 gpm respectively. These valves shall be pressure compensated and parallel in their circuit architecture.

The System Controls commands to the system valves shall be digitally encoded and sent over the vehicles electrical system using only a 12-volt DC and ground connection at each end of the system.

The valve driver modules shall be housed in Deutsch boxes employ Deutsch connectors at solenoids or acceptable equal giving IP69 environmental rating. The valve driver modules shall be equipped with current sensing control to offset thermal changes in solenoid performance and to detect open or short circuit conditions and protect against the latter by automatic interruption of current to the shorted output.

Cylinder momentary push button switches will provide on-off style control of the plow and dump body operations. Program settings will provide effective and independent flow trims for plow up-down, plow angle and dump up-down.

A two-axis cylinder proportional joystick with dead man switch and pushbutton selection of equipment shall be provided. The joystick shall employ dual redundant hall-effect mechanisms, eliminating the wear of potentiometer or other contact mechanisms. In the event of failure of one hall-effect output a program adjustment to system controller will allow selection of the alternate channel. The same controller will also provide electronic adjustment of one degree from center for operation, minimum valve drive at minimum joystick deflection, and maximum valve drive at maximum joystick deflection. Adjustments for degrees from center operation and the minimum valve drive at minimum joystick deflection will be independent for the plow and dump. The joystick shall plug to the control panel as its only connection point. Connection of the joystick will render the pushbutton cylinder controls inoperable. Conversely, disconnection of the joystick will reactivate the pushbutton controls. Selection of the equipment function by pushbuttons on the head of the joystick will illuminate an equipment identity label on the control panel. No operation of the joystick can take place without holding the dead man switch.





**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 101 of 157

Body Capacity:	11-yard sides and 14-yard Ends.	<u>Describe:</u> _____
Length:	15-Feet.	<u>Describe:</u> _____
Width Inside:	87-Inches.	<u>Describe:</u> _____
Head Height:	60-Inches.	<u>Describe:</u> _____
Tail Gate Height:	42-Inches.	<u>Describe:</u> _____
Side Height:	34-Inches, 4-bend (boxed) top rail, continuous steel with dirt shedding top.	<u>Describe:</u> _____
Steel Thickness:	7-gauge floor, 10-gauge sides and ends. With Made od A1011 Steel.	<u>Describe:</u> _____
Floor:	Approx. 8-inch Radius floor to sidewall for easy cleanout.	<u>Describe:</u> _____
Longitudinals:	7-gauge A1011 channel steel.	<u>Describe:</u> _____
Corner Posts Rear:	Two (2) Each, Approx. 12 3/4-Inches, full depth with extra braces with 2 spreader chains, dirt shedding top.	<u>Describe:</u> _____
Corner Post Front:	Two (2) each full depth, Approx. 8-inches wide w/4-inch radius, dirt shedding top.	<u>Describe:</u> _____
Spreader Chains:	Two (2) each.	<u>Describe:</u> _____
Grab Handles:	Two (2), one on each side of gate.	<u>Describe:</u> _____
Rub Rails:	Full length sloping.	<u>Describe:</u> _____
Clearance Lights:	Federal Motor Vehicle Safety Standards, LED clearance lights plus LED Stop/turn lights flush mounted in the rear corner pillars, shock resistant	<u>Describe:</u> _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 102 of 157

	rubber mounted. Wiring-joints soldered and shrink wrapped with loom covering.	_____
Light Wiring:	Joints soldered and shrink wrapped, in a plastic convoluted loom protective covering.	Describe: _____ _____
Base Weight:	Show base weight of body (without hoist & accessories).	Describe: _____ _____
Reflectors:	Six (6), 2 each side, 2 rear mounted on 3-inch dia. end gate, Interstate Corporation Commission approved, Federal #108, Lighting to apply. <u>NOTE:</u> These reflectors must be housed type with screw or bolt type mounting, stick-on type is not acceptable. Install Conspicuity tape on the rear on the bed. 12-foot minimum	Describe: _____ _____ _____ _____ _____ _____
Tail Gate:	Double Acting with fully welded box-type 6 panel bracing and offset hardware.	Describe: _____ _____
NOTE:	When Tailgate is hinged from the bottom, it must not have a gap where material can fall out.	Describe: _____ _____
Air Tailgate:	Air operated tailgate release with in- cab controls. The unit shall have an air activated tailgate latch, utilizing a 3-1/2-inch x 8-inch non-tie rod cylinder. The pneumatic cylinder shall be retracted when the latch is closed and shall be located at the rear of the bed to minimize the linkage necessary. The linkage shall be specifically designed to operate with the pneumatic cylinder.	Describe: _____ _____ _____ _____ _____ _____
Banjo Eyes:	Four (4), two (2) each Side, 3/8-inch steel, 4-3/8-inch x 5-inch and extend beyond Rear Post.	Describe: _____ _____
Side Board Braces:	5-Inch Box Type.	Describe: _____ _____
Side Board gussets:	Four (4) Each, 6-inches High, 3-inches wide.	Describe: _____ _____
Side Board	Install 2-inch Oak boards tapered from front to rear of	Describe: _____ _____



Extensions:	bed. Boards to be tapered so that the area from the front of the bed to allow smooth operation of a roll up type tarp system. The tailgate is completely filled.	
NOTE:	All Channel Iron used in mounting these extensions must be assembled so the flanges are turned to the inside of the bed. This is to eliminate edges which might collect materials, on the outside of the bed.	<u>Describe:</u>
Brackets:	Two (2), 30-inches x 5-inches, 1/8-inch thick Steel. (See Manufacturer's Instructions)	<u>Describe:</u>
Mud Flaps:	Two (2) - One (1) on each side, 24inches X 30-inches Non-Sail Type. To be without any advertisement. One each mounted on each side to the rear of the duals, Non-Sail type and prevented from becoming entangled in the tires.	<u>Describe:</u>
Tail Gate Hardware:	Upper offset Tailgate Hinges shall be of plate steel. Lower tailgate pins shall be 1-1/4-inch diameter minimum. Lower body hardware shall be of the overhead type hooks and retain the 1-1/4-inch Pins in supports on each side of the hook.	<u>Describe:</u>
NOTE:	When Tailgate is hinged from the bottom, it must not have a gap where material can fall out.	<u>Describe:</u>
Folding Ladder	Qty of Two (2), 20-inches, 4 -inch wide metal grip strut steps attached on the front right-hand side of the body. Install a slide out, (2) rung ladder, mounted under the body just below the steps. The slide out ladder shall be on a hinged mechanism that has a positive latch system and will be locked in storage mode or when retracted out will hinge down and be locked in a stable configuration for safe utilization and accessible from the ground. The steps and the 2 rung ladder will allow access from the ground to the top of the body.	<u>Describe:</u>
Tarp Tie Down Rails:	Full length both sides to be 5/8-inch reinforcing bar, 3-inch high from extreme top outer edge of Rub Rail.	<u>Describe:</u>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 104 of 157

Mounting Height:	Not to exceed 12-3/8-inches from top of truck frame to floor of body.	Describe: _____ _____
Cab Shield:	Full Cab Shield - Full Width of Bed	Describe: _____ _____
Safety Strut:	All dump beds must be equipped with Safety Strut to hold bed in the 'UP' position while repairs are being made. (ONE EACH SIDE).	Describe: _____ _____
Spreader Tie Down "D" Rings	Install four (4) 1/2-inch dia. "D" Rings on lower rub rail; 2 on each side with one mounted 24-inches from the front and one mounted 24-inches from the rear of body. Must have the capability of ratcheting the spreader chains from a standing position on the ground.	Describe: _____ _____ _____ _____ _____
Electric Tarp Kit	Donovan 7000ELD electric tarp kit or approved equal with control box. A wind deflector: 16-gauge galvanized steel. A 3/16-inch removeable plate shall be installed over the top of the tarp roll up mechanism to protect it from damage.	Describe: _____ _____ _____ _____ _____
Trailer Tow Pkg:	Complete trailer package for pulling air brake trailers. To include air lines plumbed to rear of frame from the factory source (To be supplied by the truck manufacturer). Furnish and install glad hands and 7-way electrical connector at rear of frame ready to use with a 6 to 7-way adaptor. Air couplers and electrical connections are to be mounted as high as possible in the hinge area and plumbed in such a way as to not interfere with dumping of the bed or sand spreader operation and to avoid contact when pulling trailers.	Describe: _____ _____ _____ _____ _____ _____ _____ _____ _____
Pintle Hitch:	Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a 90,000 lb. pintle hitch, Holland PH210 or equal. Trailer safety rings are Crosby weldless links per Item 21, to match capacity of hitch. Air lines to have quick disconnect fittings behind air operated pintle hitch so hitch may be removed during certain operations of the dump truck such as spreader operations.	Describe: _____ _____ _____ _____ _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 105 of 157

Strobes, Front & Rear:	Furnish and install two strobes on each side in rear corner pillars per Item 5 of this bid and two strobes in front grill area.	Describe: _____ _____ _____
Warranty:	Body manufacturer shall provide a written 5-year warranty covering repair or replacement of the body, hoist and air cylinder for defective material and/or workmanship. Warranty shall include all freight and labor for repairs or replacement. Warranty shall also include adherence of primer to all metal surfaces not including inside or understructure of dump bodies. The manufacturer's warranty must be submitted with bid.	Describe: _____ _____ _____ _____ _____ _____ _____ _____
<u>Note:</u>	Warranty labor and parts replacement must be handled by an in-state authorized dealer, who can provide immediate replacement without charge or delay. "See Specification Header at beginning of bid specifications".	Describe: _____ _____ _____ _____ _____
Hydraulic Hoist, Pump & Control Valve:	Class 120.	Describe: Pump Make: _____ Pump model: _____ Hoist Make: _____ Hoist Model: _____
Cylinder:	Show inside diameter & piston diameter and stroke, 1st active sleeve, _____" 2nd, _____", 3rd, _____" and base tube _____" stroke, single acting, self-adjusting V-type packing interior guide bushing – chrome plated cylinder.	Describe: 1st _____ 2nd _____ 3rd _____ Base Tube _____ Stroke _____
Hoist Capacity:	Minimum lift 37-Tons net payload.	Describe: _____
Dump Angle:	50-Degrees Maximum.	Describe: _____
Auto Bleed System:	An internal spring assisted device to automatically remove air from the cylinder and hydraulic lines whenever the cylinder is extended and retracted. The device shall not bleed air directly to atmosphere and shall use hydraulic fluid to push air out of the cylinder and back to tank.	Describe: _____ _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 106 of 157

Oil Reservoir:	Capacity: 28-gallons, shut off valve on the suction port Reservoir located on outside of frame.	<u>Describe:</u> _____ _____
Low Hydraulic Fluid Warning Light	<b>Must install in the cab a Low Hydraulic Fluid Warning Light within easy view of driver.</b>	<u>Describe:</u> _____ _____
Rear Pivot Hinges:	Double shear type - 2 hinge pins 1-3/4-inch x 8-inch.	<u>Describe:</u> _____ _____
Hydraulic Pump	19-GPM @ 2,500 PSI, 1,000 RPM, Pump to be mounted directly on PTO.	<u>Describe:</u> _____ _____
Relief Valve:	Built into valve.	<u>Describe:</u> _____ _____
Shaft Bearings:	Roller Bearings Standard.	<u>Describe:</u> _____ _____
Control Valve:	4 Position (raised, hold, feather, and lower).	<u>Describe:</u> _____ _____
Controls:	Locking lever pedestal control with BODY UP audio and visual alarm. A locking device to lock controls in neutral position shall be provided. Connect lever and valve with a 1/4-inch sealed cable. Valves to be Gresen model V-20.	<u>Describe:</u> _____ _____ _____ _____ _____
Power Take- Off:	Direct driven from transmission to hydraulic pump. PTO to have enabler capability (i.e. "Hot Shift" Type) with electronic "overspeed protection" to prevent PTO from turning at more RPM than system is designed to handle. Must be geared to allow continuous operation at 0-30 MPH. Electronic dash mounted controls with engagement light, no levers or cables, must be able to shift PTO while truck is in motion 15 to 20 MPH.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____
Over Speed Protection For PTO:	Fully Adjustable from 300 to 3000 RPM	<u>Describe:</u> _____ _____

**TAIL LIGHTS:**

Tail lights of vehicle are to be mounted on the outside of the truck frame. Tail lights shall be installed within a protected bracket to prevent them from being knocked off accidentally. Lens should be protected with expanded metal.

**MOUNTING INSTRUCTIONS:**

The front mounting brackets on each side of the frame shall be drilled and bolted, not welded to the truck frame. The hydraulic pump



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 107 of 157

shall be direct mounted to the Power take off.

The rear end of the truck frame to be cut the least amount to allow the bed to reach maximum dumping position. The truck frame shall be cut at a right angle or square cut rather than tapered. (The trimmed material must be left in the truck bed.)

The following requirements will be necessary if there is no safeguard to prevent the bed from being raised too high or beyond the return point of the hydraulic hoist cylinders:

Safety bed stop blocks of enough thickness to provide this protection must be mounted behind the bed hinges between the bed and truck frame.

NOTE: Seller must NOT remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take-off installed. If, during installation, it becomes necessary to remove these plates or cover these numbers, they must be replaced in a visible location.

**ELECTRICAL WIRING:**

Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, splices and wiring to be protected by all-weather insulation. This insulation material to be of sufficient quality to insure a life period of five (5) years.

**\*POWER TAKE OFF:**

Must be the latest current model installed and/or adapted to fit the transmission. Mounting bolts or screws must provide adequate self-locking and sealing to insure against oil leaks and must keep housing firmly attached to transmission.

**FRONT CLEARANCE LIGHTS:** To be installed under the front lower corner.

**PAINT:**

All exposed metal shall be primed and painted. The bed shall be sprayed or dipped with a protective metal primer, then be painted Factory White to match vehicle.

OPTIONS:	
	<u>Describe:</u>
1. <u>Central Hydraulic System with Quick Disconnect:</u> Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor. (see specification below).	1
2. <u>Spread Apron:</u> 12-inch spread apron, 10-gauge Steel.	2
3. <u>Ball Hitch:</u> Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a Buyers or Kernis K300 2 5/16-inch ball hitch rated at 16,000 LB. Trailer safety rings are Crosby weldless links per Item 21 to match capacity of hitch. To include glad hands and 7-Way light connection.	3
4. <u>Tool Box:</u> Frame mounted tool box, Rawson-Koenig H361818 or equal.	4
5. <u>Side Boards:</u>	5
A. In place of the 2-inch Oak Boards, install Rumber type material 2-inch boards tapered from front to rear of bed so that the area from the front of the bed to the rear to allow smooth operation of a roll up type tarp system.	A
B. In place of the 2-inch Oak Boards, install 10 gauge "C" channel reinforced every 3-feet bolted in place tapered from front to rear of bed	B



	to allow smooth operation of a roll up type tarp system.	
6.	<u>Controls:</u> Air operated controls for raising and lowering dump bed. Controls shall be of the type to enable operator to feather the bed down. <b>** This system not required if installing a Central Hydraulic System with Quick Disconnect.</b>	6
7.	<u>Flooring:</u> 1/4-inch thick steel floor in lieu of 7-gauge.	7
8.	<u>Steps:</u> Qty of (2), 20-inch steps, 4-inch wide metal grip strut located on the right front side corner of the body. No folding ladder.	8

### Hydraulic Central Control System for Snow and Ice Equipment:

Install a Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor.

The sand spreader system shall contain a 3/4" pressure line for the spinner and a 3/4" pressure line for the conveyor and a single 1" return line. These lines will be hard piped from the hoist area to the rear of the truck. The spinner quick connect shall be an Eaton #5602-12-12S or acceptable equal. The conveyor quick connect shall be an Eaton #5601-12-12S or acceptable equal. The return quick connect shall be an Eaton #5602-16-16S or acceptable equal. All quick connects must be compatible with existing quick connects of same size being utilized in the current fleet of trucks so all sand spreaders units are compatible with any truck utilized. All quick connects are to be mounted on the rear curbside of the dump body approximately 10" from the rear (contact a City of Tulsa representative for an exact location). All quick connects to have a protective cover. These quick connects shall be mounted so they will not interfere with dumping of the bed or with use of the Pintle Hitch.

The Hydraulic Valving shall be as follows. The circuit design shall include Load-Sensing communication from all valves. The valves shall be solenoid operated carriage style with a common manifold and rated IP69. There shall be a flow priority to insure operation of the cylinder functions whenever the spreader is operating, and pump flow is critically low. All cylinders shall have proportional flow control on the power sequence to afford cylinder speed control. Pressure relief valves shall have an independent stem adjustable pressure protection included for the manifold inlet, the spreader, the down-side of all double acting cylinders and plow angle cylinders. The plow lift valves shall be capable of four-way control and have a flow capacity of 15 gpm. The raise side of the circuit shall be rated for zero leakage. The plow angle valves shall be capable of four-way control and have a flow capacity of 15 gpm. Load Locking check valves) or Motor Spool design) shall be included as required to support the angling mechanism used. The dump hoist valves shall have a four-way control and have a flow capacity of 30 gpm. Counter balance control valves shall be included. The spreader proportional control valves for the auger, conveyor, and spinner motors shall have flow capacities of 15/7 gpm respectively. These valves shall be pressure compensated and parallel in their circuit architecture.

The System Controls commands to the system valves shall be digitally encoded and sent over the vehicles electrical system using only a 12-volt DC and ground connection at each end of the system.

The valve driver modules shall be housed in Deutsch boxes employ Deutsch connectors at solenoids or acceptable equal giving IP69 environmental rating. The valve driver modules shall be equipped with current sensing control to offset thermal changes in solenoid performance and to detect open or short circuit conditions and protect against the latter by automatic interruption of current to the shorted output.

Cylinder momentary push button switches will provide on-off style control of the plow and dump body operations. Program settings will provide effective and independent flow trims for plow up-down, plow angle and dump up-down.

A two-axis cylinder proportional joystick with dead man switch and pushbutton selection of equipment shall be provided. The joystick shall employ dual redundant hall-effect mechanisms, eliminating the wear of potentiometer or other contact mechanisms. In the event of failure of one hall-effect output a program adjustment to system controller will allow selection of the alternate channel. The same controller will also provide electronic adjustment of one degree from center for operation, minimum valve drive at minimum joystick deflection, and maximum valve drive at maximum joystick deflection. Adjustments for degrees from center operation and the minimum valve drive at minimum joystick deflection will be independent for the plow and dump. The joystick shall plug to the control panel as its only connection point. Connection of the joystick will render the pushbutton cylinder controls inoperable. Conversely, disconnection of the





**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 110 of 157

Body Capacity:	11-yard sides and 14-yard Ends.	Describe: _____
Length:	15-Feet.	Describe: _____
Width Inside:	87-Inches.	Describe: _____
Head Height:	60-Inches.	Describe: _____
Tail Gate Height:	42-Inches.	Describe: _____
Side Height:	34-Inches, 4-bend (boxed) top rail, continuous Stainless steel with dirt shedding top.	Describe: _____ _____
Steel Thickness:	7-gauge floor, 10-gauge sides and ends. With Made od A1011 Stainless Steel.	Describe: _____ _____
Floor:	Approx. 8-inch Radius floor to sidewall for easy cleanout.	Describe: _____ _____
Longitudinals:	7-gauge A1011 channel Stainless Steel.	Describe: _____
Corner Posts Rear:	Two (2) Each, Approx. 12 3/4-Inches, full depth with extra braces with 2 spreader chains, dirt shedding top.	Describe: _____ _____
Corner Post Front:	Two (2) each full depth, Approx. 8-inches wide w/4-inch radius, dirt shedding top.	Describe: _____ _____
Spreader Chains:	Two (2) each.	Describe: _____
Grab Handles:	Two (2), one on each side of gate.	Describe: _____
Rub Rails:	Full length sloping.	Describe: _____
Clearance	Federal Motor Vehicle Safety Standards, LED	Describe: _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 111 of 157

Lights:	clearance lights plus LED Stop/turn lights flush mounted in the rear corner pillars, shock resistant rubber mounted. Wiring-joints soldered and shrink wrapped with loom covering.	_____ _____ _____ _____
Light Wiring:	Joints soldered and shrink wrapped, in a plastic convoluted loom protective covering.	<u>Describe:</u> _____ _____
Base Weight:	Show base weight of body (without hoist & accessories).	<u>Describe:</u> _____ _____
Reflectors:	Six (6), 2 each side, 2 rear mounted on 3-inch dia. end gate, Interstate Corporation Commission approved, Federal #108, Lighting to apply. <u>NOTE:</u> These reflectors must be housed type with screw or bolt type mounting, stick-on type is not acceptable. Install Conspicuity tape on the rear on the bed. 12-foot minimum.	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Tail Gate:	Double Acting with fully welded box-type 6 panel bracing and offset hardware.	<u>Describe:</u> _____ _____
NOTE:	When Tailgate is hinged from the bottom, it must not have a gap where material can fall out.	<u>Describe:</u> _____ _____
Air Tailgate:	Air operated tailgate release with in- cab controls. The unit shall have an air activated tailgate latch, utilizing a 3-1/2-inch x 8-inch non-tie rod cylinder. The pneumatic cylinder shall be retracted when the latch is closed and shall be located at the rear of the bed to minimize the linkage necessary. The linkage shall be specifically designed to operate with the pneumatic cylinder.	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Banjo Eyes:	4, 2 Each Side 3/8-inch steel, 4-3/8-inch x 5-inch and extend beyond Rear Post.	<u>Describe:</u> _____ _____
Side Board Braces:	5-Inch Box Type.	<u>Describe:</u> _____ _____
Side Board gussets:	Four (4) Each, 6-inches High, 3-inches wide.	<u>Describe:</u> _____ _____





**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 113 of 157

Down Rails:	3-inch high from extreme top outer edge of Rub Rail.	
Mounting Height:	Not to exceed 12-3/8-inches from top of truck frame to floor of body.	Describe: _____ _____
Cab Shield:	Full Cab Shield - Full Width of Bed	Describe: _____
Safety Strut:	All dump beds must be equipped with Safety Strut to hold bed in the 'UP' position while repairs are being made. (ONE EACH SIDE).	Describe: _____ _____ _____
Spreader Tie Down "D" Rings	Install four (4) 1/2-inch dia. "D" Rings on lower rub rail; 2 on each side with one mounted 24-inches from the front and one mounted 24-inches from the rear of body. Must have the capability of ratcheting the spreader chains from a standing position on the ground.	Describe: _____ _____ _____ _____ _____
Electric Tarp Kit	Donovan 7000ELD electric tarp kit or approved equal with control box. A wind deflector: 16-gauge galvanized steel. A 3/16-inch removeable plate shall be installed over the top of the tarp roll up mechanism to protect it from damage.	Describe: _____ _____ _____ _____
Trailer Tow Pkg:	Complete trailer package for pulling air brake trailers. To include air lines plumbed to rear of frame from the factory source (To be supplied by the truck manufacturer). Furnish and install glad hands and 7-way electrical connector at rear of frame ready to use with a 6 to 7-way adaptor. Air couplers and electrical connections are to be mounted as high as possible in the hinge area and plumbed in such a way as to not interfere with dumping of the bed or sand spreader operation and to avoid contact when pulling trailers.	Describe: _____ _____ _____ _____ _____ _____ _____
Pintle Hitch:	Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a 90,000 lb. pintle hitch, Holland PH210 or equal. Trailer safety rings are Crosby weldless links per Item 21, to match capacity of hitch. Air lines to have quick disconnect fittings behind air operated pintle hitch so hitch may be removed during certain operations of the dump truck such as spreader operations.	Describe: _____ _____ _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 114 of 157

Strobes, Front & Rear:	Furnish and install two strobes on each side in rear corner pillars per Item 5 of this bid and two strobes in front grill area.	Describe: _____ _____ _____
Warranty:	Body manufacturer shall provide a written 5-year warranty covering repair or replacement of the body, hoist and air cylinder for defective material and/or workmanship. Warranty shall include all freight and labor for repairs or replacement. Warranty shall also include adherence of primer to all metal surfaces not including inside or understructure of dump bodies. The manufacturer's warranty must be submitted with bid.	Describe: _____ _____ _____ _____ _____ _____ _____ _____
<u>Note:</u>	Warranty labor and parts replacement must be handled by an in-state authorized dealer, who can provide immediate replacement without charge or delay. "See Specification Header at beginning of bid specifications".	Describe: _____ _____ _____ _____ _____
Hydraulic Hoist, Pump & Control Valve:	Class 120.	Describe: Pump Make: _____ Pump model: _____ Hoist Make: _____ Hoist Model: _____
Cylinder:	Show inside diameter & piston diameter and stroke, 1st active sleeve, _____" 2nd, _____", 3rd, _____" and base tube _____" stroke, single acting, self-adjusting V-type packing interior guide bushing – chrome plated cylinder.	Describe: 1st _____ 2nd _____ 3rd _____ Base Tube _____ Stroke _____
Hoist Capacity:	Minimum lift 37-Tons net payload.	Describe: _____
Dump Angle:	50-Degrees Maximum.	Describe: _____ _____
Auto Bleed System:	An internal spring assisted device to automatically remove air from the cylinder and hydraulic lines whenever the cylinder is extended and retracted. The device shall not bleed air directly to atmosphere and shall use hydraulic fluid to push air out of the cylinder	Describe: _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 115 of 157

	and back to tank.	
Oil Reservoir:	Capacity: 28-gallons, shut off valve on the suction port Reservoir located on outside of frame.	<u>Describe:</u> _____ _____
Low Hydraulic Fluid Warning Light	<b>Must install in the cab a Low Hydraulic Fluid Warning Light within easy view of driver.</b>	<u>Describe:</u> _____ _____
Rear Pivot Hinges:	Double shear type - 2 hinge pins 1-3/4-inch x 8-inch.	<u>Describe:</u> _____ _____
Hydraulic Pump	19-GPM @ 2,500 PSI, 1,000 RPM, Pump to be mounted directly on PTO.	<u>Describe:</u> _____ _____
Relief Valve:	Built into valve.	<u>Describe:</u> _____ _____
Shaft Bearings:	Roller Bearings Standard.	<u>Describe:</u> _____ _____
Control Valve:	4 Position (raised, hold, feather, and lower).	<u>Describe:</u> _____ _____
Controls:	Locking lever pedestal control with <u>BODY UP</u> audio and visual alarm. A locking device to lock controls in neutral position shall be provided. Connect lever and valve with a 1/4-inch sealed cable. Valves to be Gresen model V-20.	<u>Describe:</u> _____ _____ _____ _____ _____
Power Take-Off:	Direct driven from transmission to hydraulic pump. PTO to have enabler capability (i.e. "Hot Shift" Type) with electronic "overspeed protection" to prevent PTO from turning at more RPM than system is designed to handle. Must be geared to allow continuous operation at 0-30 MPH. Electronic dash mounted controls with engagement light, no levers or cables, must be able to shift PTO while truck is in motion 15 to 20 MPH.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____
Over Speed Protection For PTO:	Fully Adjustable from 300 to 3000 RPM	<u>Describe:</u> _____ _____

**TAIL LIGHTS:**

Tail lights of vehicle are to be mounted on the outside of the truck frame. Tail lights shall be installed within a protected bracket to



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 116 of 157

prevent them from being knocked off accidentally. Lens should be protected with expanded metal.

**MOUNTING INSTRUCTIONS:**

The front mounting brackets on each side of the frame shall be drilled and bolted, not welded to the truck frame. The hydraulic pump shall be direct mounted to the Power take off.

The rear end of the truck frame to be cut the least amount to allow the bed to reach maximum dumping position. The truck frame shall be cut at a right angle or square cut rather than tapered. (The trimmed material must be left in the truck bed.)

The following requirements will be necessary if there is no safeguard to prevent the bed from being raised too high or beyond the return point of the hydraulic hoist cylinders:

Safety bed stop blocks of enough thickness to provide this protection must be mounted behind the bed hinges between the bed and truck frame.

**NOTE:**

Seller must NOT remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take-off installed. If, during installation, it becomes necessary to remove these plates or cover these numbers, they must be replaced in a visible location.

**ELECTRICAL WIRING:**

Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, splices and wiring to be protected by all-weather insulation. This insulation material to be of sufficient quality to insure a life period of five (5) years.

**\*POWER TAKE OFF:**

Must be the latest current model installed and/or adapted to fit the transmission. Mounting bolts or screws must provide adequate self-locking and sealing to insure against oil leaks and must keep housing firmly attached to transmission.

**FRONT CLEARANCE LIGHTS:** To be installed under the front lower corner.

**PAINT:**

All exposed metal shall be primed and painted. The bed shall be sprayed or dipped with a protective metal primer, then be painted Factory White to match vehicle.

<b>OPTIONS:</b>		
	<p>1. <b><u>Central Hydraulic System with Quick Disconnect:</u></b> Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor. (see specification below).</p> <p>2. <b><u>Spread Apron:</u></b> 12-inch spread apron, 10-gauge Steel.</p> <p>3. <b><u>Ball Hitch:</u></b> Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a Buyers or Kernis K300 2 5/16-inch ball hitch rated at 16,000 LB. Trailer safety rings are Crosby weldless links per Item 21 to match capacity of hitch. To include glad hands and 7-Way light connection.</p> <p>4. <b><u>Tool Box:</u></b> Frame mounted tool box, Rawson-Koenig H361818 or equal.</p> <p>5. <b><u>Side Boards:</u></b> C. In place of the 2-inch Oak Boards, install Rumber type material 2-inch boards tapered from front to rear of bed so that the area from the front of the bed to the rear to allow smooth</p>	<p><b><u>Describe:</u></b></p> <p>1 _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>2 _____</p> <p>_____</p> <p>3 _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>4 _____</p> <p>_____</p> <p>5 _____</p> <p>A _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 117 of 157

	<p>operation of a roll up type tarp system.</p> <p>D. In place of the 2-inch Oak Boards, install 10 gauge "C" channel reinforced every 3-feet bolted in place tapered from front to rear of bed to allow smooth operation of a roll up type tarp system.</p> <p>6. <u>Controls</u>: Air operated controls for raising and lowering dump bed. Controls shall be of the type to enable operator to feather the bed down.</p> <p><b>** This system not required if installing a Central Hydraulic System with Quick Disconnect.</b></p> <p>7. <u>Flooring</u>: 1/4-inch thick steel floor in lieu of 7-gauge.</p> <p>8. <u>Steps</u>: Qty of (2), 20-inch steps, 4-inch wide metal grip strut located on the right front side corner of the body. No folding ladder.</p>	<p>B</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p>6</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <p>7</p> <p>8</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
--	---	---

**Hydraulic Central Control System for Snow and Ice Equipment:**

Install a Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor.

The sand spreader system shall contain a 3/4" pressure line for the spinner and a 3/4" pressure line for the conveyor and a single 1" return line. These lines will be hard piped from the hoist area to the rear of the truck. The spinner quick connect shall be an Eaton #5602-12-12S or acceptable equal. The conveyor quick connect shall be an Eaton #5601-12-12S or acceptable equal. The return quick connect shall be an Eaton #5602-16-16S or acceptable equal. All quick connects must be compatible with existing quick connects of same size being utilized in the current fleet of trucks so all sand spreaders units are compatible with any truck utilized. All quick connects are to be mounted on the rear curbside of the dump body approximately 10" from the rear (contact a City of Tulsa representative for an exact location). All quick connects to have a protective cover. These quick connects shall be mounted so they will not interfere with dumping of the bed or with use of the Pintle Hitch.

The Hydraulic Valving shall be as follows. The circuit design shall include Load-Sensing communication from all valves. The valves shall be solenoid operated carriage style with a common manifold and rated IP69. There shall be a flow priority to insure operation of the cylinder functions whenever the spreader is operating, and pump flow is critically low. All cylinders shall have proportional flow control on the power sequence to afford cylinder speed control. Pressure relief valves shall have an independent stem adjustable pressure protection included for the manifold inlet, the spreader, the down-side of all double acting cylinders and plow angle cylinders. The plow lift valves shall be capable of four-way control and have a flow capacity of 15 gpm. The raise side of the circuit shall be rated for zero leakage. The plow angle valves shall be capable of four-way control and have a flow capacity of 15 gpm. Load Locking check valves) or Motor Spool design) shall be included as required to support the angling mechanism used. The dump hoist valves shall have a four-way control and have a flow capacity of 30 gpm. Counter balance control valves shall be included. The spreader proportional control valves for the auger, conveyor, and spinner motors shall have flow capacities of 15/7 gpm respectively. These valves shall be pressure compensated and parallel in their circuit architecture.

The System Controls commands to the system valves shall be digitally encoded and sent over the vehicles electrical system using only a 12-volt DC and ground connection at each end of the system.

The valve driver modules shall be housed in Deutsch boxes employ Deutsch connectors at solenoids or acceptable equal giving IP69 environmental rating. The valve driver modules shall be equipped with current sensing control to offset thermal changes in solenoid performance and to detect open or short circuit conditions and protect against the latter by automatic interruption of current to the shorted output.

Cylinder momentary push button switches will provide on-off style control of the plow and dump body operations. Program settings will provide effective and independent flow trims for plow up-down, plow angle and dump up-down.

A two-axis cylinder proportional joystick with dead man switch and pushbutton selection of equipment shall be provided. The joystick shall employ dual redundant hall-effect mechanisms, eliminating the wear of potentiometer or other contact mechanisms. In the event of failure of one hall-effect output a program adjustment to system controller will allow selection of the alternate channel. The same controller will also provide electronic adjustment of one degree from center for operation, minimum valve drive at minimum joystick deflection, and maximum valve drive at maximum joystick deflection. Adjustments for degrees from center operation and the minimum





**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 119 of 157

Body Size: Capacity:	11-yard sides and 14-yard ends.	<u>Describe:</u> _____
Length:	14-feet.	<u>Describe:</u> _____
Width:	84-inch inside width.	<u>Describe:</u> _____
Head Height:	62-inches.	<u>Describe:</u> _____
Tail Gate Height:	54-inches.	<u>Describe:</u> _____
Side Height:	42-inch, 4-bend (boxed) top rail, continuous steel with dirt shedding top.	<u>Describe:</u> _____
Steel Thickness:	1/4-inch, AR400, Certified 145,000 psi yield for floor, sides, front and tailgate. All welds to be continuous.	<u>Describe:</u> _____
NOTE:	Understructure to be "western" Crossmemberless design with tubular long sills. Long sills will be 100,000 psi yield strength steel with internal bracing, 8-gauge Inner and 8-gauge outer.	<u>Describe:</u> _____ _____ _____ _____
Floor:	Approx. 26-inch radius floor to sidewall for easy cleanout. Must have Approx. 37-inches flat floor in center.	<u>Describe:</u> _____ _____ _____
Top Rail:	Boxed top rail will be 4 bend dirt shedding 5.5-inches x 8-inches.	<u>Describe:</u> _____ _____ _____
Fenders:	Sides shall have tandem steel fenders 9-feet forward from the rear, sloped 30-degrees outward.	<u>Describe:</u> _____ _____ _____
Longitudinals:	8-inches under structure height.	<u>Describe:</u> _____ _____
Corner Posts Rear:	Two (2) each, 12 3/4-inches, full depth with extra braces, dirt shedding top.	<u>Describe:</u> _____ _____ _____
Tailgate Chains:	Two (2) each.	<u>Describe:</u> _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 120 of 157

Grab Handles:	Two (2) each, one on each side of gate.	<u>Describe:</u> _____
Clearance Lights:	Federal Motor Vehicle Safety Standard, LED clearance lights plus LED Stop/turn lights flush mounted in the rear corner pillars, shock resistant rubber mounted. Wiring-joints soldered and shrink wrapped with loom covering.	<u>Describe:</u> _____ _____ _____ _____ _____
Base Weight:	Show base weight of body. (Without hoist & accessories).	<u>Describe:</u> _____ _____ _____
Reflectors:	Six (6) each, two (2) each side, two (2) rear mounted on 3-inch dia. End gate, ICC approved, Federal #108, lighting to apply. <u>NOTE:</u> These reflectors must be housed type with screw or bolt type mounting stick-on type is not acceptable. Install Conspicuity tape on the rear on the bed. 12-feet minimum.	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Tail Gate:	Panel fabricated from 1/4-inch, high strength steel with typical yield strength of 145,000 psi tailgate fully boxed upper, lower and vertical frames. Two (2) additional horizontal braces, sloped to shed dirt. All welds continuous.	<u>Describe:</u> _____ _____ _____ _____ _____
Banjo Eyes:	Four (4), two (2) each side 3/8-inch steel, 4 3/8-inch x 5-inches and extend beyond rear post.	<u>Describe:</u> _____ _____ _____
Brackets & Mud Flaps:	Two (2), 30-inches x 5-inches, 1/8-inch thick Steel (See Manufacturer's Instructions). Two (2)-One (1) on each side, 24-inches x 30-inches Non-Sail type. To be without any advertisement.	<u>Describe:</u> _____ _____ _____ _____
Strobes, Front & Rear:	Furnish and install two (2) strobes on each side in rear corner pillars per Item 5 of this bid and two strobes in front grill area.	<u>Describe:</u> _____ _____ _____
Warranty:	Body manufacturer shall provide a written 5-year warranty covering repair or replacement of the body, hoist and air cylinder for defective material and/or workmanship. Warranty shall include all freight and labor for repairs or replacement. Warranty shall also include adherence of primer to all metal surfaces not	<u>Describe:</u> _____ _____ _____ _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 121 of 157

	including inside or understructure of dump bodies. The manufacturer's warranty <b><u>must</u></b> be submitted with bid.	
<b>Note:</b>	Warranty labor and parts replacement must be handled by an in-state authorized dealer, who can provide immediate replacement without charge or delay. "See Specification Header at beginning of bid specifications".	<u>Describe:</u> _____ _____ _____ _____
<b>Tail Gate Hardware:</b>	Upper tailgate hinges shall be off set forward 10" and shall have 1 1/2-inch pivot pins with zerk lubrication. Lower latch pins shall be 1 1/4-inches. Air tailgate release with in-cab controls.	<u>Describe:</u> _____ _____ _____ _____
<b>NOTE:</b>	When tailgate is hinged from the bottom, it must not have a gap where material can fall out.	<u>Describe:</u> _____ _____
<b>Folding Ladder</b>	Qty of Two (2), 20-inch, 4-inch wide metal grip strut steps attached on the front right-hand side of the body. Install a slide out, two (2) rung ladder, mounted under the body just below the steps. The slide out ladder shall be on a hinged mechanism that has a positive latch system and will be locked in storage mode or when retracted out will hinge down and be locked in a stable configuration for safe utilization and accessible from the ground. The steps and the 2 rung ladder will allow access from the ground to the top of the body.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
<b>Mounting Height:</b>	Not to exceed 8-inch mounting height from top of truck frame to floor of body.	<u>Describe:</u> _____ _____
<b>Full Cab Shield:</b>	FULL cab shield, Full width of bed.	<u>Describe:</u> _____
<b>Safety Strut:</b>	All dump beds must be equipped with Safety Strut to hold bed in the "UP" position while repairs are being made. (One each side).	<u>Describe:</u> _____ _____ _____
<b>Spreader Tie Down "D" Rings</b>	Install four (4), 1/2-inch dia. "D" Rings on approximately 30-inches down from top rail; two (2) on each side with one (1) mounted 24-inches from the front and one mounted 24-inches from the rear of	<u>Describe:</u> _____ _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 122 of 157

	body. Must have the capability of ratcheting the spreader chains from a standing position on the ground.	_____ _____ _____
Electric Tarp	Donovan 7000ELD electric tarp kit or approved equal with control box. A wind deflector- 16-gauge galvanized steel. A 3/16-inch removeable plate shall be installed over the top of the tarp roll up mechanism to protect it from damage.	<u>Describe:</u> _____ _____ _____ _____
Hydraulic Hoist, Pump & Control Valve:	Class 110	<u>Describe:</u> Pump Make: _____ Pump model: _____ Hoist Make: _____ Hoist Model: _____
Cylinder:	Show inside diameter & piston diameter and stroke _____" 1st active sleeve, _____", 2nd, _____" 3rd, _____" and base tube _____" stroke, single acting, self-adjusting V-type packing interior guide bushing, chrome plated cylinders.	<u>Describe:</u> 1 <sup>st</sup> _____ 2 <sup>nd</sup> _____ 3 <sup>rd</sup> _____ Base Tube _____ _____
Hoist Capacity	38-tons.	<u>Describe:</u> _____
Dump Angle:	50-Degrees Maximum.	<u>Describe:</u> _____ _____
Bleeder Valve:	At top of base sleeve, auto bleed.	<u>Describe:</u> _____
Oil Reservoir:	Capacity 28-gallons with filtered return line, include shut off valve, sight gauge. Mount to outside frame.	<u>Describe:</u> _____ _____ _____
Low Hydraulic Fluid Warning Light	<b>Must install in the cab a Low Hydraulic Fluid Warning Light within easy view of driver.</b>	<u>Describe:</u> _____ _____ _____
Rear Pivot Hinges	Double shear type - 2 hinge pins 1-3/4-inch x 8-inch.	<u>Describe:</u> _____ _____
Hydraulic Pump	20 GPM @ 2,500 PSI @ 1,000 RPM. Pump to be mounted directly on PTO.	<u>Describe:</u> _____ _____ _____
Relief Valve:	Built into valve.	<u>Describe:</u> _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 123 of 157

Shaft Bearings:	Roller Bearings Standard.	<u>Describe:</u> _____
Control Valve:	4 Position (raised, hold, feather, and lower) direct mounted on the reservoir.	<u>Describe:</u> _____ _____ _____
Controls:	Locking lever pedestal control with <u>Body Up</u> audio and visual alarm. A locking device to lock controls in neutral position shall be provided. Connect lever and valve with a 1/4-inch sealed cable. Valve to be Gresen model V-20.	<u>Describe:</u> _____ _____ _____ _____ _____
Power Take-Off:	Direct driven from transmission to hydraulic pump. PTO to have enabler capability (i.e. "Hot Shift" Type) with electronic "overspeed protection" to prevent PTO from turning at more RPM than system is designed to handle. Must be geared to allow continuous operation at 0-30 MPH. Electronic dash mounted controls with engagement light, no levers or cables, must be able to shift PTO while truck is in motion 15 to 20 MPH.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____
Over Speed Protection for PTO	Fully adjustable from 300 to 3000 RPM.	<u>Describe:</u> _____

**TAIL LIGHTS:** Tail lights of vehicle are to be mounted on the outside of the truck frame. Tail lights shall be installed within a protected bracket to prevent them from being knocked off accidentally. Lens should be protected with expanded metal.

**MOUNTING INSTRUCTIONS:** The front mounting brackets on each side of the frame shall be drilled and bolted, not welded to the truck frame. The hydraulic pump shall be direct mounted to the Power take off.

The rear end of the truck frame to be cut the least amount to allow the bed to reach maximum dumping position. The truck frame shall be cut at a right angle or square cut rather than tapered.

The following requirements will be necessary if there is no safeguard to prevent the bed from being raised too high or beyond the return point of the hydraulic hoist cylinders:

Safety bed stop blocks of enough thickness to provide this protection must be mounted behind the bed hinges between the bed and truck frame.

**NOTE:** Seller must NOT remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take-off is installed. If, during installation, it becomes necessary to remove these plates or cover these numbers, they must be replaced in a visible location.

**ELECTRICAL WIRING:** Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, splices and wiring to be protected by all-weather insulation. This insulation material to be of enough quality to insure a life period of five (5) years.

**\*POWER TAKE OFF:** Must be the latest current model installed and/or adapted to fit the transmission. Mounting bolts or screws must provide adequate self-locking and sealing to insure against oil leaks and must keep housing firmly attached to transmission.

**FRONT CLEARANCE LIGHTS:** To be installed under the front lower corner.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 124 of 157

PAINT: All exposed metal shall be primed and painted. the bed shall be sprayed or dipped with a protective metal primer, then be painted Factory White to match vehicle.

OPTIONS		
	<ol style="list-style-type: none"><li>1. <u>Central Hydraulic System with Quick Disconnect:</u> Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor. (see specification below). NOTE: Spreaders with water system will not currently fit RIP RAP bodies.</li><li>2. <u>Ball Hitch:</u> Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a Buyers or Kernis K300 2 5/16-inch ball hitch rated at 16,000 LB. Trailer safety rings are Crosby weldless links per Item 23 of this bid to match capacity of hitch.</li><li>3. <u>Pintle Hitch:</u> Reinforced trailer hitch mounted on a 5/8-inch plate, gusseted, with a 90,000 lb. pintle hitch, Holland PH210 or equal. Trailer safety rings are Crosby weldless links per Item 21 to match capacity of hitch. To include glad hands and 7-Way light connector. Air lines to have quick disconnect fittings behind air operated pintle hitch so hitch may be removed during certain operations of the dump truck such as spreader operations.</li><li>4. <u>Tool Box:</u> Frame mounted tool box, RKI H361818 or Equal.</li><li>5. <u>Trailer Tow Pkg:</u> Complete trailer package for pulling air brake trailers. To include air lines plumbed to rear of frame from factory source. Furnish and install glad hands and 7-way electrical connector at rear of frame ready to use with a 6 to 7-way adaptor. Air couplers and electrical connections are to be mounted as high as possible in the hinge area and plumbed in such a way as to not interfere with dumping of the bed or sand spreader operation and to avoid contact when pulling trailers.</li><li>6. <u>Controls:</u> Air operated controls for raising and lowering dump bed. Controls shall be of the type to enable operator to feather the bed down. <b>** This system not required if installing a Central Hydraulic System with Quick</b></li></ol>	<p><u>Describe:</u></p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p>



2-7-17



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 126 of 157

shall employ dual redundant hall-effect mechanisms, eliminating the wear of potentiometer or other contact mechanisms. In the event of failure of one hall-effect output a program adjustment to system controller will allow selection of the alternate channel. The same controller will also provide electronic adjustment of one degree from center for operation, minimum valve drive at minimum joystick deflection, and maximum valve drive at maximum joystick deflection. Adjustments for degrees from center operation and the minimum valve drive at minimum joystick deflection will be independent for the plow and dump. The joystick shall plug to the control panel as its only connection point. Connection of the joystick will render the pushbutton cylinder controls inoperable. Conversely, disconnection of the joystick will reactivate the pushbutton controls. Selection of the equipment function by pushbuttons on the head of the joystick will illuminate an equipment identity label on the control panel. No operation of the joystick can take place without holding the dead man switch.

The spreader controls modes of operation shall provide a selectable automatic and manual control. There shall be a Blast operation with programmable selection of level and time. A Pause operation shall be available to momentarily disable the spreader operation.

A feedback sensor shall not be required to achieve accurate and consistent operation of the spreader functions.

High brightness LED numerical displays will be used to indicate one of 11 reference controls positions for the spinner and auger (manual mode). In Auto operation the auger display will indicate "pounds per mile" if the system has been calibrated for such.

The system shall display fault occurrences of shorted or open outputs at the valves with indication of which circuit is responsible.

All controls will be mounted in the truck cab. The joystick shall be mounted on a pedestal style mechanism beside the driver at a level and location that is comfortable to operate, allowing the driver to operate at a glance without taking his eyes completely off the road. The Control display panel shall be mounted in the dash area and at a level easily viewed by the driver.

An integral valve/tank enclosure assembly shall be mounted to the frame rail of the vehicle. The reservoir and dry compartment shall be made of 7-gauge mild powder coated steel and the lid assembly shall be made of 10-gauge mild powder coated steel painted black to match the frame rails.

The bottom portion of the valve/tank integral design shall house a minimum of 35 gallons of hydraulic oil with temperature/sight gauge mounted on the front face. The reservoir shall be properly baffled with a drain plug in the bottom and provision in the top for an in-tank, glass type return line filter. There shall also be a fill tube vented cap assembly that will also serve as a clean out port. The filter will be a minimum of 10 micron and the element shall be easily removed for replacement.

The top portion of the valve/tank assembly will be dry with a rubber seal that will provide protection when the lid assembly is in place.

This area will house the tube/vented cap, return line in-tank filter, the solenoid control valve manifold, and the PLC electronic command modules.

The solenoid control manifold valve will mount in the enclosure against the back wall allowing for all cylinder and spreader hose connections to be mounted directly to this assembly. The back of the manifold assembly will be bolted to the back wall in a way to prevent outside contamination and to allow for the O ring fittings for hose connections to the direct entry eliminating the need for internal cylinder and spreader hose plumbing. The valve/tank assembly shall be narrow or stepped from the frame of the vehicle to allow for ample room for installation and servicing of the hoses.

The PLC modules will be contained to the back wall of the enclosure and will allow for easy servicing. The wiring from the manifold cartridge solenoids will plug into these two modules and the power, ground, and ground speed control conductors will exit the enclosure with a strain relief sealed connector.

The lid will set on a perimeter gasket and will be retained with four over-center chrome latches for easy access and removal. The entire valve/tank enclosure will be mounted to the frame in a cradle fabricated by the installer to properly support the assembly.

**ITEM 34: DUMP BODY 12 CUBIC YARD CAPACITY, ROCK BED, 126" CA.**  
**(12-16 Yard Range with Side Boards)**

Item	Specifications (Minimum)	Bidders Proposal
General:	This specification shall provide for steel hydraulic Rip Rap dump beds new, the latest current production model. Complete with manufacturer's standard equipment and accessories, fully serviced ready to operate. To include manufacturer's certificate or warranty and be bid less all applicable State and Federal Taxes. This body shall be equipment to meet all Federal and State of Oklahoma Safety Standards and Requirements. No dealer advertisement shall be affixed to the bed.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 127 of 157

Body size: Capacity:	12-yards sides and 16-yard ends.	<u>Describe:</u> _____
Length:	15-feet.	<u>Describe:</u> _____
Width:	84-inch inside width.	<u>Describe:</u> _____
Head Height:	62-inches.	<u>Describe:</u> _____
Tail Gate Height:	54-inches.	<u>Describe:</u> _____
Side Height:	42-inches, four (4)-bend (boxed) top rail, continuous steel with dirt shedding top.	<u>Describe:</u> _____ _____
Steel Thickness:	1/4-inch, AR400, certified 145,000 psi yield for floor, sides, front and tailgate. All welds to be continuous.	<u>Describe:</u> _____ _____
NOTE:	Understructure to be "western" Crossmemberless design with tubular long sills. Long sills will be 100,000 psi yield strength steel with internal bracing, 8-gauge inner and 8-gauge outer.	<u>Describe:</u> _____ _____ _____ _____
Floor:	Approx. 26-inch radius floor to sidewall for easy cleanout. Must have 37-inches (approx.) flat floor in center.	<u>Describe:</u> _____ _____ _____
Top Rail:	Boxed top rail will be four (4) bend, dirt shedding 5.5-inches x 8-inches.	<u>Describe:</u> _____ _____ _____
Fenders:	Sides shall have tandem steel fenders 9-feet forward from the rear, sloped 30-degrees outward.	<u>Describe:</u> _____ _____
Longitudinals:	8-inch under structure height.	<u>Describe:</u> _____
Corner Posts Rear:	Two (2) each, 12 3/4-inches, full depth with extra braces, dirt shedding top.	<u>Describe:</u> _____ _____
Spreader Chains:	Two (2) each.	<u>Describe:</u> _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 128 of 157

Grab Handles:	Two (2), one (1) on each side of gate.	<u>Describe:</u> _____
Clearance Lights:	Federal Motor Vehicle Safety Standard, LED clearance lights plus LED Stop/turn lights flush mounted in the rear corner pillars, shock resistant rubber mounted. Wiring-joints soldered and shrink wrapped with loom covering.	<u>Describe:</u> _____ _____ _____ _____ _____
Base Weight:	Show base weight of body. (Without hoist & accessories)	<u>Describe:</u> _____ _____ _____
Reflectors:	Six (6), two (2) each side, two (2) rear mounted on 3-inch dia. End gate, ICC approved, Federal #108, lighting to apply. <u>NOTE:</u> These reflectors must be housed type with screw or bolt type mounting stick-on type is not acceptable. Install Conspicuity tape on the rear on the bed. 12-feet minimum	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Tail Gate:	Panel fabricated from 1/4-inch high strength steel with typical yield strength of 145,000 psi tailgate fully boxed upper, lower and vertical frames. Two (2) additional horizontal braces, sloped to shed dirt. All welds continuous.	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Banjo Eyes:	Four (4), two (2) each side 3/8-inch steel, 4 3/8-inch x 5-inch and extend beyond rear post.	<u>Describe:</u> _____ _____ _____
Strobes Front and Rear:	Furnish and install strobe system as outlined in Item 5 of this bid on each side in rear corner pillars and in front grill area of truck.	<u>Describe:</u> _____ _____ _____
Warranty:	Body manufacturer shall provide a written 5-year warranty covering repair or replacement of the body, hoist and air cylinder for defective material and/or workmanship. Warranty shall include all freight and labor for repairs or replacement. Warranty shall also include adherence of primer to all metal surfaces not including inside or understructure of dump bodies. The manufacturer's warranty must be submitted with bid.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____ _____
Brackets &	Two (2), 30-inch x 5-inch, 1/8-inch thick Steel.	<u>Describe:</u> _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 129 of 157

Mud Flaps:	(See Manufacturer's Instructions) Two (2), One (1) on each side, 24-inches x 30-inches Non-Sail type. Located to the rear of the rear tandems. To be without any advertisement.	
Tail Gate Hardware:	Upper tailgate hinges shall be off set forward 10-inches and shall have 1 1/2-inch pivot pins with zerk lubrication. Lower latch pins shall be 1 1/4-inches. Air tailgate release in cab control.	<u>Describe:</u> 
NOTE:	When tailgate is hinged from the bottom, it must not have a gap where material can fall out.	<u>Describe:</u> 
Folding Ladder	Qty of Two (2), 20-inch, 4-inch wide metal grip strut steps attached on the front right-hand side of the body. Install a slide out, two (2) rung ladder, mounted under the body just below the steps. The slide out ladder shall be on a hinged mechanism that has a positive latch system and will be locked in storage mode or when retracted out will hinge down and be locked in a stable configuration for safe utilization and accessible from the ground. The steps and the 2 rung ladder will allow access from the ground to the top of the body.	<u>Describe:</u> 
Mounting Height:	Not to exceed 8-inch mounting height from top of truck frame to floor of body.	<u>Describe:</u> 
Full Cab Shield:	Full Cab shield approximately over truck cab mounted on front of dump bed full width. Horizontal portion shall have 5-degrees slope. Material will be 11-gauge, high strength steel with typical yield strength of 100,000 psi.	<u>Describe:</u> 
Safety Strut:	All dump beds must be equipped with Safety Strut to hold bed in the "UP" position while repairs are being made. (One each side).	<u>Describe:</u> 
Spreader Tie Down "D" Rings	Install four (4), 1/2-inch dia. "D" Rings on approximately 30-inches down from top rail; Two (2) on each side with one mounted 24-inches from the front and one mounted 24-inches from the rear of body. Must have the capability of ratcheting the spreader chains from a standing position on the	<u>Describe:</u> 



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 130 of 157

	ground.	_____
Electric Tarp Kit	Donovan 7000ELD electric tarp kit or approved equal with control box. A wind deflector, 16-gauge galvanized steel, with a 3/16-inch removeable plate shall be installed over the top of the tarp roll up mechanism to protect it from damage.	<u>Describe:</u> _____ _____ _____ _____ _____
Hydraulic Hoist, Pump & Control Valve:	Class 120	<u>Describe:</u> <u>Pump Make:</u> _____ <u>Pump Model:</u> _____ <u>Hoist Make:</u> _____ <u>Hoist Model:</u> _____
Cylinder:	Show inside diameter & piston diameter and stroke _____", 1st active sleeve, _____" 2nd, _____", 3rd, _____" and base tube _____" stroke, single acting, self-adjusting V-type packing interior guide bushing, chrome plated cylinder.	<u>Describe:</u> <u>1<sup>st</sup></u> _____ <u>2<sup>nd</sup></u> _____ <u>3<sup>rd</sup></u> _____ <u>Base Tube</u> _____ _____
Hoist Capacity:	38-Tons.	<u>Describe:</u> _____
Dump Angle:	50-Degrees Maximum.	<u>Describe:</u> _____
Bleeder Valve:	At top of base sleeve, auto bleed.	<u>Describe:</u> _____ _____
Oil Reservoir:	Capacity: 28-gallons with filtered return line, include shut off valve, sight gauge. Mount outside frame.	<u>Describe:</u> _____ _____ _____
Low Hydraulic Fluid Warning Light	<b>Must install in the cab a Low Hydraulic Fluid Warning Light within easy view of driver.</b>	<u>Describe:</u> _____ _____
Rear Pivot Hinges:	Double shear type – Two (2) hinge pins 1-3/4-inches x 8-inches.	<u>Describe:</u> _____ _____ _____
Hydraulic Pump	20 GPM @ 2,500 PSI, 1,000 RPM, Pump to be mounted directly on PTO.	<u>Describe:</u> _____ _____ _____
Relief Valve:	Built into valve.	<u>Describe:</u> _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 131 of 157

Shaft Bearings:	Roller Bearings Standard.	<u>Describe:</u> _____
Control Valve:	4 Position (raised, hold, feather, and lower).	<u>Describe:</u> _____
Controls:	Locking lever pedestal control with <u>BODY UP</u> audio and visual alarm. A locking device to lock controls in neutral position shall be provided. Connect lever and valve with a 1/4-inch sealed cable. Valve to be Gresen model V-20.	<u>Describe:</u> _____ _____ _____ _____ _____
Power Take-Off:	Direct driven from transmission to hydraulic pump. PTO to have enabler capability (i.e. "Hot Shift" Type) with electronic "overspeed protection" to prevent PTO from turning at more RPM than system is designed to handle. Must be geared to allow continuous operation at 0-30 MPH. Electronic dash mounted controls with engagement light, no levers or cables, must be able to shift PTO while truck is in motion 15 to 20 MPH.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____
Over Speed Protection For PTO:	Fully Adjustable from 300 to 3000 RPM	<u>Describe:</u> _____

**TAIL LIGHTS:** Tail lights of vehicle are to be mounted on the outside of the truck frame. Tail lights shall be installed within a protected bracket to prevent them from being knocked off accidentally. Lens should be protected with expanded metal.

**MOUNTING INSTRUCTIONS:** The front mounting brackets on each side of the frame shall be drilled and bolted, not welded to the truck frame. The hydraulic pump shall be direct mounted to the Power take off.

The rear end of the truck frame to be cut the least amount to allow the bed to reach maximum dumping position. The truck frame shall be cut at a right angle or square cut rather than tapered.

The following requirements will be necessary if there is no safeguard to prevent the bed from being raised too high or beyond the return point of the hydraulic hoist cylinders:

Safety bed stop blocks of sufficient thickness to provide this protection must be mounted behind the bed hinges between the bed and truck frame.

**NOTE:** Seller must **NOT** remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take-off installed. If, during installation, it becomes necessary to remove these plates or cover these numbers, they must be replaced in a visible location.

**ELECTRICAL WIRING:** Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, splices and wiring to be protected by all weather insulation. This insulation material to be of sufficient quality to insure a life period of five (5) years.

**\*POWER TAKE OFF:** Must be the latest current model installed and/or adapted to fit the transmission. Mounting bolts or screws must provide adequate self-locking and sealing to insure against oil leaks, and must keep housing firmly attached to transmission.

**FRONT CLEARANCE LIGHTS:** To be installed under the front lower corner.

**PAINT:** All exposed metal shall be primed and painted. The bed shall be sprayed or dipped with a protective metal primer, then be painted Factory White to match vehicle.



2-7-17



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 133 of 157

	<p>completely open with controls in cab.</p> <p>8. <u>Spread Apron</u>: 12-inch Spread Apron, 10-gauge steel.</p> <p>9. <u>Steps</u>: Qty of two (2), 20-inch steps, 4-inch wide metal grip strut located on the right front side corner of the body. No folding ladder.</p> <p>10. <u>Chain &amp; Boomer Rack</u>: Install a chain and boomer rack on the nose of the trailer. The rack shall have a bottom section for the chains to sit in. The rack shall be lockable to prevent theft of the chains and boomers. The rack shall hold approx. 10 chains and boomers. The rack shall be accessible to the operator. <b>Must add 8-inches to CA of truck to mount chain rack.</b></p> <p>11. <u>Side Board Extensions</u>: Install 2-inch Oak boards tapered from front to rear of bed. Boards to be tapered so that the area from the front of the bed to allow smooth operation of a roll up type tarp system. The tailgate is filled.</p>	<div>8</div> <div>9</div> <div>10</div> <div>11</div>
--	--	---

**Additional Instructions for Hydraulic Central Control System for Snow and Ice Equipment:**

Install a Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor.

The sand spreader system shall contain a 3/4" pressure line for the spinner and a 3/4" pressure line for the conveyor and a single 1" return line. These lines will be hard piped from the hoist area to the rear of the truck. The spinner quick connect shall be an Eaton #5602-12-12S or acceptable equal. The conveyor quick connect shall be an Eaton #5601-12-12S or acceptable equal. The return quick connect shall be an Eaton #5602-16-16S or acceptable equal. All quick connects must be compatible with existing quick connects of same size being utilized in the current fleet of trucks so all sand spreaders units are compatible with any truck utilized. All quick connects are to be mounted on the rear curbside of the dump body approximately 10" from the rear (contact a City of Tulsa representative for an exact location). All quick connects to have a protective cover. These quick connects shall be mounted so they will not interfere with dumping of the bed or with use of the Pintle Hitch.

The Hydraulic Valving shall be as follows. The circuit design shall include Load-Sensing communication from all valves. The valves shall be solenoid operated carriage style with a common manifold and rated IP69. There shall be a flow priority to insure operation of the cylinder functions whenever the spreader is operating, and pump flow is critically low. All cylinders shall have proportional flow control on the power sequence to afford cylinder speed control. Pressure relief valves shall have an independent stem adjustable pressure protection included for the manifold inlet, the spreader, the down-side of all double acting cylinders and plow angle cylinders. The plow lift valves shall be capable of four-way control and have a flow capacity of 15 gpm. The raise side of the circuit shall be rated for zero leakage. The plow angle valves shall be capable of four-way control and have a flow capacity of 15 gpm. Load Locking check valves) or Motor Spool design) shall be included as required to support the angling mechanism used. The dump hoist valves shall have a four-way control and have a flow capacity of 30 gpm. Counter balance control valves shall be included. The spreader proportional control valves for the auger, conveyor, and spinner motors shall have flow capacities of 15/7 gpm respectively. These valves shall be pressure compensated and parallel in their circuit architecture.

The System Controls commands to the system valves shall be digitally encoded and sent over the vehicles electrical system using only a 12-volt DC and ground connection at each end of the system.

The valve driver modules shall be housed in Deutsch boxes employ Deutsch connectors at solenoids or acceptable equal giving IP69 environmental rating. The valve driver modules shall be equipped with current sensing control to offset thermal changes in solenoid performance and to detect open or short circuit conditions and protect against the latter by automatic interruption of current to the shorted output.

Cylinder momentary push button switches will provide on-off style control of the plow and dump body operations. Program settings will provide effective and independent flow trims for plow up-down, plow angle and dump up-down.

A two-axis cylinder proportional joystick with dead man switch and pushbutton selection of equipment shall be provided. The joystick shall employ dual redundant hall-effect mechanisms, eliminating the wear of potentiometer or other contact mechanisms. In the event of failure of one hall-effect output a program adjustment to system controller will allow selection of the alternate channel. The same controller will also provide electronic adjustment of one degree from center for operation, minimum valve drive at minimum joystick deflection, and maximum valve drive at maximum joystick deflection. Adjustments for degrees from center operation and the minimum



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 134 of 157

valve drive at minimum joystick deflection will be independent for the plow and dump. The joystick shall plug to the control panel as its only connection point. Connection of the joystick will render the pushbutton cylinder controls inoperable. Conversely, disconnection of the joystick will reactivate the pushbutton controls. Selection of the equipment function by pushbuttons on the head of the joystick will illuminate an equipment identity label on the control panel. No operation of the joystick can take place without holding the dead man switch.

The spreader controls modes of operation shall provide a selectable automatic and manual control. There shall be a Blast operation with programmable selection of level and time. A Pause operation shall be available to momentarily disable the spreader operation.

A feedback sensor shall not be required to achieve accurate and consistent operation of the spreader functions.

High brightness LED numerical displays will be used to indicate one of 11 reference controls positions for the spinner and auger (manual mode). In Auto operation the auger display will indicate "pounds per mile" if the system has been calibrated for such.

The system shall display fault occurrences of shorted or open outputs at the valves with indication of which circuit is responsible.

All controls will be mounted in the truck cab. The joystick shall be mounted on a pedestal style mechanism beside the driver at a level and location that is comfortable to operate, allowing the driver to operate at a glance without taking his eyes completely off the road. The Control display panel shall be mounted in the dash area and at a level easily viewed by the driver.

An integral valve/tank enclosure assembly shall be mounted to the frame rail of the vehicle. The reservoir and dry compartment shall be made of 7-gauge mild powder coated steel and the lid assembly shall be made of 10 gauge mild powder coated steel painted black to match the frame rails.

The bottom portion of the valve/tank integral design shall house a minimum of 35 gallons of hydraulic oil with temperature/sight gauge mounted on the front face. The reservoir shall be properly baffled with a drain plug in the bottom and provision in the top for an in-tank, glass type return line filter. There shall also be a fill tube vented cap assembly that will also serve as a clean out port. The filter will be a minimum of 10 micron and the element shall be easily removed for replacement.

The top portion of the valve/tank assembly will be dry with a rubber seal that will provide protection when the lid assembly is in place.

This area will house the tube/vented cap, return line in-tank filter, the solenoid control valve manifold, and the PLC electronic command modules.

The solenoid control manifold valve will mount in the enclosure against the back wall allowing for all cylinder and spreader hose connections to be mounted directly to this assembly. The back of the manifold assembly will be bolted to the back wall in a way to prevent outside contamination and to allow for the O ring fittings for hose connections to the direct entry eliminating the need for internal cylinder and spreader hose plumbing. The valve/tank assembly shall be narrow or stepped from the frame of the vehicle to allow for ample room for installation and servicing of the hoses.

The PLC modules will be contained to the back wall of the enclosure and will allow for easy servicing. The wiring from the manifold cartridge solenoids will plug into these two modules and the power, ground, and ground speed control conductors will exit the enclosure with a strain relief sealed connector.

The lid will set on a perimeter gasket and will be retained with four over-center chrome latches for easy access and removal. The entire valve/tank enclosure will be mounted to the frame in a cradle fabricated by the installer to properly support the assembly.

**ITEM 35: DUMP BODY 14 CUBIC YARD CAPACITY, ROCK BED, 132" CA Without Chain Rack.**  
**(14-18 Yard Range with Side Boards)**

Item	Specifications (Minimum)	Bidders Proposal
General:	This specification shall provide for Rip Rap steel hydraulic dump beds new, the latest current production model. Complete with manufacturer's standard equipment and accessories, fully serviced ready to operate. to include manufacturer's certificate or warranty. This body shall be equipment to meet all Federal and State of Oklahoma Safety Standards and Requirements. No dealer advertisement shall be affixed to the bed.	<u>Describe:</u> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Body Size: Capacity:	14-yard sides and 18-yard ends.	<u>Describe:</u> <hr/>



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 135 of 157

Length:	16-feet.	<u>Describe:</u> _____
Width:	84-inch inside width.	<u>Describe:</u> _____
Head Height:	66-inches.	<u>Describe:</u> _____
Tail Gate Height:	54-inches.	<u>Describe:</u> _____
Side Height:	42-inch, four (4)-bend (boxed) top rail, continuous steel with dirt shedding top.	<u>Describe:</u> _____ _____ _____
Steel Thickness:	1/4-inch, AR400, certified 145,000 psi yield for floor, sides, front and tailgate. All welds to be continuous.	<u>Describe:</u> _____ _____ _____
Folding Ladder	Qty of Two (2), 20-INCH, 4-inch wide metal grip strut steps attached on the front right-hand side of the body. Install a slide out, two (2) rung ladder, mounted under the body just below the steps. The slide out ladder shall be on a hinged mechanism that has a positive latch system and will be locked in storage mode or when retracted out will hinge down and be locked in a stable configuration for safe utilization and accessible from the ground. The steps and the 2 rung ladder will allow access from the ground to the top of the body.	<u>Describe:</u> _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
Note:	Understructure to be "western" Crossmemberless design with tubular long sills. Long sills will be 100,000 psi yield strength steel with internal bracing, 8-gauge inner and 8-gauge outer.	<u>Describe:</u> _____ _____ _____ _____
Floor:	26-inch, radius floor to sidewall for easy cleanout. Must have 37-inch flat floor in center.	<u>Describe:</u> _____ _____ _____
Top Rail:	Boxed top rail will be four (4) bend dirt shedding 5.5-inches x 8-inches.	<u>Describe:</u> _____ _____ _____
Fenders:	Sides shall have tandem steel fenders 9-feet forward	<u>Describe:</u> _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 136 of 157

	from the rear, sloped 30-degrees outward.	
Longitudinals:	8-inch under structure height.	<u>Describe:</u> _____ _____
Corner Posts Rear:	Two (2) each, 12 3/4-inch, full depth with extra braces, dirt shedding top.	<u>Describe:</u> _____ _____
Spreader Chains:	Two (2) each.	<u>Describe:</u> _____ _____
Grab Handles:	Two (2), one (1) on each side of gate.	<u>Describe:</u> _____ _____
Clearance Lights:	Federal Motor Vehicle Safety Standard, LED clearance lights plus LED Stop/turn lights, flush mounted in the rear corner pillars, shock resistant rubber mounted. Wiring-joints soldered and shrink wrapped with loom covering.	<u>Describe:</u> _____ _____ _____ _____ _____
Base Weight:	Show base weight of body. (Without hoist & accessories).	<u>Describe:</u> _____ _____
Reflectors:	Six (6), two (2) each side, two (2) rear mounted on 3-inch diameter. End gate, ICC approved, Federal #108, lighting to apply. <u>NOTE:</u> These reflectors must be housed type with screw or bolt type mounting stick-on type is not acceptable. Install Conspicuity tape on the rear on the bed. 12-feet minimum	<u>Describe:</u> _____ _____ _____ _____ _____ _____
Tail Gate:	Panel fabricated from 1/4-inch high strength steel with typical yield strength of 145,000 psi tailgate fully boxed upper, lower and vertical frames. Two (2) additional horizontal braces, sloped to shed dirt. All welds continuous.	<u>Describe:</u> _____ _____ _____ _____ _____
Banjo Eyes:	Four (4), two (2) each side. 3/8-inch steel, 4 3/8-inch x 5-inch and extend beyond rear post.	<u>Describe:</u> _____ _____
Warranty:	Covers bed for defective material and/or workmanship at a rate of 100% for the first (3) years and at a rate of 50% for years 4 and 5.	<u>Describe:</u> _____ _____ _____
Brackets &	Two (2), 30-inch x 5-inch, 1/8-inch thick Steel (See	<u>Describe:</u> _____



**CITY OF  
Tulsa**  
A New Kind of Energy.

**Invitation For Bid TAC 309E  
Truck Bodies, Equipment & Accessories  
City Wide  
Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 137 of 157

Mud Flaps:	Manufacturer's Instructions). Two (2), One (1) on each side, 24-inches x 30-inches Non-Sail type. To be without any advertisement.	_____ _____ _____
Tail Gate Hardware:	Upper tailgate hinges shall be off set forward 10-inches and shall have 1 1/2-inch pivot pins with zerk lubrication. Lower latch pins shall be 1 1/4-inches. Air tailgate release in cab control.	<u>Describe:</u> _____ _____ _____
Note:	When tailgate is hinged from the bottom, it must not have a gap where material can fall out.	<u>Describe:</u> _____ _____ _____
Step:	One (1), 20-inch, Step, two (2) rung, 4-inch wide expanded metal located lower right front corner of body.	<u>Describe:</u> _____ _____ _____
Mounting Height:	Not to exceed 8-inch mounting height from top of truck frame to floor of body.	<u>Describe:</u> _____ _____ _____
Full Cab Shield:	Full Cab shield, full width of bed to be mounted on front of dump bed full width. Horizontal portion shall have 5-degree slope. Material will be 11-gauge high strength steel with typical yield strength of 100,000 psi.	<u>Describe:</u> _____ _____ _____ _____ _____
Safety Strut:	All dump beds must be equipped with Safety Strut to hold bed in the "UP" position while repairs are being made. (One each side).	<u>Describe:</u> _____ _____ _____ _____
Spreader Tie Down "D" Rings	Install four (4), 1/2-inch dia. "D" Rings on approximately 30-inches down from top rail; two (2) on each side with one mounted 24-inches from the front and one mounted 24-inches from the rear of body. Must have the capability of ratcheting the spreader chains from a standing position on the ground.	<u>Describe:</u> _____ _____ _____ _____ _____
Strobes Front and Rear:	Furnish and install strobe system as outlined in Item 5 of this bid on each side in rear corner pillars and in front grill area of truck.	<u>Describe:</u> _____ _____ _____ _____
Electric Tarp	Donovan 7000ELD electric tarp kit or approved equal	<u>Describe:</u> _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 138 of 157

Kit	with control box. A wind deflector- 16-gauge galvanized steel. A 3/16-inch removeable plate shall be installed over the top of the tarp roll up mechanism to protect it from damage.	_____ _____ _____ _____
Hydraulic Hoist, Pump & Control Valve:	Class 120	Describe: _____ Pump Make: _____ Pump Model: _____ Hoist Make: _____ Hoist Model: _____
Cylinder:	Show inside diameter & piston diameter and stroke _____", 1st active sleeve, _____" 2nd, _____", 3rd, _____" and base tube _____" stroke, single acting, self-adjusting V-type packing interior guide bushing, chrome plated cylinder	Describe: _____ 1 <sup>st</sup> _____ 2 <sup>nd</sup> _____ 3 <sup>rd</sup> _____ Base Tube _____ _____
Hoist Capacity:	38-tons.	Describe: _____ _____
Dump Angle:	50-degrees Maximum.	Describe: _____ _____
Bleeder Valve:	At top of base sleeve, auto bleed.	Describe: _____ _____
Oil Reservoir:	Capacity: 28-gallons with filtered return line, include shut off valve, sight gauge. Mount outside frame.	Describe: _____ _____ _____
Low Hydraulic Fluid Warning Light	<b>Must install in the cab a Low Hydraulic Fluid Warning Light within easy view of driver.</b>	Describe: _____ _____ _____
Rear Pivot Hinges:	Double shear type - 2 hinge pins 1-3/4inches x 8-inches.	Describe: _____ _____ _____
Hydraulic Pump	20 GPM @ 2,500 PSI, 1,000 RPM, Pump to be mounted directly on PTO.	Describe: _____ _____ _____
Relief Valve:	Built into valve.	Describe: _____ _____
Shaft Bearings:	Roller Bearings Standard.	Describe: _____ _____
Control Valve:	4 Position (raised, hold, feather, and lower)	Describe: _____ _____



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 139 of 157

Controls:	Locking lever pedestal control with <u>BODY UP</u> audio and visual alarm. A locking device to lock controls in neutral position shall be provided. Connect lever and valve with a 1/4-inch sealed cable. Valve to be Gresen model V-20.	<u>Describe:</u>      
Power Take-Off:	Direct driven from transmission to hydraulic pump. PTO to have enabler capability (i.e. "Hot Shift" Type) with electronic "overspeed protection" to prevent PTO from turning at more RPM than system is designed to handle. Must be geared to allow continuous operation at 0-30 MPH. Electronic dash mounted controls with engagement light, no levers or cables, must be able to shift PTO while truck is in motion 15 to 20 MPH.	<u>Describe:</u>          
Over Speed Protection For PTO:	Fully Adjustable from 300 to 3000 RPM.	<u>Describe:</u>   

**TAIL LIGHTS:** Tail lights of vehicle are to be mounted on the outside of the truck frame. Tail lights shall be installed within a protected bracket to prevent them from being knocked off accidentally. Lens should be protected with expanded metal.

**MOUNTING INSTRUCTIONS:** The front mounting brackets on each side of the frame shall be drilled and bolted, not welded to the truck frame. The hydraulic pump shall be direct mounted to the Power take off. The rear end of the truck frame to be cut the least amount to allow the bed to reach maximum dumping position. The truck frame shall be cut at a right angle or square cut rather than tapered. The following requirements will be necessary if there is no safeguard to prevent the bed from being raised too high or beyond the return point of the hydraulic hoist cylinders:  
Safety bed stop blocks of enough thickness to provide this protection must be mounted behind the bed hinges between the bed and truck frame.

**NOTE:** Seller must **NOT** remove identification plates or numbers on the truck. This especially applies to the truck transmission when power take-off installed. If, during installation, it becomes necessary to remove these plates or cover these numbers, they must be replaced in a visible location.

**ELECTRICAL WIRING:** Wiring to be in loom and properly secured to frame to prevent sagging. Upon completion of installation all connections, splices and wiring to be protected by all-weather insulation. This insulation material to be of enough quality to insure a life period of five (5) years.

**\*POWER TAKE OFF:** Must be the latest current model installed and/or adapted to fit the transmission. Mounting bolts or screws must provide adequate self-locking and sealing to insure against oil leaks and must keep housing firmly attached to transmission.

**FRONT CLEARANCE LIGHTS:** To be installed under the front lower corner.

**PAINT:** All exposed metal shall be primed and painted. The bed shall be sprayed or dipped with a protective metal primer, then be painted Factory White to match vehicle.

<b>OPTIONS:</b>		
	1. <u>Central Hydraulic System:</u> with Quick Disconnect for Snow & Ice Equipment: (see additional instructions below). Muncie MP2 central hydraulic	<u>Describe:</u> 1   



- 10



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 141 of 157

	a bottom section for the chains to sit in. The rack shall be lockable to prevent theft of the chains and boomers. The rack shall hold approx. 10 chains and boomers. The rack shall be accessible to the operator. <b>Must add 8-inches to CA of truck to mount chain rack.</b>	
11.	<u>Side Board Extensions:</u> Install 2-inch Oak boards tapered from front to rear of bed. Boards to be tapered so that the area from the front of the bed to allow smooth operation of a roll up type tarp system. The tailgate is full.	11

**Additional Instructions for Hydraulic Central Control System for Snow and Ice Equipment:**

Install a Muncie MP2 central hydraulic system or acceptable equal capable of operating the dump body hoist, snow plow up/down/left/right and sand spreader spinner and conveyor.

The sand spreader system shall contain a 3/4" pressure line for the spinner and a 3/4" pressure line for the conveyor and a single 1" return line. These lines will be hard piped from the hoist area to the rear of the truck. The spinner quick connect shall be an Eaton #5602-12-12S or acceptable equal. The conveyor quick connect shall be an Eaton #5601-12-12S or acceptable equal. The return quick connect shall be an Eaton #5602-16-16S or acceptable equal. All quick connects must be compatible with existing quick connects of same size being utilized in the current fleet of trucks so all sand spreaders units are compatible with any truck utilized. All quick connects are to be mounted on the rear curbside of the dump body approximately 10" from the rear (contact a City of Tulsa representative for an exact location. All quick connects to have a protective cover. These quick connects shall be mounted so they will not interfere with dumping of the bed or with use of the Pintle Hitch.

The Hydraulic Valve shall be as follows. The circuit design shall include Load-Sensing communication from all valves. The valves shall be solenoid operated carriage style with a common manifold and rated IP69. There shall be a flow priority to insure operation of the cylinder functions whenever the spreader is operating, and pump flow is critically low. All cylinders shall have proportional flow control on the power sequence to afford cylinder speed control. Pressure relief valves shall have an independent stem adjustable pressure protection included for the manifold inlet, the spreader, the down-side of all double acting cylinders and plow angle cylinders. The plow lift valves shall be capable of four-way control and have a flow capacity of 15 gpm. The raise side of the circuit shall be rated for zero leakage. The plow angle valves shall be capable of four-way control and have a flow capacity of 15 gpm. Load Locking check valves) or Motor Spool design) shall be included as required to support the angling mechanism used. The dump hoist valves shall have a four-way control and have a flow capacity of 30 gpm. Counter balance control valves shall be included. The spreader proportional control valves for the auger, conveyor, and spinner motors shall have flow capacities of 15/7 gpm respectively. These valves shall be pressure compensated and parallel in their circuit architecture.

The System Controls commands to the system valves shall be digitally encoded and sent over the vehicles electrical system using only a 12-volt DC and ground connection at each end of the system.

The valve driver modules shall be housed in Deutsch boxes employ Deutsch connectors at solenoids or acceptable equal giving IP69 environmental rating. The valve driver modules shall be equipped with current sensing control to offset thermal changes in solenoid performance and to detect open or short circuit conditions and protect against the latter by automatic interruption of current to the shorted output.

Cylinder momentary push button switches will provide on-off style control of the plow and dump body operations. Program settings will provide effective and independent flow trims for plow up-down, plow angle and dump up-down.

A two-axis cylinder proportional joystick with dead man switch and pushbutton selection of equipment shall be provided. The joystick shall employ dual redundant hall-effect mechanisms, eliminating the wear of potentiometer or other contact mechanisms. In the event of failure of one hall-effect output a program adjustment to system controller will allow selection of the alternate channel. The same controller will also provide electronic adjustment of one degree from center for operation, minimum valve drive at minimum joystick deflection, and maximum valve drive at maximum joystick deflection. Adjustments for degrees from center operation and the minimum valve drive at minimum joystick deflection will be independent for the plow and dump. The joystick shall plug to the control panel as its only connection point. Connection of the joystick will render the pushbutton cylinder controls inoperable. Conversely, disconnection of the joystick will reactivate the pushbutton controls. Selection of the equipment function by pushbuttons on the head of the joystick will illuminate an equipment identity label on the control panel. No operation of the joystick can take place without holding the dead man switch.

The spreader controls modes of operation shall provide a selectable automatic and manual control. There shall be a Blast operation with programmable selection of level and time. A Pause operation shall be available to momentarily disable the spreader operation.

A feedback sensor shall not be required to achieve accurate and consistent operation of the spreader functions.

High brightness LED numerical displays will be used to indicate one of 11 reference controls positions for the spinner and auger (manual mode). In Auto operation the auger display will indicate "pounds per mile" if the system has been calibrated for such.

The system shall display fault occurrences of shorted or open outputs at the valves with indication of which circuit is responsible.



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 142 of 157

All controls will be mounted in the truck cab. The joystick shall be mounted on a pedestal style mechanism beside the driver at a level and location that is comfortable to operate, allowing the driver to operate at a glance without taking his eyes completely off the road. The Control display panel shall be mounted in the dash area and at a level easily viewed by the driver.

An integral valve/tank enclosure assembly shall be mounted to the frame rail of the vehicle. The reservoir and dry compartment shall be made of 7-gauge mild powder coated steel and the lid assembly shall be made of 10-gauge mild powder coated steel painted black to match the frame rails.

The bottom portion of the valve/tank integral design shall house a minimum of 35 gallons of hydraulic oil with temperature/sight gauge mounted on the front face. The reservoir shall be properly baffled with a drain plug in the bottom and provision in the top for an in-tank, glass type return line filter. There shall also be a fill tube vented cap assembly that will also serve as a clean out port. The filter will be a minimum of 10 micron and the element shall be easily removed for replacement.

The top portion of the valve/tank assembly will be dry with a rubber seal that will provide protection when the lid assembly is in place. This area will house the tube/vented cap, return line in-tank filter, the solenoid control valve manifold, and the PLC electronic command modules.

The solenoid control manifold valve will mount in the enclosure against the back wall allowing for all cylinder and spreader hose connections to be mounted directly to this assembly. The back of the manifold assembly will be bolted to the back wall in a way to prevent outside contamination and to allow for the O ring fittings for hose connections to the direct entry eliminating the need for internal cylinder and spreader hose plumbing. The valve/tank assembly shall be narrow or stepped from the frame of the vehicle to allow for ample room for installation and servicing of the hoses.

The PLC modules will be contained to the back wall of the enclosure and will allow for easy servicing. The wiring from the manifold cartridge solenoids will plug into these two modules and the power, ground, and ground speed control conductors will exit the enclosure with a strain relief sealed connector.

The lid will set on a perimeter gasket and will be retained with four over-center chrome latches for easy access and removal. The entire valve/tank enclosure will be mounted to the frame in a cradle fabricated by the installer to properly support the assembly.

#### **SPECIFICATION ATTACHMENT CHECKLIST**

In addition to the items required for the bid as listed on the checklist at the beginning of the bid package, use the following checklist to ensure you have provided all required attachments based on the technical specifications. Bids submitted by the Seller must include the following attachments, as required by the technical specifications:

\_\_\_\_\_ Brochures and/or specification literature clearly describing the unit(s) and verifying that the unit(s) meet or exceed the requirements of this specification

\_\_\_\_\_ Complete Warranty documentation

**THE REST OF THIS PAGE LEFT INTENTIONALLY BLANK**



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 143 of 157

**EXHIBIT A**  
**BID FORM INCLUDING DELIVERY AND PRICING**

**1. Delivery.** If your Bid is accepted and an agreement is executed, state the number of days you need to deliver the Goods and/or to begin providing Services:

\_\_\_\_\_

You must be able to deliver the Goods and/or Services as specified in your Bid. Failure to do so may result in City terminating your agreement or canceling the Purchase Order, pursuing collection under any performance bond, as well as seeking any other damages to which it may be entitled in law or in equity.

**2. Pricing**

**(ESTIMATED QUANTITIES FOR EVALUATION PURPOSES ONLY)**

Item	Description	Estimate Annual QTY	Unit Cost	Extended Cost
<b>1</b>	2,000 lb. Crane w/manual 5-foot 6-inch Boom.	2 or more	\$	\$
	<b>ITEM 1 Total Extended Cost</b>			\$
<b>2</b>	2,000 lb. Crane w/7-foot Boom (Pedestal Mounted)	1 or more	\$	\$
	Option 1, Power Rotation	1 or more	\$	\$
	<b>ITEM 2 Total Extended Cost</b>			\$
<b>3</b>	3,200 lb. Crane	3 or more	\$	\$
	Option 1, Power Out/In, Up/DownOutriggers.	3 or more	\$	\$
	Option 2, Remote Control System.	3 or more	\$	\$
	<b>ITEM 3 Total Extended Cost</b>			\$
<b>4</b>	5,000 lb. Crane	2 or more	\$	\$
	Option 1. Power In/Out, power Up/Down outriggers for curbside crane	2 or more	\$	\$
	<b>ITEM 4 Total Extended Cost</b>			\$
<b>5</b>	<b>Strobe Systems</b>	10 or more	\$	\$
	Option A, Front & Rear for Cars	10 or More	\$	\$
	Option B, Front & Rear for Pickups	10 or More	\$	\$
	Option C, Front & Rear for Vans	10 or More	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 144 of 157

	Option D, Front & Rear for SUV's	10 or More	\$	\$
	Option E, Front & Rear for Trucks w/Utility Service Bodies (8500-18,000 GVW)	10 or More	\$	\$
	Option F, Front & Rear for Trucks /Utility Service Bodies (19,000-33,000 GVW)	10 or More	\$	\$
	Option G, Front & Rear for Trucks w/Contractors Beds (10,000-18,000 GVW)	10 or More	\$	\$
	Option H, Front & Rear for Trucks w/Contractors Beds (19,000-33,000 GVW)	10 or More	\$	\$
	Option I, Front & Rear for Trucks w/ Stake Body Flatbeds (10,000-18,000 GVW)	10 or More	\$	\$
	Option J, Front & Rear for Trucks w/Stake Body Flatbeds (19,000-33,000 GVW)	10 or More	\$	\$
	Option K, <b>FRONT ONLY</b> for Heavy Duty Cab & Chassis Trucks (33,000-120,000 GVW)	10 or More	\$	\$
	Option L, Rear Mount Only Dump Bodies & Service Bodies	10 or More	\$	\$
	Option M, Not Installed Item Rear Strobes	2 or More	\$	\$
	Option N, Not Installed Front Strobes	2 or More	\$	\$
	<b>ITEM 5 TOTAL EXTENDED COST</b>			\$
<b>6</b>	Tool Boxes			
	Option A, Tool Chests, Double Lid, Standard Size	10 or More	\$	\$
	Option B, Tool Chests, Double Lid, Wide, Deep	3 or More	\$	\$
	Option C, Tool Chests, Double Lid, Wide	3 or more	\$	\$
	Option D, Tool Chests, Double Lid, Standard, Mid Size Truck	4 or more	\$	\$
	Option E, Tool Chests, Single Lid, Standard Size	2 or more	\$	\$
	Option F, Tool Chests, Single Lid, Low Profile, for Mid Size Trucks	2 or more	\$	\$
	Option G, Tool Chests, Single Lid, Standard Size, for Mid Size Trucks	4 or more	\$	\$
	Option H, Tool Chests, Upper Side Box, 78x16 1/2x12 1/2	4 or more	\$	\$
	Option I, Tool Chests, Upper Side Box, 90x16 1/2x12 1/2	4 or more	\$	\$
	Option J, Tool Chests, Upper Side Box, 96x16 1/2x12 1/2	4 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 145 of 157

	Option K, Tool Chests, Underbody Box, 96x 16 1/2 x 12 1/2, 2 door	4 or more	\$	\$
	Option L, Tool Chests, Underbody Box, 24x18x18	6 or more	\$	\$
	Option M, Tool Chests, Underbody Box, 36x14x16	4 or more	\$	\$
	Option N, Tool Chests, Underbody Box, 36x18x18	2 or more	\$	\$
	Option O, Tool Chests, Underbody Box, 48x18x18	4 or more	\$	\$
	Option P, Tool Chests, Underbody Box, 60x18x18	2 or more	\$	\$
	Option Q, Tool Chests, 2 door, 96x18x18 mounted on top or stacked, Flatbed.	3 or more	\$	\$
	Option R, Tool Chests, Over-wheel Box, 51x13 3/16x8	1 or more	\$	\$
	Option S1, Window Grill, Mid-Size Truck	2 or more	\$	\$
	Option S2, Window Grill, Full Size Truck	2 or more	\$	\$
	Option S3, Window Grill, Service Body Truck	6 or more	\$	\$
	Option S4, Tool Chests, Bow Bracket, 1/2 Ton Truck	1 or more	\$	\$
	Option S5, Tool Chests, Bow Bracket, Super Duty Truck	1 or more	\$	\$
	Option S6, Tool Chests, Bow Bracket, Service Body Truck	1 or more	\$	\$
	<b>ITEM 6 TOTAL EXTENDED COST</b>			\$
<b>7</b>	Fire Extinguisher	10 or more	\$	\$
	<b>ITEM 7 TOTAL EXTENDED COST</b>			\$
<b>8</b>	Safety Triangles	5 or more	\$	\$
	<b>ITEM 8 TOTAL EXTENDED COST</b>			\$
<b>9</b>	Backup Alarm	10 or more	\$	\$
	<b>ITEM 9 TOTAL EXTENDED COST</b>			\$
<b>10</b>	Electric Brake Controller	3 or more	\$	\$
	<b>ITEM 10 TOTAL EXTENDED COST</b>			\$
<b>11</b>	6 or 7-way Trailer Light Connector			



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 146 of 157

	11A. Cars.	2 or more	\$	\$
	11B. Pickups	2 or more	\$	\$
	11C. Vans	2 or more	\$	\$
	11D. SUV's	10 or more	\$	\$
	11E. Utility Service Bodies	10 or more	\$	\$
	11F. Contractors Dump Bodies	3 or more	\$	\$
	11G. Flatbeds	10 or more	\$	\$
	11H. Dump Bodies	2 or more	\$	\$
	11I. 6-way to 7-way adaptor	5 or more	\$	\$
	<b>ITEM 11 TOTAL EXTENDED COST</b>			\$
<b>12</b>	Hitch, Receiver Type			
	12A. Cars, Class I, 2,000 lb.	1 or more	\$	\$
	12B. Vans, Class II, 3,500 lb.	2 or more	\$	\$
	12C. SUV's, Mid-size Pickups, Class II, 3,500 lb.	1 or more	\$	\$
	12D. Pickups, Class III, 8,000 lb.	5 or more	\$	\$
	12E. Pickups, Class IV, 10,000 lb.	5 or more	\$	\$
	12F. Contractors Dump Beds, Class IV, 10,000 lb.	4 or more	\$	\$
	12G. Utility Service Bodies, Class IV, 10,000 lb.	10 or more	\$	\$
	12H. Flatbeds, Class IV, 10,000 lb.	2 or more	\$	\$
	<b>ITEM 12 TOTAL EXTENDED COST</b>			\$
<b>13</b>	Pintle Hitch Combination			
	13A. Pintle Hitch w/a 8,000 lb Receiver Installed on 6,000 GVW Pickups.	2 or more	\$	\$
	13B. Pintle Hitch w/a 10,000 lb Receiver Installed on 8,500 GVW Pickups.	2 or more	\$	\$
	13C. Pintle Hitch w/3,500 lb Capacity Receiver Hitch w/Tongue & Ball on SUV'S	2 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 147 of 157

	13D. Pintle Hitch w/a 3,500 lb. Receiver Installed on Vans	2 or more	\$	\$
	13E. Pintle Hitch w/a 10,000 lb. Receiver Installed on Flatbeds, Contractor Bodies, Utility Service Bodies.	2 or more	\$	\$
	13F. Pintle Hitch w/ a mounted on tongue only, NO HITCH.	2 or more	\$	\$
	<b>ITEM 13 TOTAL EXTENDED COST</b>			\$
<b>14</b>	Air Pintle Hitch (PH210) w/7 way Connector & Glad Hands	5 or More	\$	\$
	<b>ITEM 14 TOTAL EXTENDED COST</b>			\$
<b>15</b>	Lift Gates			
	15A. 1,000 lb for Mid Size & Compact Pickups	3 or More	\$	\$
	15B. 1,000 lb for ½ to ¾ Ton Pickups	3 or More	\$	\$
	15C. 1,300 lb. Standard Type Liftgate for 1-ton walkthrough vans, panel vans, delivery and cube vans, utility service bodies.	3 or More	\$	\$
	15D. 1,300 lb. Dump thru type Liftgate for 1-ton walkthrough vans, panel vans, delivery and cube vans, utility service bodies.	3 or More	\$	\$
	15E. 1,300 lb. Standard Type Liftgate for stake bodies and contractor beds.	3 or More	\$	\$
	15F. 1,300 lb. Dump Thru type Liftgate for stake bodies and contractor beds.	3 or More	\$	\$
	15G. 1,600 lb. Standard type Liftgate for 1-ton walkthrough vans, panel vans, delivery and cube vans, utility service bodies.	3 or More	\$	\$
	15H. 1,600 lb. Dump thru type Liftgate for 1-ton walkthrough vans, panel vans, delivery and cube vans, utility service bodies.	3 or More	\$	\$
	15I. 1,600 lb. Standard type Liftgate for Stake Bodies and Contractor Dump Beds.	3 or More	\$	\$
	15J. 1,600 lb. Dump thru type Liftgate for Stake Bodies and Contractor Dump Beds.	3 or More	\$	\$
	<b>ITEM 15 TOTAL EXTENDED COST</b>			\$
<b>16</b>	Non Emergency Light Bar			
	16A. Installed, Work Vehicle.	10 or more	\$	\$
	16B. Installed Security Vehicles.	1 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 148 of 157

	16C. NOT Installed, Security Vehicles.	1 or more	\$	\$
	<b>ITEM 16 TOTAL EXTENDED COST</b>			\$
<b>17</b>	8 Light LED Traffic Advisor	5 or more	\$	\$
	<b>ITEM 17 TOTAL EXTENDED COST</b>			\$
<b>18</b>	Bed Liners			
	18A. Drop-in Hard Plastic, Full Size 8-Foot Bed.	1 or more	\$	\$
	18B. Drop-in Hard Plastic, Full Size 6-foot Bed.	1 or more	\$	\$
	18C. Drop-in Hard Plastic, Mid-Size Long Bed.	1 or more	\$	\$
	18D. Drop-in Hard Plastic, Mid-Size Short Bed.	1 or more	\$	\$
	18E. Rubber Mat, Full Size 8-Foot Bed.	1 or more	\$	\$
	18F. Rubber Mat, Full Size 6-foot Bed.	1 or more	\$	\$
	18G. Rubber Mat, Mid-Size Long Bed.	1 or more	\$	\$
	18H. Rubber Mat, Mid-Size Short Bed.	1 or more	\$	\$
	18I. Spray-In Bed Liner, Full Size 8-Foot Bed, spray under Rail.	10 or more	\$	\$
	18J. Spray-In Bed Liner, Full Size 6-Foot Bed, spray under Rail.	10 or more	\$	\$
	18K. Spray-In Bed Liner, Mid-Size Long Bed, spray under Rail.	3 or more	\$	\$
	18L. Spray-In Bed Liner, Mid-Size Short Bed, spray under Rail.	3 or more	\$	\$
	18M. 96,108,132, Utility Service Body, Bed floor, Bumper and Tops of Compartments.	10 or more	\$	\$
	<b>ITEM 18 TOTAL EXTENDED COST</b>			\$
<b>19</b>	8,000 lb. Winch			
	19A. Pickups, 6,000 gvw to 9,500 lb. gvw.	5 or more	\$	\$
	19B. Heavy Duty Trucks, 9,600 gvw to 17,500 gvw.	2 or more	\$	\$
	19C. Heavy duty Trucks, 9,600 gvw to 17,500 gvw. Mounted in the bed	1 or more	\$	\$
	<b>ITEM 19 TOTAL EXTENDED COST</b>			\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 149 of 157

<b>20</b>	2,400 Watt Power Inverter			
	Option 1, Mounted in Servie Bodies.	1 or more	\$	\$
	Option 2, Mounted in Cabs of Pickup Trucks & Cab Chassis Trucks.	1 or more	\$	\$
	<b>ITEM 20 TOTAL EXTENDED COST</b>			\$
<b>21</b>	Safety Chains & Hooks			
	Option A. Class I,II,III	5 or more	\$	\$
	Option B. Class IV	5 or more	\$	\$
	Option C. Class V	2 or more	\$	\$
	Sling Links			
	Option D. Class I,II,III	2 or more	\$	\$
	Option E. Class IV	2 or more	\$	\$
	Option F. Class V	2 or more	\$	\$
	<b>ITEM 21 TOTAL EXTENDED COST</b>			\$
<b>22</b>	Conspicuity Tape	5 or more	\$	\$
	<b>ITEM 22 TOTAL EXTENDED COST</b>			\$
<b>23</b>	StakeBodies			
	23A. 8'6" Body (56" CA)	1 or more	\$	\$
	23B. 9'6" Body (60" CA)	1 or more	\$	\$
	23C. 10'6" Body (84" CA)	1 or more	\$	\$
	23D. 12'6" Body (84" CA)	1 or more	\$	\$
	23E. 14'6" Body (108" CA)	1 or more	\$	\$
	23F. 16'6" Body (120" CA)	1 or more	\$	\$
	23G. 18'6" Body (120" CA)	1 or more	\$	\$
	23H. 20'6" Body (150" CA)	1 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 150 of 157

	23I. 22'6" Body (150" CA)	1 or more	\$	\$
	23J. 24'6" Body (165" CA)	1 or more	\$	\$
	Option 1. 14" high Steel Contractors sides. (priced per foot, one side)	1 or more	\$	\$
	Option 2. 40" high Steel Stake Sides. (priced per foot, one side)	1 or more	\$	\$
	Option 3. 2" Pine Floor.	1 or more	\$	\$
	Option 4. 1 3/8" Apitong Floor (Priced per foot)	1 or more	\$	\$
	Option 5. 3/16" Smooth Steel Floor.	1 or more	\$	\$
	Option 6. Bulkhead.	1 or more	\$	\$
	Option 7. 4" Tail Roller.	1 or more	\$	\$
	Option 8. 4" solid Tail Pipe on Bed.	1 or more	\$	\$
	Option 9. 1,300 lb. Liftgate.	1 or more	\$	\$
	Option 10. Floor reinforcement for 3,200 lb. Crane mounting.	1 or more	\$	\$
	Option 11. Floor reinforcement for 5,000 lb. Crane mounting.	1 or more	\$	\$
	<b>ITEM 23 TOTAL EXTENDED COST</b>			\$
<b>24</b>	Contractors Dump Body			
	24A. 8'6" Body (56" CA)	1 or more	\$	\$
	24B. 9'6" Body (60" CA)	1 or more	\$	\$
	24C. 10'6" Body (84" CA)	1 or more	\$	\$
	24D. 12'6" Body (84" CA)	1 or more	\$	\$
	24E. 14'6" Body (108" CA)	1 or more	\$	\$
	24F. 16'6" Body (120" CA)	1 or more	\$	\$
	Option 1. 3/16" Steel Treadplate Floor.	1 or more	\$	\$
	Option 2. 3/16" Steel Smooth Floor.	1 or more	\$	\$
	Option 3. 14" Steel Stake Sides w/ Tailgate. (Priced per foot)	1 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 151 of 157

	<b>ITEM 24 TOTAL EXTENDED COST</b>			\$
<b>25</b>	Utility Service Body	10 or more	\$	\$
	25A. 96" Bed, "H" Model (56" CA) (Single Wheel)	2 or more	\$	\$
	25B. 96" Bed, "V" Model (56" CA) (Single Wheel)	2 or more	\$	\$
	25C. 96" Bed, Low Profile (56" CA)	2 or more	\$	\$
	25D. 108" Bed, (60" CA)	2 or more	\$	\$
	25E1, 108" Bed, Low Profile (60" CA) (Single Wheel)	2 or more	\$	\$
	25E2, 108" Bed, Low Profile (60" CA) (Dual Wheel)	2 or more	\$	\$
	25F, 132" Bed, Model (84" CA)	2 or more	\$	\$
	Option 1, Bumper with Lift Gate Cutouts.	2 or more	\$	\$
	Option 2, Top Pak Top Opening 4' Deep Compartment.	2 or more	\$	\$
	Option 3, High Roof	1 or more	\$	\$
	Option 3A, 108" Bed Model, 54" Roof.	1 or more	\$	\$
	Option 3B, 108" Bed Model, 60" Roof.	1 or more	\$	\$
	Option 3C, 108" Bed Model, 72" Roof.	1 or more	\$	\$
	Option 3D, 132" Bed Model, 54" Roof.	1 or more	\$	\$
	Option 3E, 132" Bed Model, 60" Roof.	1 or more	\$	\$
	Option 3F, 132" Bed Model, 72" Roof.	1 or more	\$	\$
	Option 3G, Roll-up Rear Door.	1 or more	\$	\$
	Option 3H, Pair of Conduit Doors, one each side with High Roof.	1 or more	\$	\$
	Option 3I, Overhead Ladder Rack.	1 or more	\$	\$
	Option 3J, Side Mounted Ladder Rack.	1 or more	\$	\$
	Option 4, Right Rear Body Reinforcement for Mount 3,200 lb. Crane.	2 or more	\$	\$
	Option 5, Additional Shelving for 108" Body	2 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 152 of 157

	Option 6, Additional Shelving for 132" Body	2 or more	\$	\$
	Option 7, Replace Shelving with Pull Out Drawers on 108" Body.	2 or more	\$	\$
	Option 8, Replace Shelving with Pull Out Drawers on 132" Body.	2 or more	\$	\$
	<b>ITEM 25 TOTAL EXTENDED COST</b>			\$
<b>26</b>	38,000 lb. Crane Body (84" CA)	2 or more	\$	\$
	Option 1, Additional Shelving Pkg for 38K Body.	2 or more	\$	\$
	Option 2, Tool Tray.	2 or more	\$	\$
	Option 3, Drop Well for Gas Bottles.	2 or more	\$	\$
	Option 4, Bottle Holders to secure Gas Bottles.	2 or more	\$	\$
	Option 5, Compartment Lighting.	2 or more	\$	\$
	Option 6, 2 flood Lights.	2 or more	\$	\$
	Option 7, Crane Boom Support.	2 or more	\$	\$
	Option 8, 24" Work Bumper.	2 or more	\$	\$
	Option 9, 12" Bumper.	2 or more	\$	\$
	Option 10, 16,000 lb. Pintle Hitch.	2 or more	\$	\$
	Option 11, Valve Key Brackets.	2 or more	\$	\$
	Option 12, Ladder Racks.	2 or more	\$	\$
	<b>ITEM 26 TOTAL EXTENDED COST</b>			\$
<b>27</b>	50,000 lb. Crane Body.	2 or more	\$	\$
	Option 1, Additional Shelving Pkg for 50K Body.	2 or more	\$	\$
	Option 2, Tool Tray.	2 or more	\$	\$
	Option 3, Drop Well for Gas Bottles.	2 or more	\$	\$
	Option 4, Bottle Holders to secure Gas Bottles.	2 or more	\$	\$
	Option 5, Compartment Lighting.	2 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 153 of 157

	Option 6, 2 Flood Lights.	2 or more	\$	\$
	Option 7, Additional Flood Lights.	2 or more	\$	\$
	Option 8, Crane Boom Support.	2 or more	\$	\$
	Option 9, 24" Work Bumper.	2 or more	\$	\$
	Option 10, Valve Key Brackets.	2 or more	\$	\$
	Option 11, Ladder Brackets.	2 or more	\$	\$
	Option 12, Pintle Hitch, 16,000 lb.	2 or more	\$	\$
	Option 13, Air Pintle Hitch. 90,000 lb.	2 or more	\$	\$
	Option 14, Delete Drawers Compartment H.	2 or more	\$	\$
	Option 15A, Slide Out Shelf in Compartment D & J.	2 or more	\$	\$
	Option 15B, Spray-on Liner, Cargo Area.	2 or more	\$	\$
	Option 16, Spray-on Liner, Bumper rear body, tops of compartments.	2 or more	\$	\$
	Option 17, Lift Gate, 1,600 lb	1 or more	\$	\$
	Option 18, Labor to Mount Lift Gate to 50K Body.	1 or more	\$	\$
	<b>ITEM 27 TOTAL EXTENDED COST</b>			\$
<b>28</b>	5 Cubic Yard Steel Dump Body (84" CA)	2 or more	\$	\$
	Option 1, Central Hydraulic System.	2 or more	\$	\$
	Option 2, Spread Apron.	2 or more	\$	\$
	Option 3, 16,000 lb Pintle Ball Hitch.	2 or more	\$	\$
	Option 4, Tool Box.	2 or more	\$	\$
	Option 5a, Rumbar Side Boards.	2 or more	\$	\$
	Option 5b, Steel Side Boards.	2 or more	\$	\$
	Option 6, Air Controls for Raising Bed. <b>(NOT REQUIRED IF QK CONNECT HYD SYSTEM IS USED)</b>	2 or more	\$	\$
	Option 7, 20" Steps in Place of Ladder.	2 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 154 of 157

	<b>ITEM 28 TOTAL EXTENDED COST</b>			\$
<b>29</b>	5 Cubic Yard Stainless Steel Dump Body (84" CA)	1 or more	\$	\$
	Option 1, Central Hydraulic System.	1 or more	\$	\$
	Option 2, Spread Apron.	1 or more	\$	\$
	Option 3, 16,000 lb Pintle Ball Hitch.	1 or more	\$	\$
	Option 4, Tool Box.	1 or more	\$	\$
	Option 5a, Rumbar Side Boards.	1 or more	\$	\$
	Option 5b, Steel Side Boards.	1 or more	\$	\$
	Option 6, Air Controls for Raising Bed. (NOT REQUIRED IF QK CONNECT HYD SYSTEM IS USED)	1 or more	\$	\$
	<b>ITEM 29 TOTAL EXTENDED COST</b>			\$
<b>30</b>	10 Cubic Yard Steel Dump Body. (120" CA)	2 or more	\$	\$
	Option 1, Central Hydraulic System.	2 or more	\$	\$
	Option 2, Spread Apron.	2 or more	\$	\$
	Option 3, 16,000 lb Pintle Ball Hitch.	2 or more	\$	\$
	Option 4, Tool Box.	2 or more	\$	\$
	Option 5a, Rumbar Side Boards.	2 or more	\$	\$
	Option 5b, Steel Side Boards.	2 or more	\$	\$
	Option 6, Air Controls for Raising Bed. (NOT REQUIRED IF QK CONNECT HYD SYSTEM IS USED)	2 or more	\$	\$
	Option 7, 1/4" Floor.	2 or more	\$	\$
	Option 8, 20" Steps in Place of Ladder.	2 or more	\$	\$
	<b>ITEM 30 TOTAL EXTENDED COST</b>			\$
<b>31</b>	13 Cubic Yard Steel Dump Body. (126" CA)		\$	\$
	Option 1, Central Hydraulic System.	2 or more	\$	\$
	Option 2, Spread Apron.	2 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 155 of 157

	Option 3, 16,000 lb Pintle Ball Hitch.	2 or more	\$	\$
	Option 4, Tool Box.	2 or more	\$	\$
	Option 5a, Rumbar Side Boards.	2 or more	\$	\$
	Option 5b, Steel Side Boards.	2 or more	\$	\$
	Option 6, Air Controls for Raising Bed. (NOT REQUIRED IF QK CONNECT HYD SYSTEM IS USED)	2 or more	\$	\$
	Option 7, 1/4" Floor.	2 or more	\$	\$
	Option 8, 20" Steps in Place of Ladder.	2 or more	\$	\$
	<b>ITEM 31 TOTAL EXTENDED COST</b>			\$
<b>32</b>	13 Cubic Yard Stainless Steel Dump Body. (126" CA)	1 or more	\$	\$
	Option 1, Central Hydraulic System.	1 or more	\$	\$
	Option 2, Spread Apron.	1 or more	\$	\$
	Option 3, 16,000 lb Pintle Ball Hitch.	1 or more	\$	\$
	Option 4, Tool Box.	1 or more	\$	\$
	Option 5a, Rumbar Side Boards.	1 or more	\$	\$
	Option 5b, Steel Side Boards.	1 or more	\$	\$
	Option 6, Air Controls for Raising Bed. (NOT REQUIRED IF QK CONNECT HYD SYSTEM IS USED)	1 or more	\$	\$
	Option 7, 1/4" Floor.	1 or more	\$	\$
	Option 8, 20" Steps in Place of Ladder.	1 or more	\$	\$
	<b>ITEM 32 TOTAL EXTENDED COST</b>			\$
<b>33</b>	11 Cubic Yard Steel Rip Rap Dump Body. (126" CA)	2 or more	\$	\$
	Option 1, Central Hydraulic System.	2 or more	\$	\$
	Option 2, Pintle Ball Hitch, 16,000 lb.	2 or more	\$	\$
	Option 3, Pintle Hitch, 90,000 lb.	2 or more	\$	\$
	Option 4, Tool Box.	2 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,  
Oklahoma**  
Page 156 of 157

	Option 5, Trailer tow Package.	2 or more	\$	\$
	Option 6, Air Controls for Raising Bed. (NOT REQUIRED IF QK CONNECT HYD SYSTEM IS USED)	2 or more	\$	\$
	Option 7, Hydraulic Tail Gate.	2 or more	\$	\$
	Option 8, Spread Apron.	2 or more	\$	\$
	Option 9, 20" steps in place of ladder.	2 or more	\$	\$
	Option 10, Chain & Boomer Rack. (Add 8" to Chassis CA)	2 or more	\$	\$
	Option 11, 2" Oak Side Board Extensions.	2 or more	\$	\$
	<b>ITEM 33 TOTAL EXTENDED COST</b>			\$
<b>34</b>	12 Cubic Yard Steel Rip Rap Dump Body. (126" CA)	2 or more	\$	\$
	Option 1, Central Hydraulic System.	2 or more	\$	\$
	Option 2, Pintle Ball Hitch, 16,000 lb.	2 or more	\$	\$
	Option 3, Pintle Hitch, 90,000 lb.	2 or more	\$	\$
	Option 4, Tool Box.	2 or more	\$	\$
	Option 5, Trailer tow Package.	2 or more	\$	\$
	Option 6, Air Controls for Raising Bed. (NOT REQUIRED IF QK CONNECT HYD SYSTEM IS USED)	2 or more	\$	\$
	Option 7, Hydraulic Tail Gate.	2 or more	\$	\$
	Option 8, Spread Apron.	2 or more	\$	\$
	Option 9, 20" steps in place of ladder.	2 or more	\$	\$
	Option 10, Chain & Boomer Rack. (Add 8" to Chassis CA)	2 or more	\$	\$
	Option 11, 2" Oak Side Board Extensions.			
	<b>ITEM 34 TOTAL EXTENDED COST</b>			\$
<b>35</b>	14 Cubic Yard Steel Rip Rap Dump Body. (132" CA)	2 or more	\$	\$
	Option 1, Central Hydraulic System.	2 or more	\$	\$
	Option 2, Pintle Ball Hitch, 16,000 lb.	2 or more	\$	\$



**Invitation For Bid TAC 309E**  
**Truck Bodies, Equipment & Accessories**  
**City Wide**  
**Issued: October 29, 2020**

**City of Tulsa,**  
**Oklahoma**  
Page 157 of 157

	Option 3, Pintle Hitch, 90,000 lb.	2 or more	\$	\$
	Option 4, Tool Box.	2 or more	\$	\$
	Option 5, Trailer tow Package.	2 or more	\$	\$
	Option 6, Air Controls for Raising Bed. (NOT REQUIRED IF QK CONNECT HYD SYSTEM IS USED)	2 or more	\$	\$
	Option 7, Hydraulic Tail Gate.	2 or more	\$	\$
	Option 8, Spread Apron.	2 or more	\$	\$
	Option 9, 20" steps in place of ladder.	2 or more	\$	\$
	Option 10, Chain & Boomer Rack. (Add 8" to Chassis CA)	2 or more	\$	\$
	Option 11, 2" Oak Side Board Extensions.	2 or more	\$	\$
	<b>ITEM 35 TOTAL EXTENDED COST</b>			\$
<b>TOTAL COST NOT TO EXCEED:</b> <b>(All costs must be included or your Bid will be disqualified)</b>		\$ _____		

**Annual Price Adjustment.** The prices bid for any Goods and/or Services shall not increase during the initial term of the agreement. However, if you anticipate that you will not be able to maintain firm prices for any renewal period, a change in price **will be considered** if the following conditions are met:

- a) You must limit any increase to **one** of the following(indicate your **choice\***):
1. the change in the Consumer Price Index from BLS Table 1(web link below) from the prior year, as measured by the change in the CPI-U between the most recent month available and that same month in the prior year \_\_\_\_\_ (place an "X" here if this is your choice)
  2. a fixed percentage you specify \_\_\_\_\_%
- b) You must notify City, in writing, no later than 90 days before the initial agreement period ends, or any renewal period ends, of your intent to exercise the price choice in your bid. **Failure to so notify City will result in City denying any price increases.** In no event can the proposed price change exceed that possible under the choice in your bid. Your notice can be sent by certified mail, fax or email.

Notes: \* - Any price increase you choose will be considered in the evaluation of your bid. If you choose the CPI-U, the annual increase used for evaluation will be assumed to equal the change in the CPI-U for the prior year, as described above.

CPI Web Link: <http://www.bls.gov/news.release/cpi.t01.htm>

Bidder's Company Name \_\_\_\_\_

**Authorized Signature Here ►** \_\_\_\_\_

Printed Name: \_\_\_\_\_

**RETURN THIS ENTIRE BID PACKET**