



CITY OF HOUSTON INVITATION TO BID

Issued: July 29, 2016

Bid Opening:

Sealed bids, in duplicate, will be received by the City Secretary of the City of Houston, in the City Hall Annex, Public Level, 900 Bagby, Houston, Texas 77002, until **10:30 a.m. Thursday, August 18, 2016** bids will be opened and publicly read in the City Council Chamber, City Hall Annex, Public Level, 900 Bagby at 11:00 a.m. on that date for the purchase of:

**PURCHASE OF MEDIUM, HEAVY-DUTY VEHICLES
FOR
VARIOUS DEPARTMENTS
BID INVITATION NO. S38-N25921
NIGP: 072-00**

Buyer:

Lena M. Farris is the Buyer for this solicitation and she may be reached at 832-393-8729. Any questions regarding this solicitation should be submitted in writing to 832-393-8760 (fax) or via e-mail lena.farris@houstontx.gov. No later than **August 12, 2016 at 5:00 P.M. CST**. The City of Houston shall provide written response to all questions received in writing before the submittal deadline. Questions received from all Offeror(s) shall be answered and sent to all Offeror(s) who are listed as having obtained the ITB. Offeror(s) shall be notified in writing of any changes in the specifications contained in this ITB.

Electronic Bidding:

In order to submit a bid for the items associated with this procurement, you must fill in the pricing information on the "PLACE BID" page.

Pre-Bid Conference:

A Pre-Bid Conference will be held for all Prospective Bidders in the Strategic Procurement Division, Concourse Level Conference Room No. 1 City Hall Basement, 901 Bagby, at **10:00 a.m. on Wednesday, August 10, 2016**

All Prospective Bidders are urged to be present. It is the bidder's responsibility to ensure they have secured and thoroughly reviewed the solicitation documents prior to the Pre-Bid Conference. Any revisions to be incorporated into this solicitation document arising from discussions before, during and subsequent to the Pre-Bid Conference will be confirmed in writing by Letter(s) of Clarification prior to the bid due date. Verbal responses will not otherwise alter the specifications, terms and conditions as stated herein.

Bidding forms, specifications, and all necessary information should be downloaded from the Internet at <http://purchasing.houstontx.gov> by registering and downloading this solicitation document, all updates to this solicitation document will be automatically forwarded via e-mail to all registered bidders. This information may also be obtained from the Chief Procurement Officer, Strategic Procurement Division, 901 Bagby, Concourse Level, Houston, Texas 77002.

The place of the bid opening may be transferred in accordance with Paragraph (b), (5) of Section 15-3 of The Code of Ordinances, Houston, Texas. The bid opening meeting may be rescheduled in accordance with Paragraph (b), (6) of said Section 15-3.

The City reserves the right to reject any or all bids, or to accept any bid or combination of bids deemed advantageous to it.

City Employees are prohibited from bidding on this solicitation in accordance with the Code of Ordinances, Section 15 - 1.

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SECTION A



FLEET FORMAL BID

PURCHASE OF MEDIUM, HEAVY-DUTY VEHICLES
FOR
VARIOUS DEPARTMENTS
BID INVITATION NO. S38-N25896
NIGP: 072-00

To the Honorable Mayor
and City Council Members
of the City of Houston, Texas (the "City")

The undersigned hereby offers to furnish and deliver prepaid F.O.B. destination point Houston, Texas, the item(s) listed on the **electronic bid form** and on individual Purchase Orders, in accordance with the price(s) bid and other conditions shown herein, and in accordance with the City's Specifications and General Terms & Conditions and/or samples/drawings provided herein. When issued by the City of Houston, Letters of Clarification shall automatically become part of this bid document and shall supersede any previous specifications or provisions in conflict with the Letters of Clarification. It is the responsibility of each bidder to ensure it has obtained all such Letters. By submitting a bid on this project, bidder shall be deemed to have received all Letters of Clarification and to have incorporated them into the bid.

The City may accept this bid offer by issuance of a Notice of Award Letter and/or a Purchase Order at any time on or before the 120th day following the day this Official Bid Form is opened by the City. This offer shall be irrevocable for 120 days after bid opening or for 90 days after City Council awards the bid, whichever comes last, but this period may be extended by written agreement of the parties.

The City reserves the option, after bids are opened, to adjust the quantities on the item(s) upward or downward, subject to the availability of funds, and/or make award(s) on a line item basis.

The City reserves the right to INCREASE quantities during the twelve-month period following the issuance of the first purchase order(s) subject to agreement in writing by the Contractor/Supplier to honor the same bid price(s).

SECTION A

Bidding forms, specifications, and all necessary information should be downloaded from the Internet at <http://purchasing.houstontx.gov> by registering and downloading this solicitation document

Additional Required Forms to be Included with this Bid:

In addition to the electronic Bid Form and the Official Signature Page, the Forms listed in Table 1 **must be completed and submitted to the Office of the City Secretary on or before the date and time the bid is due:**

Table 1 - Required Forms

http://purchasing.houstontx.gov/forms.html

Table 2 lists other documents and forms that should be viewed/downloaded from the City's website, but are not required to be submitted with the bid. The City will request these forms, as applicable, to be completed and submitted to the City by the recommended/successful bidder:

Table 2 - Documents and Forms

http://purchasing.houstontx.gov/forms/Certificate_of_Insurance

http://purchasing.houstontx.gov/forms/Drug_Forms.doc

http://purchasing.houstontx.gov/forms/EEOC.doc

http://purchasing.houstontx.gov/forms/Equipment_Inspection_&_Receiver.doc

http://purchasing.houstontx.gov/forms/Formal_Instructions_for_Bid_Terms

http://purchasing.houstontx.gov/forms/Sample_Insurance_Endorsements

PROTESTS

- Filing a Protest
 - An interested party may file a protest on the basis that the City has failed to comply with applicable federal or state law or with City ordinances. The subject of the protest shall be limited to fraud, corruption, or illegal acts undermining the objectivity and integrity of the procurement process. A protest must be filed in accordance with the timing requirements set forth herein and must include:
 - The name, address, telephone number, and email address of the protestor.
 - The number of the solicitation.
 - Information confirming that the protestor is an interested party.
 - A written statement of the grounds for the protest and the law or ordinance alleged to have been violated. The statement shall be accompanied by relevant supporting documentation and the relief requested.
 - The signature of the protestor.
 - Protests shall be submitted to: Chief Procurement Officer, City of Houston, 901 Bagby B300, Houston, TX 77002.
- The City recognizes three types of protests:
 - Protests regarding solicitation (Pre-Submission Protest)
 - Any Pre-Submission Protest regarding a solicitation published by the City shall be filed no later than five days before the opening of bids (if a competitive bid) or due date for submittals or proposals (if an RFP/RFQ), as applicable.
 - Protests regarding the evaluation or rejection of bids, qualifications, or proposals (Pre-Award Protest)
 - Any Pre-Award Protest regarding the evaluation of bids, qualifications, or proposals by the City must be filed no later than five business days prior to the City Council meeting at which the award appears on the agenda.
 - Protests made after City Council's decision to award a contract (Post-Award Protest)

SECTION A: (Continued)

PROTEST: (Continued)

- Any protest regarding the award of a contract must be submitted no later than five calendar days after the date of the award.
- Any protest received after the applicable deadline will not be considered.

NO CONTACT PERIOD:

Neither bidder(s) nor any person acting on bidder(s)'s behalf shall attempt to influence the outcome of the award by the offer, presentation or promise of gratuities, favors, or anything of value to any appointed or elected official or employee of the City of Houston, their families or staff members. All inquiries regarding the solicitation are to be directed to the designated City Representative identified on the first page of the solicitation. Upon issuance of the solicitation through the pre-award phase and up to the date the City Secretary publicly posts notice of any City Council agenda containing the applicable award, aside from bidder's formal response to the solicitation, through the pre-award phase, written requests for clarification during the period officially designated for such purpose by the City Representative, neither bidder(s) nor persons acting on their behalf shall communicate with any appointed or elected official or employee of the City of Houston, their families or staff through written or oral means in an attempt to persuade or influence the outcome of the award or to obtain or deliver information intended to or which could reasonably result in an advantage to any bidder. However, nothing in this paragraph shall prevent a bidder from making public statements to the City Council convened for a regularly scheduled session after the official selection has been made and placed on the City Council agenda for action, or to a City Council committee convened to discuss a recommendation regarding the solicitation.

HIRE HOUSTON FIRST:

THIS PROCUREMENT IS SUBJECT TO THE HIRE HOUSTON FIRST PROGRAM, WHICH GIVES A PREFERENCE TO CERTAIN LOCAL BIDDERS IN AWARD OF THE PROCUREMENT. FOR MORE INFORMATION, GO TO:

<http://www.houstontx.gov/onestop/hirehoustonfirstaffidavit.pdf>

Designation as a City Business or Local Business

To be designated as a City or Local Business for the purposes of the Hire Houston First Program, as set out in Article XI of Chapter 15 of the Houston City Code, a bidder or proposer must submit the **Hire Houston First Application and Affidavit ("HHF Affidavit")** to the Director of the Office of Business Opportunity and receive notice that the submission has been approved prior to award of a contract. Bidders are encouraged to secure a designation prior to submission of a bid or proposal if at all possible.

Download the HHF Affidavit from the Office of Business Opportunities Webpage at the City of Houston e-Government Website at the following location:

<http://www.houstontx.gov/hbsc/hirehoustonfirstaffidavit.pdf>

HIRE HOUSTON FIRST

Submit the completed application forms to: Office of Business Opportunity, Houston Business Solutions Center (HBSC), 611 Walker, Level, Houston, TX 77002 or Applications may be submitted via e-mail to HoustonBSC@houstontx.gov or faxed to 832.393.0952.

Award of a Procurement of \$100,000 or More for Purchase of Goods:

THE CITY WILL AWARD THIS PROCUREMENT TO A "CITY BUSINESS," AS THAT TERM IS DEFINED IN SECTION 15-176 OF THE CITY OF HOUSTON CODE OF ORDINANCES ("THE CODE")

- IF THE BID OF THE CITY BUSINESS IS THE LOWEST RESPONSIBLE BID OR IS WITHIN **3%** OF THE LOWEST BID RECEIVED, AND
- UNLESS THE USER DEPARTMENT DETERMINES THAT SUCH AN AWARD WOULD UNDULY INTERFERE WITH CONTRACT NEEDS, AS PROVIDED IN SECTION 15-181 OF THE CODE.

IF THERE IS NO BID OF A CITY BUSINESS THAT MEETS THESE CRITERIA, THE CITY WILL AWARD THE PROCUREMENT TO THE LOWEST RESPONSIBLE BIDDER.

SECTION A: (Continued)

HIRE HOUSTON FIRST (CONTINUED)

Award of Procurement under \$100,000 for Purchase of Goods:

THE CITY WILL AWARD THIS PROCUREMENT TO A "CITY BUSINESS," AS THAT TERM IS DEFINED IN SECTION 15-176 OF THE CITY OF HOUSTON CODE OF ORDINANCES ("THE CODE")

- IF THE BID OF THE CITY BUSINESS IS THE LOWEST RESPONSIBLE BID OR IS WITHIN **5%** OF THE LOWEST BID RECEIVED, AND
- UNLESS THE USER DEPARTMENT DETERMINES THAT SUCH AN AWARD WOULD UNDULY INTERFERE WITH CONTRACT NEEDS, AS PROVIDED IN SECTION 15-181 OF THE CODE.

IF THERE IS NO BID OF A CITY BUSINESS THAT MEETS THESE CRITERIA, THE CITY WILL AWARD THE PROCUREMENT TO THE LOWEST RESPONSIBLE BIDDER

Award of Procurement that may be More or Less than \$100,000 for Purchase of Goods:

THE CITY WILL AWARD THIS PROCUREMENT TO A "CITY BUSINESS," AS THAT TERM IS DEFINED IN SECTION 15-176 OF THE CITY OF HOUSTON CODE OF ORDINANCES ("THE CODE")

- IF THE BID OF THE CITY BUSINESS IS LESS THAN \$100,000 AND IS THE LOWEST RESPONSIBLE BID OR IS WITHIN **5%** OF THE LOWEST BID RECEIVED, OR
- IF THE BID OF THE CITY BUSINESS IS MORE THAN \$100,000 AND IS THE LOWEST RESPONSIBLE BID OR IS WITHIN **3%** OF THE LOWEST BID RECEIVED, AND
- UNLESS THE USER DEPARTMENT DETERMINES THAT SUCH AN AWARD WOULD UNDULY INTERFERE WITH CONTRACT NEEDS, AS PROVIDED IN SECTION 15-181 OF THE CODE.

IF THERE IS NO BID OF A CITY BUSINESS THAT MEETS THESE CRITERIA, THE CITY WILL AWARD THE PROCUREMENT TO THE LOWEST RESPONSIBLE BIDDER.

**SECTION B
GENERAL SPECIFICATIONS
PART I**

1.0 Bidding:

- 1.1 Pricing for Specified Item(s):
 - 1.1.1 Bidders may bid on one or more of the specified items listed.
 - 1.1.2 Bids submitted must contain a unit price for the specified item(s). For any bid solicitation that contains a request for separate pricing of options for the specified item(s), pricing must be provided for both the specified item(s) and option(s) listed. If pricing is provided for only the listed option(s), the bid for that specified item will be deemed as non-responsive and will be rejected.
 - 1.1.3 The unit price for any specified item shall be defined as the price for the manufacturer's standard model, furnished complete with all standard equipment and factory installed accessories listed in the manufacturer's printed literature for the respective unit, and any additional equipment defined herein by the City of Houston that is to be included.
 - 1.1.4 In the official e-bid form, if the bidder does not intend to submit a bid for one or more of the specified items listed, bidder shall check the "No Bid" Box.
- 1.2 Pricing for Listed Option(s): (If Applicable)
 - 1.2.1 A unit price is required on every listed option for the specified item(s).
 - 1.2.2 If a bidder "no bids" any listed option for which bids are requested for a specified item and the option is available for the specified item(s) , the bid for that specified item will be deemed as non-responsive and will be rejected.
 - 1.2.3 In the official e-bid form, for any optional equipment requested, if the equipment that is requested is included as standard equipment by the manufacturer, or is offered by the bidder at no charge, the bidder shall check the "No Charge" Box, which will then indicate "\$0.00" in the Unit Price column.
- 1.3 The City may accept this bid offer by issuance of a Notice of Award Letter and/or a Purchase Order covering award of bid to the Contractor/Supplier at any time on or before the 120th day following the day the Official Bid Form is opened by the City. This offer shall be irrevocable for 120 days after bid opening or for 90 days after City Council awards the bid, whichever comes last, but this period may be extended by written agreement of the parties.
- 1.4 Prices quoted shall remain firm through delivery and shall not be subject to increases (or supplemented on Contractor/Supplier's invoice(s) for payment).
- 1.5 The City reserves the option, after bids are opened, to adjust the quantities listed on the City's Official Bid Form upward or downward, subject to the availability of funds, and/or make award by line item. Therefore, the City shall not be liable for any contractual agreements/obligations the Contractor/Supplier enters into based on the City purchasing all the quantities specified herein.
- 1.6 The City reserves the right to INCREASE quantities during the twelve-month period following the issuance of the first purchase order subject to agreement in writing by the Contractor/Supplier to honor the same bid price. During this period, purchase orders will be issued for these items as needed. It is emphasized that the City of Houston does not guarantee any quantities; rather, the quantities may vary depending upon the actual needs of the various city departments.

2.0 Award:

- 2.1 Award will be made on the basis of the low total bid price for the specified item(s) meeting all specifications referenced herein plus listed options, if any.

SECTION B - PART I: GENERAL SPECIFICATIONS: (Continued)

3.0 Applicable Specifications:

3.1 The applicable specifications are comprised of the "Instructions for Bidding and Terms & Conditions", "Official Bid Forms", the "General Specifications", the "Technical Equipment Specifications", the "General Terms and Conditions" and other specifications that may be included herewith and the purchase orders which refer to these specifications.

4.0 Units Bid:

4.1 The unit(s) bid shall be new, manufacturer's latest make and model in current production as offered to commercial trade and shall be furnished complete with all factory-installed standard equipment and accessories listed in the manufacturer's latest literature for the respective unit and any additional optional equipment as may be defined in the detailed Technical Specifications.

4.2 Contractor/Supplier, by affixing their signature on the Official City Bid Form, has offered to furnish the equipment as specified herein in accordance with these specifications and all provisions set forth in this bid document. As such, it is the Contractor/Supplier's responsibility to adhere to these specifications. **Any exceptions or conditions to the specifications set forth in the bid documents will deem the bid non-responsive, and the bid will be rejected.**

4.3 The unit(s) bid shall be in full and complete compliance with all applicable safety and pollution requirements and regulations in effect at the time of bid submittal. This includes but is not limited to standards established by the United States Department of Transportation, including the Federal Motor Vehicle Safety Standards (FMVSS), the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), the Texas Department of Transportation and the Texas Commission on Environmental Quality (TCEQ).

4.4 **The City of Houston requires that the unit(s) bid be the lowest emission unit(s), i.e. Nitrogen Oxides (NOx) and Fine Particulate Matter (PM) without increasing Hydrocarbons (HC), available on the market for the specified equipment.** The emission standards established by the EPA shall be considered only as minimum standards. In the absence of EPA standards or if California Air Resources Board (CARB) standards provide lower emissions, CARB standards will be considered as the minimum if the specified unit and any required fuel is available to the City of Houston. **Federally regulated engines must be covered by an EPA-issued Certificate of Conformity certifying the engine to be in compliance with federal emission standards and the Contractor/Supplier shall provide the Certificate of Conformity with their bid or within three calendar days from the written request of the City.** EPA emission label must be affixed to the vehicle and/or engine and be readily visible.

4.5 The term "Heavy Duty", or "HD" as may be applied to these specifications shall be interpreted to mean that the item referred to shall exceed the usual quality, quantity or capacity of that supplied with standard production units and shall be able to withstand the unusual strain, exposure, wear and use to be expected in the intended service. Where specification requirements are given, they shall be considered minimum requirements unless otherwise indicated.

4.6 Throughout these specifications, compatibility is of the essence and any modification, accessory, device, material or type of construction, whether to existing or to the specified equipment, which may be necessary to incorporate the specified equipment into the existing equipment shall be considered to be a part of these specifications whether detailed by item or not.

4.7 Units provided shall not have any decal, plate, sign, stencil, stamping, molding, or marking of any type pertaining to advertisement other than trademarks, trade names, or model designation normally installed by the manufacturer on equipment delivered to the City of Houston. No accessory item furnished on equipment shall advertise the name of the Contractor/Supplier.

SECTION B - PART I: GENERAL SPECIFICATIONS: (Continued)

5.0 Technical Literature:

- 5.1 To evaluate the bids, the user department and the City purchasing staff may require product literature/specification sheets. Technical literature may be provided with the bid submittal but is not required. However, the City reserves the right to request and require literature and/or clarifications, as needed, after bid submittal.
- 5.2 If required, Bidder must submit a minimum of TWO SETS of the requested catalogue information, descriptive literature specifications and/or (if applicable) engineering drawings that completely identify the items bid. Bidder(s) shall furnish the requested literature within seven (7) calendar days after the receipt of the City's written request. FAILURE ON BIDDER'S PART TO FURNISH THE REQUESTED TECHNICAL DATA IN THE TIME LIMIT SPECIFIED MAY BE CAUSE FOR REJECTION OF THE BID.

6.0 Warranty:

- 6.1 A minimum twelve (12) month manufacturer's warranty on both materials and workmanship shall be provided. Any and all documents necessary to effect warranty shall be properly applied for and submitted by the Contractor/Supplier. The Contractor/Supplier shall provide to the City a manufacturer's warranty which will be honored by any of the manufacturer's authorized dealers and a complete copy shall be provided at the time of delivery. When additional warranties are available as standard, they shall be included as a part of the bid for the benefit of the City.
- 6.2 **DELAYED WARRANTIES** must be available for all equipment. Warranty start date shall be effective the date **that the completed unit is placed into service by the City.** The Contractor/Supplier shall furnish a delayed warranty card/document for each unit delivered and/or advise the City's Fleet Management/receiving department of the procedures to be followed for obtaining the delayed start of warranty coverage. Requests for delayed warranties will not exceed six months after delivery.
- 6.3 Additional warranties, if required, are listed in the Technical Specifications for each item.
- 6.4 With respect to any goods, materials, equipment, supplies and parts furnished by it, Contractor/Supplier warrants:
 - 6.4.1 That all items are new and free of defects in title, design, material and workmanship.
 - 6.4.2 That each item meets or exceeds the manufacturer's specifications and requirements for the equipment, structure, or other improvement in which the item is installed and conforms in all respects to the terms of the City Purchase Order and Specifications.
 - 6.4.3 That each replacement item is new, in accordance with original equipment
 - 6.4.4 Manufacturer's specifications are of a quality of at least as good as the quality of the item that it replaces (when the replaced item was new).
 - 6.4.5 That no item or its use infringes any patent, copyright or proprietary right.
- 6.5 The Contractor/Supplier's product shall be supported by an authorized service facility that can provide warranty repair, service and maintenance work within 24 hours from notification by the City.
- 6.6 Any warranty work shall be completed without cost to the City. Contractor/Supplier shall be responsible for all shipping and/or freight expense from the City's designated location to the Contractor/Supplier's facility for all warranty repair and/or maintenance and return to the City's designated location.
- 6.7 Contractor/Supplier shall provide a Manufacturer's Authorized Facility located within the Houston-Galveston Region (Harris County and its nine adjacent counties, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, Waller, San Jacinto and Austin) for all warranty and maintenance service.

7.0 Licenses and Permits:

- 7.1 Contractor/Suppliers are to adhere to all applicable federal, state as well as local laws and regulations. It is the Contractor/Supplier's responsibility to acquire all necessary licenses and permits required by law.
- 7.2 Contractor/Supplier shall be responsible for securing any and all inspections required by law, including State Inspection stickers. Any fee charged for these inspections shall be the responsibility of the Contractor/Supplier and not the City of Houston.
- 7.3 At the time of delivery to the City of Houston, Contractor/Suppliers are required to provide temporary paper license tags/plates for motor vehicles or other equipment required by the State of Texas to be registered for operation on public highways.

SECTION B - PART I: GENERAL SPECIFICATIONS: (Continued)

7.0 Licenses and Permits (Continued):

- 7.4 **TEXAS OCCUPATIONS CODE, TITLE 14, CHAPTER 2301** (Formerly known as “The Texas Motor Vehicle Commission Code”): **(If Applicable to this Procurement)**
- 7.4.1 Section 2301.251: License Required: Generally (a) Unless a person holds a license issued under this chapter authorizing the activity, the person may not (1)engage in business as, serve in the capacity of, or act as a dealer, manufacturer, distributor, converter, representative, vehicle lessor, or vehicle lease facilitator in this state.
- 7.4.2 Sec. 2301.252: License required: Sale of New Motor Vehicles:(a) A person may not engage in the business of buying, selling, or exchanging new motor vehicles unless the person: (1) holds a franchised dealer’s license issued under this chapter for the make of new motor vehicle being bought, sold, or exchanged; or (2) is a bona fide employee of the holder of a franchised dealer’s license.
- 7.4.3 **Licensed Franchised Dealers** submitting bids for new cabs & chassis with installed bodies and other equipment, by this Statute, are required to employ **properly licensed converters** for the conversions of the new motor vehicles.
- 7.4.4 **The Act of Submitting a Bid is regarded as doing business, as the entity is soliciting a sale.** Accordingly, each bidder must be a **licensed franchised dealer** at the time the bid is submitted.

8.0 Delivery / Inspection:

- 8.1 The item(s) specified herein, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the location(s) shown on the purchase order(s) **within the delivery time(s) as listed in the Technical Specifications** after receipt of City of Houston Purchase Order.
- 8.2 The Contractor/Supplier shall notify the City Contact listed in the “Ship To” section of the purchase order not less than three (3) days prior to expected delivery/arrival to permit inspection scheduling. The City Contact shall advise Contractor/Supplier as to the date, time and location of authorized delivery/location. An authorized representative of the Contractor/Supplier shall supervise delivery to the City. The City will not assume any liability for any vehicle/equipment delivered to an unauthorized location and/or any vehicle/equipment delivered but not accepted by the City.
- 8.3 **Documentation at time of Delivery:**
Contractor/Supplier shall provide the following documentation **per purchase order** upon delivery:
- 8.3.1 Copy of purchase order(s) and invoice(s).
- 8.3.2 Manufacturer’s Certificate of Origin shall be made out to "City of Houston, Texas", 900 Bagby, Houston, TX 77002 and delivered to the Fleet Management Department representative at the time of delivery of the vehicle/equipment, if applicable.
- 8.3.3 Temporary paper license tags/plates paperwork, if applicable for equipment being delivered.
- 8.3.4 Warranty policy(ies) and/or certifications as may be required in the Specifications.
- 8.3.5 Parts, service, operator and maintenance manual(s) as may be required in the Technical Specifications.
- 8.4 **Line Tickets at time of Delivery:**
- 8.4.1 Vehicles (If Applicable):
- 8.4.1.1 Line sheets/line tickets from the manufacturer of the vehicle shall be provided for each vehicle and delivered along with other City-required documents and manuals. Each line sheet/line ticket shall list all components that make up the vehicle chassis and shall include the make, model, and serial number of each component. In addition, line sheets/line tickets shall be provided for all mounted bodies specified for cabs & chassis, and shall include but not be limited to manufacturer, serial number, size, and tare weight. All mounted equipment and components shall be listed by the manufacturer, serial number, weight restrictions (lifts, booms, hydraulic arms etc) and all other relevant data that identifies the component.

SECTION B - PART I: GENERAL SPECIFICATIONS: (Continued)

8.0 Delivery / Inspection: (Continued)

8.4.2 Other Equipment (If Applicable):

8.4.2.1 Line sheets/line tickets from the manufacturer of the equipment specified shall be provided for all equipment delivered along with other City-required documents and manuals. Each line sheet/line ticket shall list all components that make up the equipment and shall include the make, model, and serial number of each component.

8.5 **Weight Ticket Requirements per State of Texas Requirements for Title Transactions:**

8.5.1 A weight certificate shall be required on all new commercial motor vehicles covered by the manufacturer's certificate when the carrying capacity (in accordance with the State's Tonnage Rating Guidelines) is rated in excess of one ton by the manufacturer.

8.5.2 A weight certificate shall also be required when additional equipment has been added to the new commercial motor vehicle after it was delivered by the manufacturer.

8.6 Each unit shall be delivered clean and shall be complete with all equipment operable. Each unit shall be inspected by the City before tender of delivery to determine its compliance with the specifications and/or to test its ability to perform its intended use.

8.7 Upon acceptance and receipt of the vehicle/equipment unit by the City, Contractor/Supplier shall obtain the signatures and employee numbers of the City's receiving employees on the City's Equipment Inspection/Receiver Report.

9.0 Liquidated Damages:

9.1 Under the terms of this Contract (Purchase Order), the Contractor/Supplier certifies to complete delivery of any vehicle/equipment within the specified calendar days, listed in the Delivery Section of the Technical Specifications, counting from the date the City of Houston purchase order is received by the Contractor/Supplier. Contractor/Supplier agrees that time is of the essence in performance of this Contract. The Contractor/Supplier and the City of Houston understand and agree that a breach of contract as to completion on time will cause damages to the City and that the actual damages from the harm would be difficult to estimate accurately. Therefore, for each and every calendar day that the vehicle/equipment is not delivered and/or accepted by the City beginning sixty-one (61) calendar days after the expiration of the time limit set in the Contract, the Contractor/Supplier shall be liable for and shall pay to the City the sum of **Fifty dollars (\$50.00)** per vehicle/equipment per calendar day, or portion thereof, as liquidated damages and not as a penalty. It is further agreed that the sum stipulated as liquidated damages is a reasonable estimate of the damage that will result from a failure of the Contractor/Supplier to deliver the product/service in accordance with the Contract. The amount of the liquidated damages due may be deducted by the City from any payment or payments due to the Contractor/Supplier, or if all payments otherwise due to the Contractor/Supplier have been made, the amount of the liquidated damages shall be immediately due and payable upon demand.

9.2 Contractor/Supplier will not be liable for delays in performing its obligations to the extent such delays are caused by unforeseeable conditions that are beyond the Contractor/Supplier's reasonable control and directly interfere with performance, and are without Contractor/Supplier's fault or negligence (force majeure). However, Contractor/Supplier shall provide written notice to the City of the cause and extent of an **excusable delay** resulting from unforeseeable conditions. Upon cessation of the event causing the delay, Contractor/Supplier shall provide written notice to the City of the actual delay incurred. Determination of force majeure shall rest solely with the Chief Procurement Officer and the receiving department

10.0 Conflict in Terms:

10.1 Should there be any conflict between the General Specifications and the Technical Specifications, the Technical Specifications shall prevail.

11.0 Miscellaneous:

11.1 For purposes of this Contract (Purchase Order), the phrase "Chief Procurement Officer" shall be deemed to include both the Chief Procurement Officer, and his or her designated representative(s).

SECTION B - PART 1: GENERAL SPECIFICATIONS: (Continued)

11.0 Miscellaneous (Continued):

11.2 Prospective bidders may propose "equivalent equipment" as additional item(s) for City-approved equipment listings of acceptable equipment in this bid document. Prospective bidders must submit, in writing to the Chief Procurement Officer, 1) a request for approval of proposed equipment, 2) Equipment Manufacturer's literature, and 3) a detailed comparison documenting that the equipment proposed is equivalent to existing equipment in the City-approved equipment listings. The approval request and all required documentation shall be in the Office of the Chief Procurement Officer no later than 14 calendar days before the bids for this Contract are scheduled to be opened and publicly read. Requests for equipment approval not received by the time specified above will not be considered for this Contract. Determination as to whether the equipment proposed is equivalent to the items in the City-approved equipment listings shall rest solely with the Chief Procurement Officer.

12.0 Contractor/Supplier References (See Exhibit No. 1):

12.1 In order to receive bid award consideration, the bidder must be able to demonstrate that it has provided, as a contractor/supplier, products that are similar to those offered on the electronic bid form to governmental agencies or other entities within the last two years.

12.2 If this information is required by the City, the bidder shall provide the information on Exhibit Form No. 1 within seven (7) calendar days after receipt of the City's written request. Failure by the Bidder to furnish the requested information in the time limit specified may be cause for the rejection of the bid.

SECTION B
PART II
TECHNICAL SPECIFICATIONS
PURCHASE OF MEDIUM, HEAVY-DUTY VEHICLES
FOR
VARIOUS DEPARTMENTS

ITEM NO. 1: CAB & CHASSIS FOR 5/6 CUBIC YARD DUMP TRUCK
PR No. 10206886

1.0 GENERAL:

- 1.1 Equipment Description
 - 1.1.1 These specifications are intended to describe a Truck Cab and Chassis, 35,000 lb. GVWR, to be mounted with a 5/6 yard dump body for the Public Works & Engineering Department, Public Utilities Division.
 - 1.1.2 Reference: Hino 268A or City Approved Equal

2.0 CAB & CHASSIS:

- 2.1 Front Axle and Equipment
 - 2.1.1 12,000 lb. axle
 - 2.1.2 12,000 lb. suspension
- 2.2 Rear Axle and Equipment:
 - 2.2.1 23,000 lb. axle, single-speed, tandem - Locking rear differential
 - 2.2.2 23,000 lb. suspension, Hendrickson HMX460 with shocks
 - 2.2.3 Oil wheel seals
 - 2.2.4 Differential ratio, 5.25, will be geared for truck to run approximately 67 MPH
 - 2.2.5 4S4M ABS Brakes
- 2.3 Bakes and Equipment Air:
 - 2.3.1 Moisture ejectors, automatic, Bendix DV-2
 - 2.3.2 Air pressure gauge, dash-mounted w/light/buzzer for low air pressure
 - 2.3.3 Front and rear dust shields.
 - 2.3.4 Air Compressor, 18.7 CFM.
 - 2.3.5 Bendix AD-IP EP heated air dryer or equal.
 - 2.3.6 Front and rear brake dust shields.
- 2.4 Cab and Equipment:
 - 2.4.1 OEM severe service with tilting hood and fenders.
 - 2.4.2 Hi-back air suspension, seat with Hi-back fixed single passenger seat.
 - 2.4.3 Warning light and buzzer for low oil pressure and high temperature.
 - 2.4.4 Heater
 - 2.4.5 Assist handles
 - 2.4.6 Dual sun visors
 - 2.4.7 Tinted glass, all
 - 2.4.8 Gauges - to include the following; water temp (eng.), voltmeter, oil temp (trans.) oil pressure (eng), air pressure, and fuel
 - 2.4.9 Speedometer/Odometer with trip odometer
 - 2.4.10 Tachometer
 - 2.4.11 Engine hour meter, which will actuate only with engine running, dash mounted
 - 2.4.12 Dual electric horns
 - 2.4.13 Mirrors, dual Moto-Mirrors SS each side heated and motorized with switch on dash
 - 2.4.13.1 (2) Convex 8 inch Heated SS mirrors, offset under mirror bracket
 - 2.4.14 Arm rest on both doors
 - 2.4.15 Factory air conditioning
 - 2.4.16 Two (2) Hadley Air Horns, RECT 26" air horns with shields
 - 2.4.17 Engine fan switch - full on or automatic selections
 - 2.4.18 AM/FM/WB radio with (2) speakers
 - 2.4.19 Tilt wheel, telescoping column
 - 2.4.20 Power Lift window, passenger door
 - 2.4.21 Painted outside sunvisor
 - 2.4.22 Convex mirror over passenger door

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 1: CAB & CHASSIS FOR 5/6 CUBIC YARD DUMP TRUCK (Continued):

2.0 CAB AND CHASSIS (Continued):

- 2.4 Cab and Equipment (Continued):
 - 2.4.23 Dash mounted, air operated PTO control
 - 2.4.24 Cab air suspension
- 2.5 Electrical:
 - 2.5.1 145 amp alternator
 - 2.5.2 Batteries, AGM (Absorbent Glass Material) Minimum 2700 CCA Total
 - 2.5.3 Battery Box, left hand under cab, with non-slip step
 - 2.5.4 Rubber pad under batteries.
 - 2.5.5 Plug in, reset able circuit breakers.
 - 2.5.6 L.E.D. marker and tail lights.
- 2.6 Engine and Equipment:
 - 2.6.1 Diesel 315 gross horsepower, 6 cylinders, minimum 1,000 ft. lbs. Torque.
 - 2.6.2 EPA Current Emission Compliant
 - 2.6.3 Air cleaner, dry type with restriction indicator, dash mounted.
 - 2.6.4 Spin-on fuel/water separator/filter
 - 2.6.5 Fan clutch
 - 2.6.6 Deep Core radiator, 900 sq. in. frontal area, minimum.
 - 2.6.7 Cooling system shall be protected with permanent coolant, rated for service to -40F.
- 2.7 Exhaust System:
 - 2.7.1 Single vertical exhaust and pipe with rain cap or curved
 - 2.7.2 Diesel particulate filter right hand under cab.
- 2.8 Frame and Equipment:
 - 2.8.1 Minimum frame rating 1,630,000 RBM to meet GVW.
 - 2.8.2 Minimum dual 50 gallon capacity fuel tanks.
 - 2.8.3 Frame-mounted towing hook(s) on front.
 - 2.8.4 Truck(s) will be delivered with full tanks of fuel.
- 2.9 Tires and Wheels:
 - 2.9.1 Front - 11R22.5 14 ply steel belted radial tubeless on steel disc type wheels (Accur 28408 piloted 22.5 x 8.25) R250F Tire tread.
 - 2.9.2 Rear - 11 R22.5 14 Ply steel belted radial type tubeless for on/off road use with disc type wheels (Accur 28408 piloted 22.5 x 8.25) M711 Tire tread.
- 2.10 Transmission and Equipment:
 - 2.10.1 Transmission automatic 5 speed, Allison 2500RDS-P, and must be compatible with horsepower and torque of engine proposed. Must be able to be used both on and off road.
 - 2.10.2 TranSynd automatic Transmission Fluid only.
- 2.11 Miscellaneous:
 - 2.11.1 Unless specified in the detailed vehicle specifications, the cab-to-axle dimension and/or wheel base shall be as required to properly mount the body on the chassis, with no more than four (4) inches between the Cab and Chassis unless a greater distance is required for proper operation.
 - 2.11.2 Line setting ticket for each unit will be available at the time of inspection.
 - 2.11.3 Color: White OEM standard.
 - 2.11.4 Trailer towing package including air glad hand(s), four, six, and seven-way electrical connections at rear of frame. For trailer application(s).
 - 2.11.5 Lincoln Auto lubrication System, NO EXCEPTIONS.
- 2.12 Warranty:
 - 2.12.1 Minimum, five (5) years/100,000 miles warranty on parts and labor

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 1: CAB & CHASSIS FOR 5/6 CUBIC YARD DUMP TRUCK (Continued):

3.0 DUMP BODY:

3.1 General:

- 3.1.1 These specifications are intended to describe a dump body, 5/6 cubic yard capacity, mounted to a 35,000-lb GVWR cab & chassis.
- 3.1.2 Major components shall be made with ASTM A570 Hi-Tensile steel
- 3.1.3 Minor components shall be made with ASTM A570. Hi-Tensile steel
- 3.1.4 Manufacturer's reference is Warren Model U451-10 with Scissor Hoist U50-723 (NO EXCEPTIONS).

3.2 Specifications:

3.2.1 Capacity/Dimensions:

- 3.2.1.1 5 cubic yard water level
- 3.2.1.2 6 cubic yard with side boards
- 3.2.1.3 Length 10 feet
- 3.2.1.4 Width 87 inches
- 3.2.1.5 Side height 24 inches
- 3.2.1.6 Front 30 inches
- 3.2.1.7 Tailgate height 30 inches

3.2.2 Materials:

- 3.2.2.1 Floor – 8 Gauge
- 3.2.2.2 Sides – 10 Gauge
- 3.2.2.3 Front – 10 Gauge
- 3.2.2.4 Tailgate –10 Gauge, double panel
- 3.2.2.5 Corner Post 8 gauge
- 3.2.2.6 Cab Shield 10 gauge.

3.2.3 Construction:

- 3.2.3.1 Full length welds, no stitch welding
- 3.2.3.2 Under structure crossmember design
- 3.2.3.3 Long members to be 5 inch channel.
- 3.2.3.4 Floor:
 - 3.2.3.4.1 One piece design.
- 3.2.3.5 Sides:
 - 3.2.3.5.1 Side sheet constructed of 10 gauge
 - 3.2.3.5.2 Curbside to have 2-rung ladder.
- 3.2.3.6 Top rail:
 - 3.2.3.6.1 To be 4" x 4" x 1/8" structural tubing rotated 45-degress for dirt shedding.
- 3.2.3.7 Front:
 - 3.2.3.7.1 Front head panel to be constructed of a one-piece sheet of steel with no weld seams
- 3.2.3.8 Tailgate:
 - 3.2.3.8.1 Three panel design
 - 3.2.3.8.2 Panel constructed of one-piece sheet
 - 3.2.3.8.3 All horizontal bracing, including top rail to be dirt shedding
 - 3.2.3.8.4 Upper tailgate hinge pins; 1-1/2" diameter with steel snap-lock device (no cotter pin)
 - 3.2.3.8.5 Lower tailgate hinge 1-1/2" diameter incorporated into lower vertical tailgate brace.
 - 3.2.3.8.6 Lower latch assembly, 3/4" pin, 5/8" catch bar plate
 - 3.2.3.8.7 Two (2) coil-proof spreader chains (loose).
 - 3.2.3.8.8 Tail gate shall be air operated

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 1: CAB & CHASSIS FOR 5/6 CUBIC YARD DUMP TRUCK (Continued):

3.0 DUMP BODY (Continued):

3.2 Specifications (Continued):

3.2.3 Construction (Continued):

- 3.2.3.9 Corner post:
 - 3.2.3.9.1 Full depth enclosed with cut-out to house lights
- 3.2.3.10 Cab-shield:
 - 3.2.3.10.1 One piece - 30" in length
 - 3.2.3.10.2 Mount strobe light - Target Tech Model 851 amber, brush guard, with switch in cab, fuse protector/indicator light - all wiring enclosed
- 3.2.4 Hoist:
 - 3.2.4.1 Twin cylinder twin arm Class 110
 - 3.2.4.2 Underbody full sub-frame mounts
 - 3.2.4.3 No dog house
 - 3.2.4.4 Lift capacity 36.4 tons
 - 3.2.4.5 Single stage - 24 inch stroke
 - 3.2.4.6 Twin 8" inch diameter with 2-1/2" chrome plated piston rods
 - 3.2.4.7 Dump angle 50 degrees minimum
- 3.2.5 Rear Hinge:
 - 3.2.5.1 Platform design with pins, block and hinge bearings
 - 3.2.5.2 Rear pins not to rotate
 - 3.2.5.3 Block to have grease zerks
 - 3.2.5.4 Unit to have two body props
- 3.2.6 Electrical units to meet all DOT requirements in reflectors, lights and warning labels
- 3.2.7 Towing:
 - 3.2.7.1 Units to be equipped with mounting plate
 - 3.2.7.2 Plate to be mounted to truck frame and sufficiently reinforced to provide mounting for the following equipment to be provided and installed:
 - 3.2.7.2.1 Holland Pintle Hitch PH200.
 - 3.2.7.2.2 Two folding "D" rings Buyer model B48 3 x 3 inch ID and 1 inch OD
 - 3.2.7.2.3 One-four way, one-six way, and one-7 way pin receptacles with weather-tight door hinge
 - 3.2.7.2.4 Air and Electrical connections
- 3.2.8 Hydraulic:
 - 3.2.8.1 Hydraulic system to use direct mount pump with relief setting of 2,000 PSI
 - 3.2.8.2 Hydraulic tank maximum capacity to operate system
 - 3.2.8.3 Provide filter system on return line
- 3.2.9 PTO/Controls:
 - 3.2.9.1 Allison automatic transmission
 - 3.2.9.2 Air brakes
 - 3.2.9.3 Muncie or Chelsea power-shift with electric-over-air-control and EOS-100 over-speed switch
 - 3.2.9.4 "Power tower" operating controls
 - 3.2.9.5 Control console to include:
 - 3.2.9.5.1 One lever
 - 3.2.9.5.2 Console
 - 3.2.9.5.3 Cable
 - 3.2.9.5.4 Mounting hardware
 - 3.2.9.6 Provide in cab warning light "cab body up"

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 1: CAB & CHASSIS FOR 5/6 CUBIC YARD DUMP TRUCK (Continued):

3.0 DUMP BODY (Continued):

3.2 Specifications (Continued):

3.2.10 Miscellaneous:

3.2.10.1 Mud flaps - anti-sail:

3.2.10.1.1 Heavy duty fiber

3.2.10.1.2 Reinforced with metal mounting inserts

3.2.10.1.3 Hole punched center of mud flap -to fold and connect mud flap to bed

3.2.10.1.4 Body to have "J" hooks to secure mud flaps

3.2.10.2 Shovel/Broom racks:

3.2.10.2.1 Two racks for long-handled shovel and push broom

3.2.10.2.2 Angle racks so that items will be secure while dumping

3.2.10.3 State Inspection and Weight Certificate:

3.2.10.3.1 Supplier shall provide state inspection and weight certification for each vehicle

3.2.10.3.2 Supplier will complete the document and post in an appropriate location

3.2.11 Paint:

3.2.11.1 One coat primer

3.2.11.2 Bottom of bed black acrylic enamel

3.2.11.3 Exterior white acrylic enamel to match cab and chassis

3.2.12 Tarp:

3.2.12.1 Electric full width/length tarp with in cab controls, motor shall not overspeed or continue operations when nested or extended.

3.3 Warranty:

3.3.1 Hydraulic pump, valve and cylinders- 36 months for material and workmanship

3.3.2 All other items - 36 months for material and workmanship

4.0 LITERATURE:

4.1 Two (2) sets of Parts Manuals

4.2 Two (2) sets of Service Manuals

5.0 DELIVERY/INSPECTION:

5.1 The truck unit(s) specified above, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the location(s) shown on the purchase order(s) within **one hundred eighty (180) calendar days** after receipt of City of Houston Purchase Order.

5.2 Unit(s) shall have full tanks of fuel at time of delivery.

5.3 Unit(s) shall be accompanied with a copy of the original invoice, warranty policy(ies) and/or certification, as may be required.

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 2: CAB & CHASSIS MOUNTED WITH STAKEBED BODY AND CRANE
PR No. 10207229

1.0 GENERAL:

1.1 Equipment Description:

1.1.1 This specification is intended to describe a vehicle that will be used as a utility truck by the Public Works & Engineering Department, Traffic & Transportation, Signs & Markings Maintenance Section. This vehicle consists of a cab & chassis mounted with a stake bed body, knuckleboom crane, and other equipment.

1.2 Prime Contractor/Supplier:

1.2.1 These specifications require the bidder to be a prime contractor/supplier and to bid on the cab & chassis mounted with the stake bed body and knuckle boom crane

1.3 Quantity:

1.3.1 Identical units shall be furnished.

1.4 Equivalent Equipment:

1.4.1 Bidders proposing to provide equipment they believe to be equal to the specified model must provide sufficient operating and technical specifications for the City to evaluate the proposed equipment

2.0 CAB AND CHASSIS:

2.1 General:

2.1.1 Ford F-550 4x2 Cab & Chassis with Regular Cab or City-approved equal GVWR shall be not less than 17,500 lbs. with an 84" Cab-to-Axle

2.1.2 Heavy duty front springs

2.1.3 Minimum of 2 key pod type controls for keyless entry

2.1.4 Minimum 40 gallon fuel tank

2.1.5 Power door locks and windows, Manufacturer's Standard

2.2 Engine:

2.2.1 An electronically governed **6.8 L V10 GASOLINE** engine that will meet the current EPA engine emission levels shall be provided

2.3 Transmission:

2.3.1 A 5-speed automatic transmission with integral PTO provision shall be provided

2.4 Cab:

2.4.1 OEM air conditioning, heating and defroster shall be provided

2.4.2 AM/FM radio shall be provided

2.4.3 Front cloth seat shall be provided

2.4.4 Manufacturer's standard ABS brakes

2.4.5 White exterior color

2.4.6 Darkest interior color available

3.0 ARTICULATING CRANE (KNUCKLEBOOM): DIAGRAM I-1:

3.1 General basic requirement shall be an articulating (Knuckleboom) crane behind the cab, across the bed mount complete with outriggers and hydraulic boom extension(s). The primary function of this unit will be to install and maintain steel post/signs. Referenced Manufacturers: Ferrari 545 – Telephone: (0522) 964921 – Telex FGR-GRU 5312371, Cormach 4000 or City-approval equal.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 2: CAB & CHASSIS MOUNTED WITH STAKEBED BODY AND CRANE: (Continued)

3.0 ARTICULATING CRANE (KNUCKLEBOOM): DIAGRAM I-1: (Continued)

- 3.2 Articulating Crane (Knuckleboom):
 - 3.2.1 Two (2) hydraulic horizontal extensions eighteen (18) feet minimum.
 - 3.2.2 Dual controls.
 - 3.2.3 360 degree rotation
 - 3.2.4 All cylinders to have counter-balance valves.
 - 3.2.5 All cylinder & valve bank porting shall be SAE "O" ring type
 - 3.2.6 Equipped with cable connected remote control for crane operation
 - 3.2.7 Automatic throttle control system shall be provided to provide increased engine speed for boom positioning and system shall include control switch in the cab "**PUMP: ON/OFF**" switch shall be dash mounted and contain internally illuminated indication for pump engagement
 - 3.2.8 Hydraulic pump/tank sufficient in capacity to operate crane

4.0 STAKE BED BODY: DIAGRAM I-2:

- 4.1 Stationary Platform / Stake bed Dimensions:
 - 4.1.1 Cab-to-axle: 84"
 - 4.1.2 Length: 120"
 - 4.1.3 Width: 96"
 - 4.1.4 Stake Height: 14"
- 4.2 Construction Requirements:
 - 4.2.1 Cross members minimum of six (6) cross members 3" structural steel channel
 - 4.2.2 Longitudinal sill two (2) long sill, 5", 6.7 lb/ft structural steel channel
 - 4.2.3 Rails – floor edges shall be enclosed at both ends and both sides: end rails and side rails minimum 5" structural steel channel
 - 4.2.4 Rub Rails – 1/4" X 2" steel welded to outside of stake pockets.
 - 4.2.5 Stake Racks – shall be steel, fourteen (14) inches high mounted rear of bed. Two (2) horizontal slats 5" wide welded to steel stake post. Stake post to be 1/4" x 2" removable with straight slide security.
 - 4.2.6 Toolbox Protector - Fourteen (14) inches high, steel plate, eleven (11) gauge. The frame to be constructed with 2" X 3" X 1/8" tubing, two (2) uprights of 2" X 3" X 1/8" tubing. Mounting using Knee-Brace style reinforcement welded to the bottom of the outer body rails and long sills. Top angle gusset not acceptable. **DIAGRAM I-3**
 - 4.2.7 Floor – steel flooring 3/16" safety plate are to be covered with Martex anti-slip coating.
 - 4.2.8 Lighting – lamps, reflectors and side marker lamps shall be furnished as required by Federal Standards. Rear lights to be recessed in rear of bed. Side markers to be armor lights and no adhesive type reflectors. All wiring shall be contained with flexible conduit.
 - 4.2.9 Mud Flaps – anti-sail
- 4.3 Components:
 - 4.3.1 Tool Boxes: **DIAGRAM I-4**
 - 4.3.1.1 Both on top of and under bed mounted.
 - 4.3.1.2 Minimum fourteen (14) gauge steel covered with 3/16" tread plate.
 - 4.3.1.3 Top of boxes to be covered with Martex anti-slip coating.
 - 4.3.1.4 Each door to have protective weather seals, rain gutters extending over doors and door chains. All doors to have "T" handles.
 - 4.3.1.5 Forward (curbside) box to have accessory tray sixteen (16) gauge steel, with ten (10) adjustable dividers.
 - 4.3.1.6 Doors to be hinged at base

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 2: CAB & CHASSIS MOUNTED WITH STAKEBED BODY AND CRANE: (Continued)

4.0 STAKE BED BODY: DIAGRAM I-2 (Continued):

4.3 Components (Continued):

- 4.3.1.7 *NOTE: Doors will be checked for weather proofing by pressure hose before acceptance.
- 4.3.1.8 Each truck to be keyed separately, all boxes per truck to be keyed alike with three (3) sets of keys.
- 4.3.1.9 Two (2) boxes curbside 60" X 18" X 18". One (1) box 120" X 18" X 18" with two (2) 60" doors. One (1) box 18" X 18" X 92" with two (2) 18" doors, one on each end. One (1) box 18" X 18" X 24: with one (1) 24" door.
- 4.3.2 Sign Post Rack: **DIAGRAM I-5**
 - 4.3.2.1 Supports to house eighteen (18) each 2-3/8" diameter sign posts, ranging in length from eleven (11) to thirteen (13) feet in length.
 - 4.3.2.2 Forward Section - (near Bulkhead) to be solid three (3) sided 1/4" steel plate reinforced with 1/4" X 1" X 1" box tubing welded to bulkhead. Pipe carrier (interior) to be sixteen (16) inches wide and sixteen (16) inches high. Bottom rack to be placed on top of tool boxes. **DIAGRAM I-5A**
 - 4.3.2.3 Center Rack - to be placed five (5) feet from bulkhead to be 1/4" X 2-1/2" X 2-1/2" box tubing. Pipe carrier (interior) to be sixteen (16) inches wide and sixteen (16) inches high, mounted on top of storage box. The uprights to have pre-punched holes two (2) inches apart on exterior side of the boxed tubing for tie-down capability. **DIAGRAM I-5B**
 - 4.3.2.4 End Rack - to be placed ten (10) feet from bulkhead to be 1/4" X 2-1/2" X 2-1/2" box tubing. Pipe carrier (interior) to be sixteen (16) inches wide and sixteen (16) inches high, mounted on top of tool box. The uprights to have pre-punched holes two (2) inches apart on exterior side of the boxed tubing for tie-down capability. **DIAGRAM I-5C**
 - 4.3.2.5 Center and rear pipe carrier shall have the vertical post. The full height of carrier extending and secured to the stakebed floor.
- 4.3.3 Lighting: **DIAGRAM I-6**
 - 4.3.3.1 There shall be a heavy-duty lighting package for the stakebed body.
 - 4.3.3.2 All lighting shall be recessed except for marker clearance lights.
 - 4.3.3.3 Install two low profile flashing, high-intensity, LED warning lights (one amber, one blue) with brush guards on each side of body at the front on the tool boxes. They shall have control switches in the cab.
 - 4.3.3.4 Install two low profile flashing, high-intensity, LED warning lights (one amber, one blue) with brush guards on each side of body at the rear on the tool boxes. They shall have control switches in the cab.
 - 4.3.3.5 Install full size LED light bar, minimum 48" centered on top of cab with associated control in cab.
 - 4.3.3.6 Install an arrowstick Model Number SYAS847 P.S.E. or City-approved equal with controls in the cab. This unit will be flush mounted in the tailself/rear bumper.
 - 4.3.3.7 12" Fluorescent light (12VDC) will be installed in cab to supplement courtesy light.
- 4.3.4 Water Cooler Holder: **DIAGRAM I-7**
 - 4.3.4.1 With locking device mounted on right rear, spigot access curbside.
 - 4.3.4.2 Base fifteen (15) inches diameter, height eighteen (18) inches high.
 - 4.3.4.3 Holder to fit three (3) gallon water coolers, Igloo or Gotte.
 - 4.3.4.4 Base shall be ten (10) gauge metal with a spacer placed at bottom rear for drainage.
- 4.3.5 Rear Bumper: **DIAGRAM I-8**
 - 4.3.5.1 Bumper to extend twenty-eight (28) inches to frame. Bumper to have mounted eighteen (18) inch x eighteen (18) inch across the bumper storage compartment.
 - 4.3.5.2 Minimum fourteen (14) gauge steel with 3/16" tread top plate.
 - 4.3.5.3 Each end to have locking access doors with weather protective sealing and rain gutters extended over doors.
 - 4.3.5.4 *NOTE: Doors will be checked for weather proofing by pressure hose before acceptance.
 - 4.3.5.5 Rear bumper to have 3H8 Series drop forged two (2) inch combination hitch mounted approximately 22" center of bumper.
 - 4.3.5.6 Rear bumper to have two (2) B-40 lash rings.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 2: CAB & CHASSIS MOUNTED WITH STAKEBED BODY AND CRANE: (Continued)

4.3 Components (Continued):

4.3.5.7 Mounted on rear bumper chain vise with pipe holder, Reed Model CV4 1/8" to 4" pipe capacity. **DIAGRAM I-8**

4.3.5.8 Rear bumper to have license plate bracket with light.

4.3.6 Lighting / Electrical:

4.3.6.1 Backup alarm Whelen, Model # WBUA112 or City approved equal.

4.3.6.2 All wiring to be enclosed with flexible conduit and routed to covered fuse terminal block.

4.3.7 Air Compressor and Accessories:

4.3.7.1 The successful bidder of the Stake Body and Articulating Crane shall provide, install and operational: a truck mounted under the hood rotary screw air compressor: VMAC-VR7000 System, Model 9032.

4.3.7.2 The VMAC-VR7000 System, Model 9032 rotary screw to provide 70 CFM output at 150 PSI minimum for power tools listed herein.

4.3.7.3 "The VMAC-VR7000 System, to be mounted on a Ford F-550 Super Duty or city approved equal with the specified Diesel Engine reference on page 29, section 2.2.1. Vehicle must be newest year Model Cab and Chassis 84 inch.

4.3.7.4 The VMAC-VR7000 System, as a minimum shall have a complete installation kit, compressor, low profile inlet control valve, oil cooler: liquid-to-liquid, eliminator 5000 air dryer **DIAGRAM I-13**, and two (2) chassis mounted thirty-five (35) gallon air receiver tanks **DIAGRAM I-15**.

4.3.7.5 The successful bidder shall provide as a part of this bid the following air tools per unit, one (1) each.

4.3.7.5.1 Air Drill – Ingersoll Rand, Model # 5RANST8 or City approved equal, industrial duty, Chuck capacity 1/2", power rating 0.75 HP, free speed 600 RPM, 4.2 CFM average air flow, 90PSI required pressure, 1/4" air inlet, minimum hose size 3/8".

4.3.7.5.2 Rock Drill – 103 CFM @ 90 PSI, Manufacturer Atlas COPCO, Model # RH 571-5L with two (2) 7/8" X 4-1/4" shanks.

4.3.7.5.3 Impact Wrench – 13 CFM @ 90 PSI bolt capacity SAE Grade 8, ASTM, A354 Grade BD, bolt diameter 3/8" up to 1/2", Manufacturer Chicago Pneumatic or city approved equal. Reference Chicago Pneumatic, Model # CP 9540-RSR. With wrench: one (1) 3/8" X 3" extension CP-CA046380, one (1) 3/8" X 6" extension CP-CA046382, one (1) standard socket set 3/8" drive CP-CA1341109, one (1) deep-socket set 3/8" drive CP-CA133931.

4.3.7.5.4 Airline(s) installation and supporting hardware. Successful bidder shall supply, mount and be operational all items necessary to operate air tools **DIAGRAM I-10**

4.3.7.5.5 The air system shall have metal air lines from the receiver tank(s) to three (3) air tool outlets. One (1) left and right forward on bed and one (1) at right rear on bed. The lines shall be secured to the upper-most frame on stakebed for protection, and to prevent vibration

4.3.7.5.6 The air system to have at each air tool outlet: a two (2) stage filter (40-Micron filter) and moisture separator; maximum inlet pressure 200 PSI (or recommendation from manufacturer of air tool). Unit to be shatterproof metal with sight glass, threaded ports corresponding to tool use and removable from line without disturbing hard piping. A lubricator proportional oil feed rates corresponding to pipe size/lines, (or recommendation from manufacturer of air tool). Unit to be shatterproof metal with sight glass and single flow adjustment corresponding to tool use and removable from line without disturbing hard piping.

4.3.7.5.7 Air Control Valve – each tool outlet to have an on/off air control ball valve (bronze material) with on/off lever. Inlet/outlet NPT thread corresponding tool ball valve, have hose coupling (3/4" rock drill and/or 1/4" impact wrench) and/or quick-change coupling.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 2: CAB & CHASSIS MOUNTED WITH STAKEBED BODY AND CRANE: (Continued)

4.0 STAKE BED BODY: DIAGRAM I-2 (Continued):

4.3 Components (Continued):

4.3.7 Air Compressor and Accessories (Continued):

4.3.7.5.8 Air Line(s) – each Rock Drill shall have twenty-five (25) feet of 3/4" rubber hose Goodyear with "crowfoot" 200-250 PSI connectors. Each impact wrench shall have one (1) twenty-five (25) feet 1/4" NPT, rayon braid – neoprene tube with cover (or recommendation from manufacturer). 200-250 PSI rating complete ferruled and fitted assemblies. One (1) twelve (12) feet 1/4" NPT coiled air hose, rayon braid – neoprene tube with cover (or recommendation from manufacturer). 200-250 PSI rating complete ferruled and fitted assemblies.

4.3.7.6 Inverter:

4.3.7.6.1 Install one Dimensions Model 3000N 3000 Watt Pure Sine inverter, to be place in the front curbside compartment and to have one double GFI type receptacle at the rear of the stake bed, curbside.

4.3.7.6.2 Install two Group 27 Type 12-volt batteries in the bed of the stake bed body with a cover for protection directly behind the compartment containing the inverter.

4.3.7.7 Components:

4.3.7.7.1 Articulating (Knuckleboom) Crane across the bed

4.3.7.7.2 Stakebed Body – 120" X 96"

4.3.7.7.3 Toolbox Protector.

4.3.7.7.4 Tool Boxes – Two (2) 60" X 18" X 18" on the left side of utility bed, one (1) 120" X 18" X 18" on the right side of bed, one (1) 92" X 18" X 18" across underneath rear of bed back end, one (1) 24" X 18" X 18" under rear of bed also.

4.3.7.7.5 Pipe Racks

4.3.7.7.6 Water Cooler Holder

4.3.7.7.7 Rear Bumper with accessories

4.3.7.7.8 Tool Outlet Connectors - Two (2) underbed mount; 3/4" air; one (1) 3/4" air right rear of body, and two (2) electric, one (1) next to air outlet on right side of body, one (1) at bumper

4.3.7.7.9 ***NOTE: Successful bidder may be required to make minor adjustments to locations per diagram at no additional charge to the City of Houston**

4.4 Primer, Paint and Coatings:

4.4.1 Bed to have two (2) coats Sherwin Williams KEM Jet Seal Light Grey Primer

4.4.2 Underbed: Black with undercoating 3M

4.4.3 All deck surfaces, top of storage boxes, rear bumper, deck surfaces and walk areas to be coated with Martex materials

4.4.4 Paint: Above bed, side rails up – White Enamel Acrylic to match Cab & Chassis.

4.4.5 At time of delivery, provide certification of primer used, number of coats, undercoating and surface paint

5.0 TRAINING:

5.1 Successful bidder shall instruct City of Houston personnel on proper operation and proper maintenance of units, knuckle crane, air compressor and accessories for a minimum of two (2) hours or satisfaction of City of Houston supervisory personnel, at no additional cost to the City of Houston.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 2: CAB & CHASSIS MOUNTED WITH STAKEBED BODY AND CRANE: (Continued)

6.0 MANUALS:

6.1 Three (3) sets each of Operator's, and Parts/Service for Knuckle Crane and Air Compressor .

7.0 WARRANTY:

7.1 Cab & Chassis:

7.1.1 A minimum of a Manufacturer's 36-month/36,000 mile bumper-to-bumper warranty shall be provided

7.1.2 Manufacturer's standard warranty shall be provided for emission controls, power train, and corrosion

7.2 Stake Bed Body, Crane, Air Compressor and all other Associated Equipment:

7.2.1 A minimum of one (1) year warranty on both materials and workmanship shall be provided shall start on the date of acceptance by the City of Houston. Warranty service will be conducted within boundaries of Harris County.

8.0 DELIVERY:

8.1 The City of Houston will not authorize ANY additional payment for work bid specifications after the bid award and/or the issuance of the City of Houston Purchase Order (i.e. Mounting, installation of accessories, repositioning of bed or accessories).

8.2 The successful bidder shall be responsible for mounting the Stake Bed Body and Articulating Crane and any other required equipment to the City-owned Cab and Chassis and returning the completely assembled vehicle to the designated delivery point in Houston, Texas.

8.3 All components removed from the City-owned vehicle in order to install the stake Bed Body and Articulating Crane shall remain the property of the City of Houston and shall be returned with the delivery of the completed vehicle.

8.4 The successful bidder shall be responsible for all shipping and/or freight expenses from the City's designated location in Houston, Texas to the supplier's facility for mounting, processing, completion and return to the City's designated location in Houston, Texas.

8.5 Liability for the truck units that are in the custody of the successful bidder shall be the sole responsibility of the supplier.

8.6 The vehicle shall be delivered with weight ticket and current State Inspection.

8.7 **The item(s) specified above, with delivery tickets and other required documents shall be delivered Prepaid FOB Destination to the location(s) shown on the purchase order(s) within two hundred ten (210) calendar days after receipt of City of Houston Purchase Order. Full delivery is termed ALL items.**

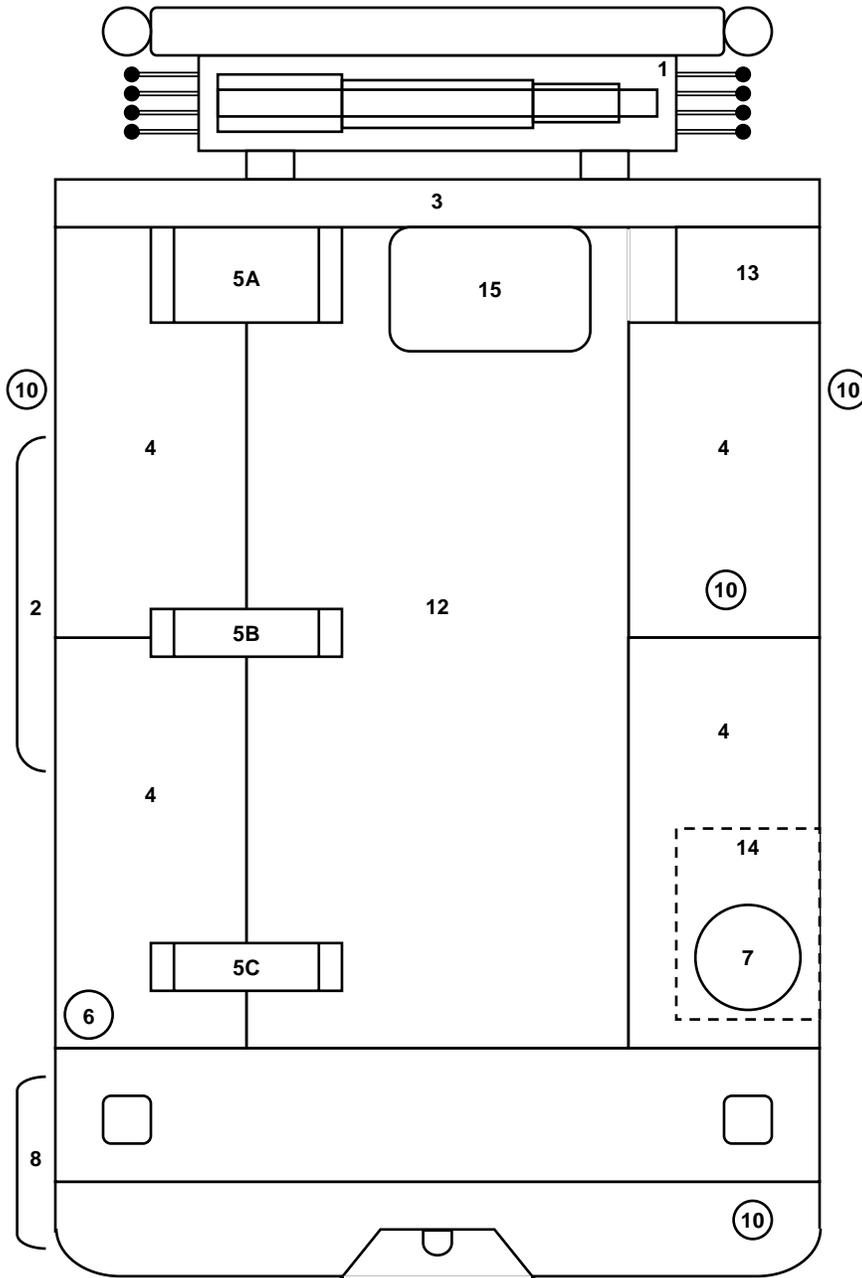
8.8 Representatives from both the cab & chassis Prime Contractor/Supplier and the body/equipment Subcontractor shall be present at the time of delivery of the unit to the City of Houston.

9.0 FINAL ACCEPTANCE:

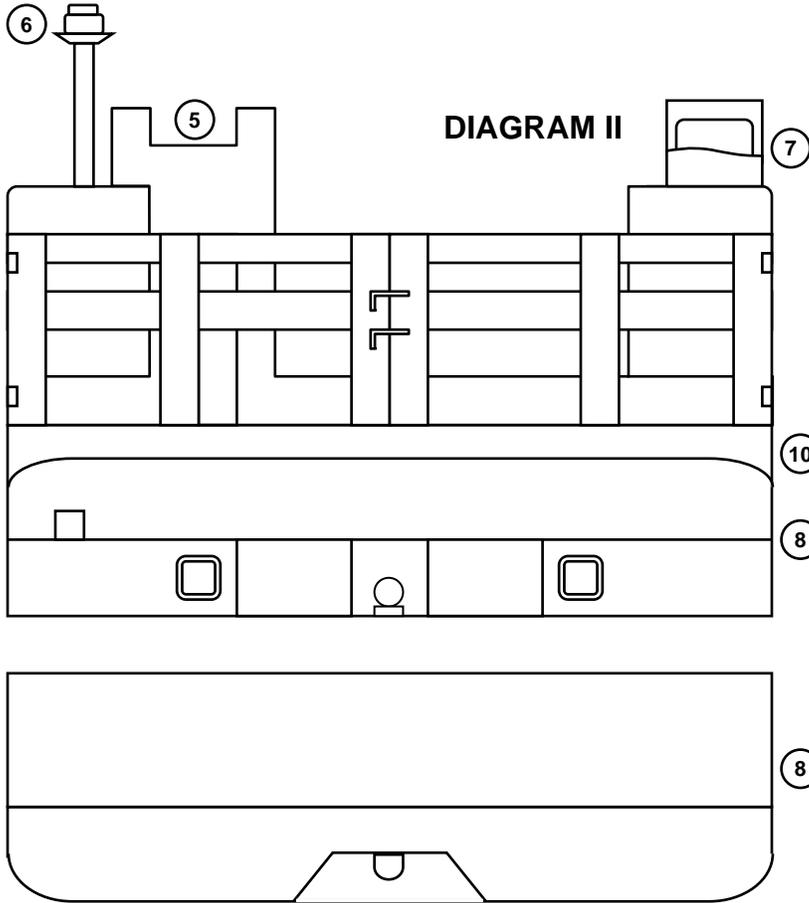
9.1 Successful completion, performance testing and final acceptance of the vehicle/equipment by the City of Houston, Fleet Management and Public Works & Engineering Departments, will be evidenced by documents signed by the City and an authorized representative of supplier. All documents of title, licenses, mileage, warranties, permits, manuals, accessories, and keys shall be submitted upon final acceptance.

DIAGRAM I

TOP VIEW

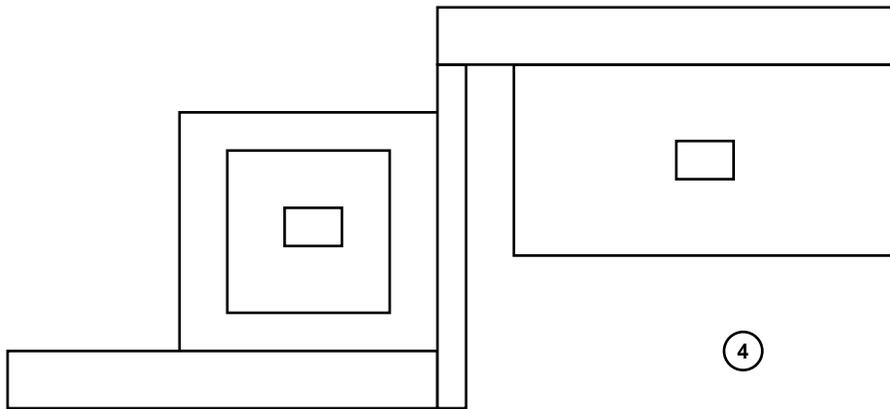


ITEM NO. 2: **CAB & CHASSIS MOUNTED WITH STAKEBED BODY AND CRANE: (Continued)**



REAR VIEW

TOP VIEW



END VIEW

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

**ITEM NO. 3: CAB & CHASSIS MOUNTED WITH 36-FOOT AERIAL MANLIFT AND BODY
PR No. 10207227 and 10207225**

1.0 GENERAL:

1.1 Equipment Description:

1.1.1 This specification is intended to describe a vehicle that will be used as an aerial bucket truck by the Department of Public Works & Engineering, Traffic and Transportation Division. The vehicle consists of a cab & chassis mounted with an aerial man-lift and service body.

1.2 Prime Contractor/Supplier:

1.1.2 These specifications require the contractor/supplier to furnish and deliver the complete unit(s). i.e. cab & chassis, mounted with the aerial man-lift and body.

1.3 Quantity:

1.3.1 Identical units shall be furnished when more than one unit is ordered.

1.4 Equivalent Equipment Documentation:

1.4.1 A bidder proposing to provide equivalent to the specified model must be able to demonstrate upon request that it has manufactured an apparatus similar to the unit bid, and that the apparatus has been proven and tested in service satisfactorily. The bidder will provide records of warranty service repairs upon request. The City of Houston shall be the sole judge whether the apparatus in service similar to the unit bid has been proven and tested satisfactorily

2.0 CAB AND CHASSIS:

2.1 General:

2.1.1 Ford F-550 4x2 Cab & Chassis with Regular Cab or City-approved equal, GVWR shall be not less than 16,000 lbs. with a 60" Cab-to-Axle and 141" Wheelbase.

2.1.2 Rear axle ratio of 4.88

2.1.3 Heavy duty front springs

2.1.4 Cab height must allow for aerial device mounting to be at 10 foot 6 inches maximum

2.1.5 Minimum of 2 key pod type controls for keyless entry

2.1.6 Minimum 40 gallon fuel tank

2.1.7 5,000-lb Front Axle

2.2 Engine:

2.2.1 **6.8 L V10 GASOLINE** engine that will meet the current EPA engine emission levels shall be provided

2.3 Transmission:

2.3.1 A 5-speed automatic transmission with integral PTO provision shall be provided

2.4 Cab:

2.4.1 OEM air conditioning, heating and defroster shall be provided

2.4.2 AM/FM radio shall be provided

2.4.3 Electric windows and door locks shall be provided.

2.4.4 Vinyl bench type seat

2.4.5 Manufacturer's standard ABS brakes

2.4.6 White exterior color

2.4.7 Darkest interior color available

2.4.8 Electric Adjustable side mirrors

2.4.9 Rubber Floor Mats.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 3: CAB & CHASSIS MOUNTED WITH 36-FOOT AERIAL MANLIFT AND BODY: (Continued)

3.0 AERIAL MANLIFT:

3.1 General:

- 3.1.1 Referenced manufacturer is Versalift Model TEL29EIH (254.717.3523) or City-approved equal.
- 3.1.2 Insulated telescopic / articulated aerial device with a minimum platform height of 29 feet
- 3.1.3 Horizontal reach shall be a minimum of 23.5 feet
- 3.1.4 Travel height shall not exceed 10 foot 6 inches
- 3.1.5 Aerial Device to be mounted maximum of 12 inches behind the cab of the chassis to the front of the pedestal
- 3.1.6 Minimum platform capacity of 350 pounds
- 3.1.7 The aerial device must be manufactured in an ISO 9001 Certified Facility

3.2 Control System:

- 3.2.1 The upper controls shall be of a Unitrol single stick design. They will consist of positive links with no cables. A safety trigger on the underside of the Unitrol handle will not allow boom movement until it is depressed. An emergency stop control is also to be provided at the upper controls at the basket.
- 3.2.2 Individual full-pressure controls at the turret actuate all boom functions. This lower control station is equipped with a selector valve to override the upper controls in event of injury, rescue or equipment malfunction.
- 3.2.3 The hydraulic control valves are full pressure and full flow.
- 3.2.4 The start/stop system will be designed so that the aerial lift cannot be operated normally unless a power switch is activated and the truck ignition switch is in the "on" position. This feature makes it difficult for unauthorized individuals to operate the aerial when the truck is locked or unattended. Start/Stop controls will be located in the basket for the operator and at the lower control station.
- 3.2.5 The aerial will have an emergency power system installed. It will consist of a hydraulic pump driven by a DC motor. This will be powered from the chassis battery system. It will be designed for non-continuous use only. These systems controls will be installed at both the basket and lower control stations. The DC motor/pump will be installed in the pedestal of the aerial device to protect it from damage and the elements.

3.3 Outer/Inner Boom Assembly:

- 3.3.1 The outer/inner booms assembly consists of the outer boom, telescopic boom, extension system, and hydraulic hose assemblies. The hoses routed through outer/inner boom assembly are non-conductive and fully contained within the boom assembly.
- 3.3.2 The outer boom consists of an 7 inch X 9-inch steel section.
- 3.3.3 The insulated rectangular inner boom is housed within the outer boom. The inner boom is easily removed and disassembled for service and/or inspection.
- 3.3.4 The extension system consists of a hydraulic cylinder, and two integral holding valves Ultra high molecular weight plastic slide pads mounted on the outer boom can be changed without the removal of the inner boom. The inner boom slide pads can also be changed through service port windows without the removal of the inner boom.
- 3.3.5 Minimum Inner Boom Extension shall be 42 inches.
- 3.3.6 The insulation gap must be a minimum of 116 inches when fully extended.
- 3.3.7 The outer/inner boom assembly articulates from -14 degrees below horizontal to +74 degrees above horizontal. A rubberized boom support cradle and ratchet type tie-down are installed.
- 3.3.8 Actuated by a double acting hydraulic cylinder that has two integral holding valves, the outer/inner boom assembly is offset to one side to provide easy access to the platform **SECTION B PART II**

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 3: CAB & CHASSIS MOUNTED WITH 36-FOOT AERIAL MANLIFT AND BODY: (Continued)

3.0 AERIAL MANLIFT (Continued):

- 3.4 Turret/Rotation:
 - 3.4.1 Turret wings are ½ inch thick steel plate. A steel tube is welded between the turret wings to support the boom cylinder and provide rigidity. The turret wings are designed for strength and rigidity. The bearing cover is continuously welded to seal out moisture and prevent foreign material from obstructing the turret rotation.
 - 3.4.2 Turret plate is machined flat to support the rotation bearing. A bearing cover is provided to prevent foreign material from interfering with lift rotation.
 - 3.4.3 Rotation is non-continuous.
 - 3.4.4 Critical bolts holding the lift to rotation bearing are SAE grade 8. These bolts are torque seal marked to provide a quick means to inspect for loosening.

- 3.5 Pedestal:
 - 3.5.1 Pedestal is a square shape with an access opening on both sides. These include easily removable doors to protect the internal components from damage and the elements. A 7-gallon hydraulic reservoir is built integral to the pedestal. The reservoir includes anti-slash baffles.
 - 3.5.2 Top plate of the pedestal 1 inch steel plate machined flat to support the rotation bearing.
 - 3.5.3 Dual sight gauges are furnished on the pedestal for monitoring the hydraulic oil level.
 - 3.5.4 A 100 mesh suction strainer and 10 micron return filter with shut off valves are located inside the pedestal.

- 3.6 Platform:
 - 3.6.1 24-inch X 30-inch X 42-inch deep platform completely closed with on access step.
 - 3.6.2 Platform to be supported in the stowed position by a tubular rubber support mounted on the floor of the service body.
 - 3.6.3 Platform must be end mounted with hydraulically leveled platform. The leveling system includes a master/slave cylinder arrangement that can be actuated from both the upper and lower controls for rescue or cleanout.
 - 3.6.4 Extra-large full body harness with deceleration lanyard will be provided.
 - 3.6.5 Anchor point for the lanyard is incorporated to the inner boom at the basket end.
 - 3.6.6 Platform liner of 24-inches X 30-inches X 42-inches deep and rated for 50 kV will be supplied.
 - 3.6.7 Bright orange or yellow soft stretch cover will be supplied to fit the 24X30x42 basket.

- 3.7 Hydraulic System:
 - 3.7.1 The open-center hydraulic system operates at 2000 psi and 36 GPM. A 10-micron return-line filter. Mounted above the hydraulic oil level and inside the pedestal, can easily be changed without draining the reservoir. A gate valve, located below the reservoir, prevents oil loss when the pump is serviced. A magnetic drain plug attracts metal particles from the oil and can easily be cleaned by removal when changing the system oil.
 - 3.7.2 Hydraulic power is provided by a PTO and Pump configuration.
 - 3.7.3 PTO/PUMP to be engaged by a toggle type switch on the dash of the chassis, there will be a red PTO indicator light dash mounted as well. There will be a PTO safety interlock installed and wired through the emergency brake of the chassis.

- 3.8 Miscellaneous:
 - 3.8.1 Non-lube bushings will be used at most points of motion. Rotation gearbox and rotation bearing require periodic lubrication.
 - 3.8.2 complete unit shall be primed and painted standard white urethane prior to assembly
 - 3.8.3 High-pressure hoses routed through the booms are non-conductive hoses with swaged hose end fittings. Reusable hose fittings may be installed if a hose is damaged.
 - 3.8.4 High-pressure hoses routed through the booms are non-conductive hoses with swaged hose end fittings. Reusable hose fittings may be installed if a hose is damaged.
 - 3.8.5 Three sets of operation and service manuals will be provided with the aerial lift.
 - 3.8.6 All cylinders are equipped with AQ type seals, nylon back up rings, non-metallic bearings on the pistons and end glands, rod wipers, threaded end glands and chrome plated rods.
 - 3.8.7 Lift and load holding type cylinders will be both threaded on the cylinder rod and then welded for dual retention and safety.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 3: CAB & CHASSIS MOUNTED WITH 36-FOOT AERIAL MANLIFT AND BODY: (Continued)

3.0 AERIAL MANLIFT (Continued):

3.8 Miscellaneous (Continued):

- 3.8.7 Extension cylinder has wear rings on the piston and end gland for extended seal life. Dual holding valves are mounted at the extension cylinder base to prevent boom creep during road travel or uncontrolled movement in case of hydraulic hose failure. A hydraulic regeneration feature on the extension cylinder provides extension and retraction at approximately the same speed.
- 3.8.8 Pins are high strength alloy steel and chrome plated for a hard finish and corrosion resistance. Cylinder pins are held in place with torque sealed bolts on one end and a pin cap washer and bolt that is torque sealed on the other

3.9 Stabilization:

- 3.9.1 Rear Mounted Frame Torsion Bar.

4.0 HEAVY-DUTY SERVICE BODY:

4.1 General:

- 4.1.1 Dakota Body or City-approved equal
- 4.1.2 Body to be install in relation to the aerial device and chassis specified above.
- 4.1.3 The body shall be a 108-inch body with tail-self and entry steps on the curbside.
- 4.1.4 Street side Compartments:
 - 4.1.4.1 All compartment doors will be of a T-Handle lock design
 - 4.1.4.2 Front vertical to have standard Dakota 108 shelving
 - 4.1.4.3 Horizontal will have one material tray and 10 dividers
 - 4.1.4.4 Rear vertical will have 4 pullout drawers. The top two drawers will have 3 sections with 3 cross sections to form 9 individual compartments for the (storage of small materials. The bottom two drawers will have 3 equal sections for tool storage. The drawers will all have a safety latch to prevent the drawer from sliding out if parked on an incline.
- 4.1.5 Curbside Compartments:
 - 4.1.5.1 Compartment doors will be of a T-Handle lock design
 - 4.1.5.2 Front Vertical to have standard Dakota 180 shelving
 - 4.1.5.3 Second compartment will be 28 inch wide access steps for body entry
 - 4.1.5.4 Horizontal will have one adjustable material tray with 10 dividers
 - 4.1.5.5 Rear vertical will have 5 fixed material hooks 1-3-1

4.2 Body Dimensions:

- 4.2.1 Floor width shall be 52 inches minimum
- 4.2.2 Body height shall be 40 inches minimum
- 4.2.3 Body length shall be 132 inches
- 4.2.4 Body width shall be 92 to 96 inches
- 4.2.5 Compartment depth shall be 18 inches minimum

4.3 Tail shelf:

- 4.3.1 Maximum width shall match outside width of body
- 4.3.2 Tail shelf shall be of sufficient size to encompass the aerial device basket completely when in the stowed position.
- 4.3.3 Tail shelf shall have an area to insert an arrow stick at the rear
- 4.3.4 Shall be one cable step at curbside rear for entry
- 4.3.5 Tail shelf and all lights on the service body shall be of an LED design.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 3: CAB & CHASSIS MOUNTED WITH 36-FOOT AERIAL MANLIFT AND BODY: (Continued)

4.0 AERIAL MANLIFT (Continued):

- 4.4 Tailgate:
 - 4.4.1 2-inch X 6-inch steel tube type tailgate shall be installed
 - 4.4.2 It shall slide into horizontal slots on the body and to be configured where it will not interfere with the aerial device basket storage
 - 4.4.3 Shall be one quick pin to hold tailgate in position and for ease of removal
- 4.5 Window Guard (Headache Rack):
 - 4.5.1 An expanded metal window guard shall be installed to protect the rear windshield and/or the chassis
 - 4.5.2 Window guard shall have two mounts for low profile amber strobe lights with brush guards for the strobes
- 4.6 Lighting:
 - 4.6.1 There shall be a heavy-duty lighting package for service body.
 - 4.6.2 All lighting shall be recessed except for marker clearance lights.
 - 4.6.3 Two low profile flashing, high – intensity LED warning lights (1 amber 1 blue) on the rear window guard with brush guards and control switches in the cab.
 - 4.6.4 Install two low profile flashing, high-intensity LED warning lights (1 amber, 1 blue) with brush guards on each side of service body at the rear. These will have control switches in the cab.
 - 4.6.5 Install an arrowstick model number SYAS847 P.S.E. or equivalent with controls in the cab. This will be flush mounted in the tail-self.
 - 4.6.6 8 “ LED light (12VDC) will be installed in cab to supplement courtesy light.
- 4.7 Painting:
 - 4.7.1 Paint Body OEM Color to match chassis
 - 4.7.2 All walkways shall have anti-skid paint applied
 - 4.7.3 All service body compartment tops shall have anti-skid paint applied
 - 4.7.4 Interior of compartments shall be primer gray

5.0 MISCELLANEOUS EQUIPMENT AND ITEMS TO BE PROVIDED AND INSTALLED:

- 5.1 High Security lock on the body to gang lock body compartments.
- 5.2 Install mudflaps anti sail with metal straps.
- 5.3 Grab handle to aid in tail self- entry, bolted on the rear of the service body curbside.
- 5.4 Install backup alarm Ecco # 5A907 or City-approved equal.
- 5.5 Treadplate installed on compartment tops.
- 5.6 Provide a 5-pound ABC fire extinguisher to be mounted inside the cab behind driver's seat.
- 5.7 Triangle reflector kit.
- 5.8 Undercoating and rustproof.
- 5.9 Install grill guard for front of chassis.
- 5.10 Generator - Honda EU3000iS or City approved equal.
- 5.11 Generator containment. One RKI V363624 or equivalent 36” long x 36” tall x 24” deep with slide out tray, generator to be securely attached to the slide out tray in a way to allow for service and cooling of generator when running. Tray should have two slides with minimum 125lb capacity each. Tray must lock in closed position with a different key than box door. Box shall be screened on exhaust end of generator to allow for exhaust and for cooling air flow.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 3: CAB & CHASSIS MOUNTED WITH 36-FOOT AERIAL MANLIFT AND BODY: (Continued)

6.0 WARRANTY:

6.1 Cab & Chassis:

- 6.1.1 A minimum of a Manufacturer's 36-month/36,000 mile bumper-to-bumper warranty shall be provided
- 6.1.2 Manufacturer's standard warranty shall be provided for emission controls, power train, and corrosion

6.2 Aerial Lift:

- 6.2.1 Aerial lift shall have a Manufacturer's standard one-year warranty and include a three-year warranty on all-hydraulic hoses and hydraulic cylinders.
- 6.2.2 Warranty repairs to the aerial device shall be made at the City of Houston Traffic Operations Facility by Factory Authorized mechanics.

6.3 Service Body:

- 6.3.1 One-year full warranty (parts and labor) shall be provided on service body and any listed options installed by manufacturer.
- 6.3.2 If manufacturer's standard warranty is longer, the City of Houston will accept the longer warranty.
- 6.3.3 Three-year full warranty (parts and labor) shall be provided for rust perforation.
- 6.3.4 One-year full warranty (parts and labor) shall be provided for any option required by the City that is installed by Prime Contractor/Supplier, including rust perforation.

7.0 TRAINING:

- 7.1 Operator orientation training shall be provided to those employees designated by the Department of Public Works & Engineering. The orientation training will include a thorough briefing on daily pre trip, during and post trip operator checks and services, unique operating characteristics of the unit and suggested handling and operating techniques.
- 7.2 Technical orientation training shall be given to department technicians to familiarize them with the new equipment and about any special troubleshooting or diagnostic checks, techniques and services.
- 7.3 Training shall be provided to the Department at no additional cost to the City.

8.0 LITERATURE:

8.1 Maintenance and Operator's Manuals:

- 8.1.1 Four sets of parts, service, shop, hydraulic schematics, lubrication charts and operator's manuals shall be provided with delivery of the first unit (electronic format is acceptable).
- 8.1.2 One set of operator's manuals shall be provided for each additional unit (hard copy) format).

9.0 DELIVERY:

- 9.1 **All of the truck unit(s) specified above, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the Public Works & Engineering Department, Houston, Texas within two hundred ten (210) calendar days after receipt of City of Houston Purchase Order.**
- 9.2 Representatives from both the cab & chassis Prime Contractor/Supplier and the body/equipment Subcontractor shall be present at the time of delivery of the unit to the City of Houston.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

**ITEM NO. 4: EXTENDED CAB AND CHASSIS MOUNTED WITH A SERVICE BODY CRANE TRUCK
PR 10206882**

1.0 GENERAL:

1.1 Equipment Description:

- 1.1.1 This specification is for the purchase of an 26,000 Gross Vehicle Weight Ratio (GVWR) extended cab and chassis to be mounted with a service body crane truck for the Department of Public Works & Engineering Department (herein referred to as "PWE"). The Contractor awarded this purchase shall have the experience and technical ability to provide the truck described herein.
- 1.1.2 Referenced Model is: PETERBILT 337 Chassis or City Approved Equal

2.0 CAB & CHASSIS:

2.1 Chassis:

- 2.1.1 26,000-lb. GVWR.
- 2.1.2 Air Disc Front Brakes and maximum capacity air compressor
- 2.1.3 Vertical Exhaust

2.2 Cab:

- 2.2.1 Cab to Axle dimension 146 in.

2.3 Transmission:

- 2.3.1 Allison 3000RDS-P Transmission, Gen 5
- 2.3.2 With clearance for mounting PTO gearbox
- 2.3.3 Direct mount hydraulic pump on right side of transmission

3.0 AUTO CRANE SERVICE BODY INSTALL TITON 60:

- 3.1 Vexstar 12,000 Hydraulic crane
- 3.2 Hydraulic out and down stabilizers
- 3.3 30* work bench bumper
- 3.4 Drawer unit 3" vertical left compartment
- 3.5 Bed lining on top of boxes, side wolfs
- 3.6 2 work lights on top of left and right of body
- 3.7 Diesel air compressor
- 3.8 3000W Invertor
- 3.9 2 inch receiver rear hitch
- 3.10 3/8 air hose reel top mounted top right
- 3.11 Compartment service body installed

4.0 WARRANTY:

- 4.1 Two year parts and labor warranty on body and one (1) year on tools and crane.

5.0 LITERATURE:

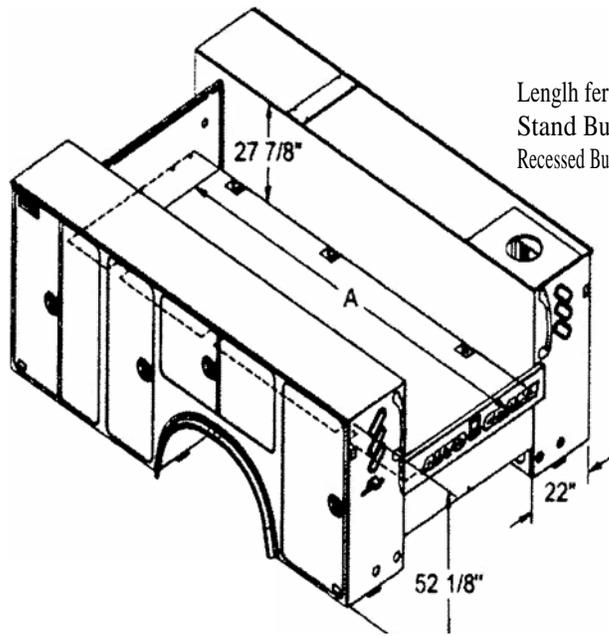
- 5.1 One (1) set of operation, maintenance and parts manuals are to be provided with each unit at the time of delivery.

6.0 DELIVERY:

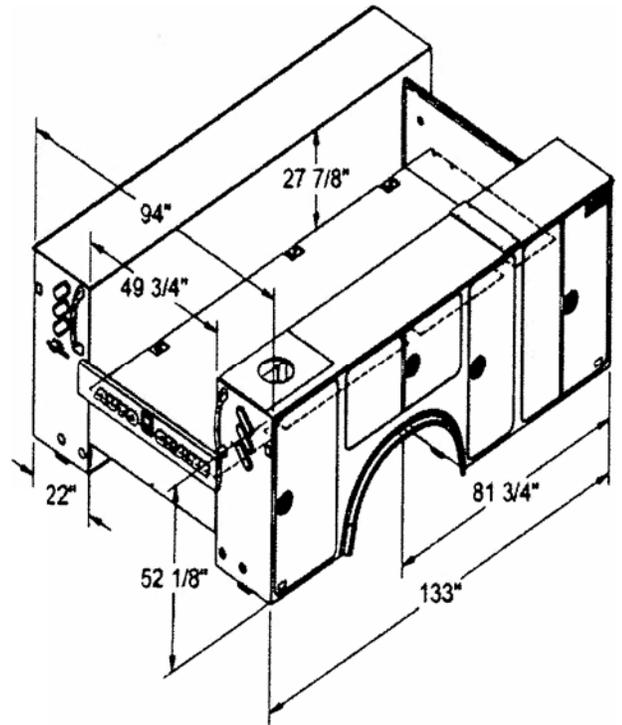
- 6.1 Unit(s) as specified above, with delivery ticket and other documents and manuals, if requested shall be delivered to the location (s) as stated on each individual purchase order as expeditiously as possible. It is specifically requested by the ordering Department(s) that delivery be made within ninety (90) calendar days after receipt of City of Houston Purchase Order.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

TITatr 60 / 84CA 52" TALL WITH RIGHT SIDE CRANE



Length for "A" Dimension
Stand Bulkhead 1315/8"
Recessed BulWlead 123"



SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

**ITEM NO. 5: CAB & CHASSIS MOUNTED WITH SEMI-TRACTOR TRAILER:
PR 10208998**

1.0 GENERAL:

1.1. Equipment Description:

1.1.1 These specifications describe a medium duty semi-tractor truck equipped with a "fifth wheel" for the purpose of hauling 57 cubic yard open bed trailers used in the department's daily bulk waste collection operations. The semi-tractor will be a conventionally configured cab and chassis equipped with a single rear axle and will have a gross vehicle weight rating (GVWR) of not less than 35,000 pounds.

1.1 Prime Contractor/Supplier:

1.2.1 These specifications require the bidder to be a prime contractor / supplier and to bid on all components specified herein, including any ancillary equipment. Award will be made on all or none basis.

1.2.2 The prime contractor/supplier shall be capable of authorizing warranty repairs at the primary service facility, or if the city elects, at the city's facility.

1.2 Equivalent Equipment:

1.3.1 Equivalent or better product may be substituted except when otherwise specified. Bidder proposing to submit an equivalent product as a substitute for the equipment specified must supply sufficient operating and technical information to allow the city to evaluate the proposed substitute product.

1.3 Order Quantity:

1.4.1 Identical units as described herein shall be provided with the option to order additional identical units at the same price within 180 calendar days of delivery and acceptance of the final vehicle.

2.0 CAB AND CHASSIS 35,000 LBS. GVWR AND DRIVE TRAIN:

2.1 Chassis:

2.1.1 Wheelbase: 145 inches and compatible with hauling requirements

2.1.2 Cab to axle (CA) distance: 72 inches.

2.1.3 Frame:

2.1.3.1 Minimum PSI (pounds per square inch) 110,000.

2.1.3.2 Minimum RBM (resistance bending movement) 900,000 pounds – unlined.

2.2 Engine:

2.2.1 Cummins ISL-300 medium duty diesel engine with a minimum rating of 300 horse power at about 2,000 rpm (governed at 2,200 rpm) and a torque rating of at least 860 ft. lbs. at about 1,300 rpm.

2.2.2 Oil level dipstick shall be scribed with cold and hot level markings or high and low levels scribe marks.

2.2.3 Dash mounted engine hour meter will be provided.

2.2.4 A Donaldson, 11 inch air cleaner assembly shall be mounted in a position that provides for ease of maintenance.

2.2.4.1 The restriction indicator on the filter housing must be easily visible from the side of the chassis.

2.2.4.2 The filter must be mounted in such a way that it is easily serviceable without removal of any air intake plumbing.

2.2.5 An engine fuel/water separator shall be provided and mounted in an easily accessible position.

2.2.6 Engine mounts shall be oil resistant neoprene

2.2.7 Cooling system – engine

2.2.7.1 Radiator clamps shall be spring loaded – bolt type.

2.2.7.2 Radiator hoses shall be silicon.

2.2.7.3 System shall be delivered full with a coolant/water mixture rated to -10 degrees F.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 5: CAB & CHASSIS MOUNTED WITH SEMI-TRACTOR TRAILER: (Continued)

2.0 CAB AND CHASSIS 35,000 LBS. GVWR AND DRIVE TRAIN (Continued):

- 2.2 Engine (Continued):
 - 2.2.8 Delco electric starting motor will be provided.
 - 2.2.9 Batteries - Will be maintenance free, stud – post type rated with minimum cold cranking amps (CCA) of 2,250 amps @ 32 degrees F
 - 2.2.9.1 Batteries will be mounted away from all hydraulic valves and fittings to preclude hydraulic fluid from dripping on to the batteries.
 - 2.2.9.2 Battery box design will provide for a latched or hinged cover.
 - 2.2.9.3 A battery disconnect master switch shall be mounted near the battery box and connected between the batteries and the chassis electrical system, and wired to a cab clearance light to indicate whether the master switch is engaged.
 - 2.2.10 Delco, heavy duty 12-volt, minimum 100 ampere alternator will be provided.
 - 2.2.11 A positive ONLY, (no negative) jumper post will be provided at the battery box to facilitate battery jumping.
 - 2.2.12 Automatic fan clutch will be provided.
 - 2.2.13 Minimum 102 micron oil filter will be provided.
 - 2.2.14 Engine Exhaust
 - 2.2.14.1 Will be mounted on the passenger's side of the cab (right side)
 - 2.2.14.2 Will be vertically mounted and equipped with a curved exhaust tip pipe with a height not to exceed the height of the cab
 - 2.2.14.3 The muffler can be vertically or horizontally mounted. Will be shielded or insulated so as to prevent accidental burns by a mechanic or operator.
 - 2.2.15 Magnetic drain plugs for the engine, transmission and rear axle housing will be provided.
 - 2.2.16 Engine will be programmed with an anti-idle feature that will shut down the engine automatically after 5-minutes of no acceleration.
- 2.3 Transmission:
 - 2.3.1 An Allison 3000 RDS transmission equipped with six (6) forward gears shall be provided (no substitute brand or model will be acceptable).
 - 2.3.2 The transmission cooling system shall be provided with an external full flow, spin - on type filter, 10 micron filter easily accessible for service.
 - 2.3.3 Rear axle ratio shall be selected by the vendor to provide these performance requirements.
- 2.4 Front Axle and Springs:
 - 2.4.1 Front axle capacity shall be 12,000 pounds minimum (Meritor preferred) with minimum 12,000 pounds suspension.
 - 2.4.2 Wheel bearings shall be fluid lubricated.
 - 2.4.3 STEMCO wet – type, guardian unitized oil seals shall be used.
- 2.5 Rear Axles and Suspension:
 - 2.5.1 Meritor 23,000 pounds OEM rear axles. Axle shall be single speed, single reduction with 23,000 pound suspension. Magnetic trap drain and fill plugs will be provided.
- 2.6 Tire and Wheels:
 - 2.6.1 Front 11R22.5 14 ply and rear tires shall be 11R22.5 16 ply, tubeless, steel belted tires.
 - 2.6.2 Wheels shall be ten – hole bud type with no split rims.
- 2.7 Brake System:
 - 2.7.1 OEM (Original equipment manufacturer) with anti-lock braking system.
 - 2.7.2 Minimum 15.0 CFM (cubic feet per minute) air compressor with stainless steel discharge lines.
 - 2.7.3 Front brakes: minimum 16 ½ " x 5" S-cam brakes with Meritor 15" x 4" or equal). Rear brakes: minimum 16 ½ " x 7" S-cam brakes with Meritor 15" x 4" brake shoes.
 - 2.7.4 Parking brake: OEM.
 - 2.7.5 Meritor slack adjusters: Automatic slack adjusters shall be provided.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 5: CAB & CHASSIS MOUNTED WITH SEMI-TRACTOR TRAILER: (Continued)

- 2.7 Brake System (Continued):
 - 2.7.6 All air chambers shall be mounted so that they do not interfere with specified steering cut, and the axle center-line for maximum ground clearance. All air lines shall be of sufficient length to permit brake servicing without disturbing the brake lines.
 - 2.7.7 Air dryer shall be equipped with pull chains easily accessible from the side of the truck.
 - 2.7.8 Quick disconnect couplings located in a protected area near the front bumper shall be provided. Male coupling ½" to air tanks; female coupling ½" to the air valve.
- 2.8 Steering:
 - 2.8.1 Maximum wheel cut available with specified tires.
 - 2.8.2 Power steering reservoir with replaceable filters shall be refillable from ground level with an easily accessible dipstick.
 - 2.8.3 Steering gear shall be rated equal to or greater than the front axle rating provided.
 - 2.8.4 Steering wheel is to be positioned on the left hand side when facing forward.
- 2.9 Cab:
 - 2.9.1 The cab shall be OEM (original equipment manufacturer) insulated and sound proof to 80 db.
 - 2.9.2 The cab roof will be insulated so as to minimize the heat load into the compartment.
 - 2.9.3 The operator's seat will be an "air ride" seat. A two person passenger bench seat will also be provided. The seats will be covered with durable cloth.
 - 2.9.4 Seat belt shall have a "Safety Orange" shoulder strap**
 - 2.9.5 All standard components shall be provided to include, without limitation, the following:
 - 2.9.5.1 Cab grab handles
 - 2.9.5.2 Shatterproof, window tint 30% tinted rear, windshield and tinted door glass
 - 2.9.5.3 Instruments (standard layout).
 - 2.9.5.3.1 Transmission temperature
 - 2.9.5.3.2 Tachometer
 - 2.9.5.3.3 Speedometer
 - 2.9.5.3.4 Fuel gauge
 - 2.9.5.3.5 Oil pressure Engine hour meter
 - 2.9.5.3.6 Engine Temperature
 - 2.9.5.3.7 Air Pressure
 - 2.9.6 A warning light and audible alarm shall be provided to indicate a shutdown is about to occur.
 - 2.9.6.1 The shutdown will occur in the event of an engine or transmission malfunction
 - 2.9.6.2 The light and alarm will indicate:
 - 2.9.6.2.1 Low oil pressure.
 - 2.9.6.2.2 High transmission temperature
 - 2.9.6.2.3 High coolant temperature
 - 2.9.6.2.4 Low coolant level or pressure
 - 2.9.6.2.5 Warning lights will be provided for the following:
 - 2.9.6.2.6 Parking brake engaged.
 - 2.9.6.2.7 PTO system engaged
 - 2.9.6.2.8 Low air pressure warning
 - 2.9.7 Doors will be equipped with:
 - 2.9.7.1 Electric power door locks
 - 2.9.7.2 Electric power windows
 - 2.9.7.3 4-keys per vehicles with all vehicles using a common keying system that can be utilized on subsequent vehicle orders.
 - 2.9.8 AM/FM radio will be provided.
 - 2.9.9 Dual sun visors will be provided.
 - 2.9.10 Mirrors:
 - 2.9.10.1 Side rear view mirrors shall have dimensions of at least 6 ½" X 10 ½"; and shall be framed with stainless steel. Other mounting configurations may be acceptable as determined by the department.
 - 2.9.10.2 10" convex mirrors shall be provided and mounted with the rear view mirrors in a suitable position.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 5: CAB & CHASSIS MOUNTED WITH SEMI-TRACTOR TRAILER: (Continued)

- 2.10 Dual single-base air horns will be provided
- 2.11 Unit will be equipped with front tow hooks mounted to the frame with a steel towing cable mounted through tow hooks.
- 2.12 Right hand (passenger side) mounted, aluminum 50-gallon minimum fuel tank capacity.
- 2.13 Vehicle will be delivered with at least ¼ (one-fourth) tank of fuel.
OEM (original equipment manufacturer) air conditioning
- 2.15 A suitably sized electrically operated fan for air circulation shall be mounted inside the cab for additional operator comfort.
- 2.16 Half Fenders will be installed above and in front of the rear axle tires.
- 2.17 Headlights shall serve as daytime running lights so as to automatically illuminate upon activation of the ignition.
- 2.18 Clearance, license plate, taillights, brake, running, backup and signal lights shall be of the LED type. They, and all lights and reflectors, must meet all applicable government requirements.
- 2.19 Metal 7- Way male socket (Pigtail end)
- 2.20 Pogo stick 3-hose holder.

3.0 FIFTH WHEEL AND WET KIT:

- 3.1 Fifth wheel shall be installed on the semi – tractor and blocked.
- 3.2 Fifth wheel shall be a Fontaine, no slack, low profile, 36 inch size with 60-40 percent setting mounted at 46 inches (Fontaine part no. SL6A365750E).
- 3.3 Wet kit shall be installed on the frame immediately behind the cab.
- 3.4 PTO shall be a “hot shift” direct mount system.
- 3.5 A stow –a- way attachment (Freightliner model no. 15042) with spring loaded slide bar for storing air lines when not in use will be affixed to the rear of the cab.

4.0 HYDRAULIC SYSTEM:

- 4.1 Hydraulic Control System:
 - 4.1.1 The hydraulic reservoir shall be chassis mounted.
 - 4.1.2 The reservoir shall have a sight gauge (LENZ model T-LLG-5 or equivalent) placed so that the fluid level can be determined by a person standing on the ground. The reservoir fill location shall be accessible from ground without climbing.
 - 4.1.3 The reservoir minimum tank capacity shall be three (3) times the fluid capacity of the hydraulic cylinders and lines.
 - 4.1.4 The hydraulic reservoir shall be steel construction.
- 4.2 Shut-off valves shall be provided on both the suction and return lines unless anti-siphoning release is provided.
- 4.3 Shut-off valves shall be accessible without crawling under the vehicle.
- 4.4 The filler cap shall be a breather type.
- 4.5 The reservoir shall be furnished with a drain plug for quickly emptying the tank.
- 4.6 Tank minimum ground clearance shall be 15 inches.
- 4.7 Reservoir shall be clearly marked “HYDRAULIC OIL ONLY” in two inch white lettering.
- 4.8 The hydraulic system shall be provided with quick disconnect(s) compatible with Oil Maintenance Technology Model #FB-5, Serial #85010 type flushing machine or City approved equivalent. All Pressure valves, including relief valves shall be accessible for servicing with the trailer loaded. Male ½” size quick-connect shut-off valve shall be supplied.
- 4.9 All Pressure setting screws, or devices, must be factory sealed. All pressure valves, including relief valves shall be accessible for servicing with the trailer loaded.
- 4.10 The hydraulic filter(s) shall be water guard Filtration spin-on type with a minimum of 10 micron filtering equipment (inorganic type) with external filter(s) for maintenance servicing or approved equal. Hydraulic system, hoses shall be located away from tires, heat and rotating shafts and any other sharp edges that might cause damage.
- 4.11 PERMCO PUMP (PN 400-80263) pump flow rate range shall be 10-40 gallons and shall be compatible with the engine’s maximum RPM (OVERSPEED PROTECTION REQUIRED). The pump will be electrically connected through the transmission.
- 4.12 All hydraulic clamps on the fluid supply and pressure side shall be a solid type with bolt. Any other clamps shall be the same if the hose diameter (outside) is equal to or greater than two inches.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 5: CAB & CHASSIS MOUNTED WITH SEMI-TRACTOR TRAILER: (Continued)

5.0 TRANSMISSION AND ENGINE SHUTDOWN SYSTEM:

- 5.1 An electronic engine shutdown device and alarm with automatic override shall monitor engine oil pressure, transmission oil temperature, and coolant temperature and coolant pressure.
- 5.2 The device shall provide audible and visual alarms when monitored conditions become harmful to the engine, transmission or their components, and shall provide engine shutdown in the event these conditions become critical.
- 5.3 An automatic override feature shall be included to allow the engine to be restarted and run for 60 seconds after shutdown has occurred.
- 5.4 The visual and audible components of the device shall be installed in the instrument panel or cluster.
- 5.5 The engine will programmed so as to limit idle time to five minutes as noted in 2.2.15.

6.0 PAINTING:

- 6.1 All surfaces shall be cleaned and primed with a suitable primer
- 6.2 Frame shall be painted black
- 6.3 Wheels shall be painted Dupont GM code 12 white enamel
- 6.4 Cab shall be painted Dupont # L6564EB safety blue enamel paint
- 6.5 Paint numbers shown are illustrative of color required equivalent manufacturer's paint number are permitted
- 6.6 Base coat/clear coat finish is required
- 6.7 Paint samples are available upon request

7.0 OPERATOR AND TECHNICAL INFORMATION:

- 7.1 The following manuals shall be provided with delivery of the first unit: Manuals (except operators) may be provided on CD or electronically online.
 - 7.1.1 Four sets of parts, service shop, electrical schematics, hydraulic schematics, and lubrication charts shall be provided, acceptable in electronic format, with delivery of the first unit.
 - 7.1.2 Four sets of operator's manuals shall be provided in manual format (hard copy) with delivery of the first unit.
 - 7.1.3 One set of operator's manuals shall be provided for each additional unit in manual format (hard copy).
- 7.2 A copy of the manufacturers line set ticket will be provided upon delivery.

8.0 SERVICE FACILITIES:

- 8.1 Bidder shall have a primary service shop located within Harris County, Texas.

9.0 WARRANTIES:

- 9.1 Minimum warranties for 100% of parts and labor costs from the City's determined in-service date, for the periods indicated shall be provided for the following cab and chassis components:
 - 9.1.1 Cab – 36 months/300,000 miles.
 - 9.1.2 Transmission (include torque converter) 36 months.
 - 9.1.3 Engine – maximum available from manufacturer – minimum 24 months
 - 9.1.4 Paint and primer – 12 months
 - 9.1.5 Cab rust – 48 months.
 - 9.1.6 Frame – 60 months.
 - 9.1.7 Rear suspension – 48 months.
 - 9.1.8 Axles – 60 months/500,000 miles.
 - 9.1.9 Shutdown system – 36 months
 - 9.1.10 Exhaust and Emissions Control System – 250,000 miles –two years
 - 9.1.11 All remaining parts/components – 12 months/100,000 miles
 - 9.1.12 If standard manufacturer's warranty for any item listed or not listed is greater than that requested, the standard warranty should apply

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 5: CAB & CHASSIS MOUNTED WITH SEMI-TRACTOR TRAILER: (Continued)

10.0 TRAINING:

- 10.1 Operator orientation training will be provided to those employees designated by the Department of Solid Waste Management. The orientation training will included a through briefing on daily pre trip, during and post trip operator checks and services, unique operating characteristics of the unit and suggested handling and operating techniques.
- 10.2 Technical orientation training will be given to department technicians to familiarize them with the new equipment and about any special troubleshooting or diagnostic checks, techniques and services.
- 10.3 If the manufacturers of the major equipment components require special certified training of department technicians before providing specialized computer diagnostic software that training will be arranged for four department technicians.

11.0 MISCELLANEOUS:

- 11.1 One BC type fire extinguisher with a 20-pound capacity rating will be provided and the place for its position will be marked with a decal and the valid extinguisher inspection card attached. The extinguisher and mounting bracket will be positioned outside of the cab on the left (driver's) side of the vehicle for quick and easy access. Protective weather resistant cover will be provided.
- 11.2 A four foot "cat walk" shall be installed behind the cab across the frame rails to provide a platform for hooking up the air, hydraulic and electrical lines. A three step ladder shall be mounted on driver's side of the truck for easy access to the "cat walk." The first step of the ladder will be 20 inches from ground level.
- 11.3 Front bumper shall have steel bumper extensions.
- 11.4 Wet kit with blocked fifth wheel.

12.0 DELIVERY

- 12.1 All of the truck unit(s) specified above, with delivery tickets and/or other required documents shall be delivery prepaid F.O.B. Destination to the Solid Waste Management Department facility located at 5617 Neches Street, Houston, Texas within one hundred eighty (180) calendar days after receipt of City of Houston Purchase Order.
- 12.2 Manufacturer or the dealer will provide temporary licenses ("paper plates") to the purchaser at the time of delivery of the equipment.
- 12.3 A copy of the manufacturers line set ticket will provided upon delivery.
- 12.4 Vehicle will be provided with a Tare Weight Ticket upon delivery.
- 12.5 Each vehicle shall have four (4) sets of keys for all locks and ignition.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

**ITEM NO. 6: CREW CAB & CHASSIS MOUNTED WITH SERVICE TRUCK BODY:
PR 10206649, 10206648 and 10206881**

1.0 GENERAL:

- 1.1 Equipment Description:
 - 1.1.1 This specification is intended to describe a medium duty crew cab truck cab & chassis mounted with a service body that will be used by the Public Works & Engineering Department, Public Utilities Division to transport field crews, tools, parts and supplies to and from water line repair worksites.
- 1.2 Prime Contractor/Supplier:
 - 1.2.1 These specifications require the bidder to be a prime contractor/supplier and to bid on the cab & chassis mounted with the service body and all other components
- 1.3 Equivalent Equipment:
 - 1.3.1 Bidders proposing to provide equipment they believe to be equal to the specified model must provide sufficient operating and technical specifications for the City to evaluate the proposed equipment

2.0 CAB AND CHASSIS:

- 2.1 General:
 - 2.1.1 Crew Cab configuration
 - 2.1.2 Cab-to-Axle shall be a minimum of 142 inches
 - 2.1.3 Power Steering with Glidecoat splines on the steering shift
- 2.2 Front Axle and Equipment:
 - 2.2.1 13,200 lb. Axle
 - 2.2.2 13,200 lb. Suspension
- 2.3 Rear Axle and Equipment:
 - 2.3.1 23,000 lb. axle, single-speed, single – Locking rear differential
 - 2.3.2 23,000 lb. suspension, Reyco 79KB Taper Leaf with shocks and 3,000 -lbs helper springs.
 - 2.3.3 Oil wheel seals
 - 2.3.4 Differential ratio, 5.38, will be geared for truck to run approximately 64 MPH
 - 2.3.5 4S4M ABS Brakes
 - 2.3.6 Front Brakes air disc.
 - 2.3.7 Rear Brakes Air Cam Drum, 16.5" x 8.6"
 - 2.3.8 Hubometer, miles on rear axle
 - 2.3.9 Upsize, larger than standard, parking brakes, Drive Axle.
 - 2.3.10 Bendix Smart ATC Traction Control
 - 2.3.11 Gusseted cam brakes, steer axle and drive Axle
 - 2.3.12 Rear axle stabilizer bar
- 2.4 Brakes and Equipment Air with ABS
 - 2.4.1 Air pressure gauge, dash-mounted w/light/buzzer for low air pressure
 - 2.4.2 Front and rear dust shields
 - 2.4.3 Air Compressor, 18.7 CFM
 - 2.4.4 Berg pull Cord Drain Valves – All air tanks
 - 2.4.5 Polished Alum. Air tanks outside frame rails
 - 2.4.6 Clear inside frame of all air system components and body connection box
 - 2.4.7 Air and electric lines EOF with 7-way socket
 - 2.4.8 Air Disc Front Brakes

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 6: CREW CAB & CHASSIS MOUNTED WITH SERVICE TRUCK BODY:

- 2.5 Cab and Equipment:
 - 2.5.1 OEM severe service with tilting hood and fenders
 - 2.5.2 Hi-back front air suspension seat driver and passenger
 - 2.5.3 3-man bench rear cabin seat with three seat belts, center seat lap belt.
 - 2.5.4 Warning light and buzzer for low oil pressure and high temperature
 - 2.5.5 Heater
 - 2.5.6 Assist handles
 - 2.5.7 Dual sun visors
 - 2.5.8 Tinted glass, all
 - 2.5.9 Gauges - to include the following; water temp (engine.), voltmeter, oil temp (transmission) oil pressure (engine), air pressure, and fuel.
 - 2.5.10 Speedometer / Odometer with trip odometer
 - 2.5.11 Tachometer
 - 2.5.12 Engine hour meter, which will actuate only with engine running, dash mounted
 - 2.5.13 Dual electric horns
 - 2.5.14 Mirrors, dual SS heated and motorized with switch on dash
 - 2.5.14.1 (2) Convex 8 inch Heated SS mirrors, under mirror bracket
 - 2.5.14.2 Mirrors not mounted on cab doors
 - 2.5.15 Arm rest on all four doors
 - 2.5.16 Factory air conditioning in the dash and AC under rear bench⁵
 - 2.5.17 Two (2) Air Horns, 24.5" air horns with shields
 - 2.5.18 2-Speed Fan Clutch⁵
 - 2.5.19 AM/FM/WB radio with (2) speakers
 - 2.5.20 Tilt wheel, telescoping column⁵
 - 2.5.21 Power windows & Locks, all four doors
 - 2.5.22 Painted outside sunvisor
 - 2.5.23 Convex mirror over passenger door
 - 2.5.24 CabMate cab air suspension
- 2.6 Electrical:
 - 2.6.1 160 amp, 36SI Brushless, alternator
 - 2.6.2 Batteries, Three (3) Optima DT31T minimum 2700 CCA Total
 - 2.6.3 Battery Box, left hand under cab, with non-slip step
 - 2.6.4 Rubber pad under batteries
 - 2.6.5 Plug in, reset able circuit breakers
 - 2.6.6 L.E.D. marker and tail lights
- 2.7 Engine and Equipment:
 - 2.7.1 Diesel 330 gross horsepower, 6 cylinders, minimum 1000 ft. lbs. Torque
 - 2.7.2 2013 Emission Compliant
 - 2.7.3 Air cleaner, dry type with restriction indicator, dash mounted
 - 2.7.4 Spin-on fuel/water separator/filter
 - 2.7.5 Two speed fan clutch
 - 2.7.6 Deep Core radiator, 1000 sq. in. frontal area, minimum
 - 2.7.7 Cooling system shall be protected with permanent coolant, rated for service to -30F
- 2.8 Exhaust System:
 - 2.8.1 Single horizontal exhaust and raised stack pipe
 - 2.8.2 Diesel particulate filter right hand under front cab door
 - 2.8.3 Select Catalytic Reduction device provided under right hand door as well with a minimum 20.7 gallon Diesel Exhaust Fluid tank provided

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 6: CREW CAB & CHASSIS MOUNTED WITH SERVICE TRUCK BODY:

2.0 CAB & CHASSIS (Continued):

- 2.9 Frame and Equipment:
 - 2.9.1 Minimum frame rating 3,4683,000 RBM to meet GVWR
 - 2.9.2 Minimum RH BOC 70 gallon and 60 gallon LH BOC capacity fuel tanks.
 - 2.9.3 Frame-mounted towing hook(s) on front
 - 2.9.4 Truck(s) will be delivered with full tanks of fuel
- 2.10 Tires and Wheels:
 - 2.10.1 Front - 11R22.5 16 ply steel belted radial tubeless on alum. disc type wheels (886677 LVL1) hub piloted 22.5 x 8.25) R283 Tire tread
 - 2.10.2 Rear – 11R22.5 14 Ply steel belted radial type tubeless for on/off road use with alum. disc type wheels (886677 LVL1) hub piloted 22.5 x 8.25 M726EL tread
- 2.11 Transmission and Equipment:
 - 2.11.1 Transmission automatic 6 speed, Allison 3500RDS-P Gen 5, and must be compatible with horsepower and torque of engine proposed. Must be able to be used both on and off road
 - 2.11.2 SPL140 Greaseless drivelines
- 2.12 Miscellaneous:
 - 2.12.1 Unless specified in the detailed vehicle specifications, the cab-to-axle dimension and/or wheel base shall be as required to properly mount the body on the chassis, with no more than four (4) inches between the Cab and Chassis unless a greater distance is required for proper operation.
 - 2.12.2 Line setting ticket for each unit will be available at the time of inspection.
 - 2.12.3 Color: White OEM standard
 - 2.12.4 Trailer towing package including air glad hand(s), six, and seven-way electrical connections at rear of frame. For trailer application(s).
 - 2.12.5 Lincoln Auto lubrication System, NO EXCEPTIONS
 - 2.12.6 RPM Industries PERT Process Multi-Vac Oil System. NO EXCPTIONS

3.0 SERVICE BODIES:

- 3.1 General:
 - 3.1.1 These specifications are intended to describe a service body, mounted to a 35,000-lb GVWR cab & chassis
 - 3.1.2 Service body @ 133.25" long
 - 3.1.3 84" CA, Single axle, dual rear wheels
 - 3.1.3.1 94" wide
 - 3.1.3.2 85" floor width
 - 3.1.3.3 50" side compartment height
 - 3.1.3.4 18" deep compartments
 - 3.1.3.5 29" floor height
 - 3.1.4 Construction:
 - 3.1.4.1 Body shell : 14 ga galvanneal steel
 - 3.1.4.2 3/16" tread plate floor
 - 3.1.4.3 7 ga cross members
 - 3.1.5 Doors: Double panel 20 ga galvanneal
 - 3.1.5.1 Stainless steel continuous hinges
 - 3.1.6 Exterior prime: zinc phosphate coating
 - 3.1.7 Interior paint: medium gloss gray epoxy paint
 - 3.1.8 Undercoating: water borne material
 - 3.1.9 Standard equipment
 - 3.1.10 Double spring door retainers
 - 3.1.11 Light guards on rear panel
 - 3.1.12 Rotary latches
 - 3.1.13 Master lock system
 - 3.1.14 Grab handles installed each side at rear

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 6: CREW CAB & CHASSIS MOUNTED WITH SERVICE TRUCK BODY:

3.0 SERVICE BODIES (Continued):

- 3.1.15 Rubber roll crown fenders
- 3.1.16 Door seal on edges of doors
- 3.1.17 Shelf retainers in each compartment
- 3.1.18 Tread plate overlay on compartment tops
- 3.1.19 Tread plate overlay on bulkhead
- 3.1.20 Tread plate overlay on compartment backs

- 3.2 Left Side:
 - 3.2.1 First vertical compartment
 - 3.2.1.1 30.25" wide, with single opening door
 - 3.2.1.2 2 each adjustable shelves 16 x 30
 - 3.2.2 Intermediate compartment
 - 3.2.2.1 25" wide, with single opening door
 - 3.2.2.2 4 drawer shelving
 - 3.2.2.3 4 x 3 deep drawers 16.5" tall, 18" side, 16" deep

- 3.3 Horizontal:
 - 3.3.1 52.75" wide
 - 3.3.2 Double overlapping door
 - 3.3.3 1 each adjustable shelf 16 x 51

- 3.4 Rear compartment:
 - 3.4.1 25.25" wide
 - 3.4.2 Single open door
 - 3.4.3 2 each adjustable shelves 16 x 23

- 3.5 Right side:
 - 3.5.1 First vertical compartment
 - 3.5.1.1 30.25" wide
 - 3.5.1.2 Single open door
 - 3.5.1.3 2 adjustable shelves 16 x 30

- 3.6 Intermediate compartment:
 - 3.6.1 25" wide
 - 3.6.2 Single open door
 - 3.6.3 2 each adjustable shelves.... 16 x 24.63

- 3.7 Horizontal compartment
 - 3.7.1 52.75" wide
 - 3.7.2 Double overlapping door
 - 3.7.3 1 adjustable shelf 16 x 51

- 3.8 Rear compartment
 - 3.8.1 25.25" wide
 - 3.8.2 Single open door
 - 3.8.3 2 adjustable shelves

- 3.9 Tailgate:
 - 3.9.1 Slam type with latches
 - 3.9.2 Treadplate overlay

- 3.10 Rear bumper "Pintle Hitch" Reinforced
 - 3.10.1 Pintle hitch set up
 - 3.10.2 2 each safety D- rings
 - 3.10.3 7 way electrical plug
 - 3.10.4 Air compensating pintle hitch
 - 3.10.5 Air glad hands

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 6: CREW CAB & CHASSIS MOUNTED WITH SERVICE TRUCK BODY:

3.0 SERVICE BODIES (Continued):

- 3.11 Body Miscellaneous:
 - 3.11.1 Cargo Area, Top and Back of Compartments and Top of Bumper
 - 3.11.2 Overhead storage rack painted black
 - 3.11.2.1 Full length of body extending @ 5' over cab
 - 3.11.2.2 Steel construction
 - 3.11.2.3 Rear step and ladder at rear painted black
 - 3.11.2.4 Note: no floor on rack
 - 3.11.3 3000 watt, GO POWER, pure sine wave inverter mounted in front side curbside compartment
 - 3.11.4 Change horizontal exhaust to vertical exhaust as requested
 - 3.11.5 Mud flaps, no logo
 - 3.11.6 State Inspection
- 3.12 Paint:
 - 3.12.1 One coat primer
 - 3.12.2 Bottom of bed black acrylic enamel
 - 3.12.3 Exterior white Jones Blair Acryl thane HS2 Urethane enamel to match cab and chassis paint color

4.0 COMPRESSOR:

- 4.1 Diesel powered air compressor will be installed in the center of box behind the cab
- 4.2 Will be a Kohler 10 horse power 22 CFM 175
- 4.3 23 gallon tank with 12 volt remote start engine
- 4.4 50 feet of ½" air hose with couplers and outlet

5.0 SAFETY ITEMS:

- 5.1 Each unit will have one (1) set (two each) wheel chocks
 - 5.1.1 Units will be rubber in material
 - 5.1.2 Width will be minimum eight inches (8")
 - 5.1.3 Height will be minimum 4 inches (4")
 - 5.1.4 Length will be minimum 4 inches (4")
 - 5.1.5 Rope length will be a minimum 4 feet (4')
 - 5.1.6 Units will be reflective
 - 5.1.7 Warranty will be one year (12 months) from acceptance of unit

6.0 WARRANTY:

- 6.1 Two (2) year parts and labor warranty on service body and hydraulic system.
- 6.2 Minimum, five (5) years/100,000 miles warranty on parts and labor
- 6.2 Minimum one (1) year/12,000 miles parts and labor warranty.

7.0 LITERATURE:

- 7.1 Two (2) sets of Parts Manuals (preferably electronic or CD)
- 7.2 Two (2) sets of Service Manuals (preferably electronic or CD)

8.0 DELIVERY/INSPECTION:

- 8.1 The unit(s) with all specified equipment shall be delivered One Hundred eighty-five (185) calendar days after receipt of City of Houston Purchase Order FOB Destination, full freight allowed (FFA) to the location(s) as stated on each individual purchase order
- 8.2 Unit(s) shall have full tanks of fuel at time of delivery.
- 8.3 Unit(s) shall be accompanied with a copy of the original invoice, warranty policy (ies) and/or certification, as may be required

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

**ITEM NO. 7: CAB & CHASSIS MOUNTED WITH WINCH
PR 1026883**

1.0 GENERAL:

- 1.1 Equipment Description:
 - 1.1.1 This specification is for the purchase of a Winch Truck for the Department of Public Works & Engineering Department (herein referred to as "PWE"). The Contractor awarded this purchase shall have the experience and technical ability to provide the truck described herein. Referenced Model is: PETERBILT 367 Chassis or City Approved Equal
- 1.2 Prime Contractor/Supplier:
 - 1.2.1 These specifications require the bidder to be a prime contractor/supplier and to bid on the complete cab & chassis and flatbed body and other required equipment.
- 1.3 Equivalent Equipment:
 - 1.3.1 Bidders proposing to provide equipment they believe to be equal to the specified model must provide sufficient operating and technical specifications for the City to evaluate the proposed equipment.
- 1.4 Equivalent Equipment Documentation:
 - 1.4.1 A bidder proposing to provide equivalent to the specified model must be able to demonstrate upon request that it has manufactured a vehicle similar to the unit bid, and that the vehicle has been proven and tested in service satisfactorily. The bidder will provide records of warranty service repairs upon request. The City of Houston shall be the sole judge whether the vehicle in service similar to the unit bid has been proven and tested satisfactorily

2.0 CAB & CHASSIS:

- 2.1 Cab:
 - 2.1.1 Aluminum
 - 2.1.2 Air Ride Driver and Passenger Seat
 - 2.1.3 High Back Driver Seat
- 2.2 Chassis:
 - 2.2.1 66,000 GVWR
 - 2.2.2 Air Disc Front Brakes and maximum capacity air compressor
 - 2.2.3 Vertical Exhaust
 - 2.2.4 5th Wheel
- 2.3 Transmission:
 - 2.3.1 Fuller fo16E308L-V10 Automated
 - 2.3.2 With clearance for mounting PTO gearbox
 - 2.3.3 Direct mount hydraulic pump on right side of transmission

3.0 HYDRAULIC WINCH WITH HYDRAULIC CIRCUIT FOR GOOSENECK TRAILER:

- 3.1 Body:
 - 3.1.1 Braden Model AHS-20 45,000 lb. capacity.
 - 3.1.2 2 dual air control valves to operate winch and trailer hydraulics.
 - 3.1.3 1 Apsco air control to operate the winch brake.
 - 3.1.4 1Apsco valve to operate the winch drive dawg.
 - 3.1.5 1PTO Hot Shift for use with automatic transmission.
 - 3.1.6 160 GPM gear type hydraulic pump direct mount to PTO.
 - 3.1.7 1 Flow control valve with 1" NPT ports
 - 3.1.8 1 Dual spool directional control valve air piloted
 - 3.1.9 All necessary hydraulic hoses, fittings and quick disconnect adaptors.
 - 3.1.10 150ft 7/8 cable with tail chain and hook.
 - 3.1.11 4 single radius stainless steel fenders with brackets on drive axles.
 - 3.1.12 2 Led load lights mounted on top of the headache rack.
 - 3.1.13 1 control console center mounted between the seats in the cab with all winch controls mounted in it including a hydraulic temperature and pressure gauge.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 7: CAB & CHASSIS MOUNTED WITH WINCH

**3.0 HYDRAULIC WINCH WITH HYDRAULIC CIRCUIT FOR GOOSE NECK TRAILER
(Continued):**

- 3.1.14 PTO switch to be mounted in the dash
- 3.1.15 Winch mounting Plates constructed of ½ smooth plate steel with 4" x3/4" gussets supporting 1" smooth steel top plates. All seal welded continuous. Attached to the frame using Huck fasteners where appropriate. Other fasteners to be grade 8.
- 3.1.16 Headache rack to be constructed of 4x4x3/8 tubular steel with 3" and 4" schedule 80 pipe where required for rollers. To have chain trays and racks and grab handles on each side. 1-1/2" #6 Expanded metal rear cover to help prevent damage to rear of cab. Seal welded continuous with exception to the expanded metal.
- 3.1.17 Sand Blast and painted black as required

4.0 WARRANTY:

- 4.1 Two (2) year parts and labor warranty on service body and hydraulic system.
- 4.2 Minimum, five (5) years/100,000 miles warranty on parts and labor
- 4.3 Minimum one (1) year/12,000 miles parts and labor warranty.

5.0 LITERATURE:

- 5.1 Two (2) sets of Parts Manuals (preferably electronic or CD)
- 5.2 Two (2) sets of Service Manuals (preferably electronic or CD)

6.0 DELIVERY/INSPECTION:

- 6.1 The unit(s) with all specified equipment shall be delivered One Hundred eighty-five (185) calendar days after receipt of City of Houston Purchase Order FOB Destination, full freight allowed (FFA) to the location(s) as stated on each individual purchase order
- 6.2 Unit(s) shall have full tanks of fuel at time of delivery.
- 6.3 Unit(s) shall be accompanied with a copy of the original invoice, warranty policy (ies) and/or certification, as may be required

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

**ITEM NO. 8: CAB AND CHASSIS MOUNTED WITH A 10/12 CUBIC YARD DUMP BODY
PR NO 10206827**

1.0 GENERAL:

- 1.1 Equipment Description:
 - 1.1.1 This specification is for the purchase of a Cab & Chassis mounted with a 10/12 Cubic Yard Dumps Body for the Department of Public Works & Engineering Department (herein referred to as "PWE"). The Contractor awarded this purchase shall have the experience and technical ability to provide the truck described herein.
Referenced Model: Peterbuilt 367 Chassis or City Approved Equal
- 1.2 Prime Contractor/Supplier:
 - 1.2.1 These specifications require the bidder to be a prime contractor/supplier and to bid on the complete cab & chassis and flatbed body and other required equipment.
- 1.3 Equivalent Equipment:
 - 1.3.1 Bidders proposing to provide equipment they believe to be equal to the specified model must provide sufficient operating and technical specifications for the City to evaluate the proposed equipment.
- 1.4 Equivalent Equipment Documentation:
 - 1.4.1 A bidder proposing to provide equivalent to the specified model must be able to demonstrate upon request that it has manufactured a vehicle similar to the unit bid, and that the vehicle has been proven and tested in service satisfactorily. The bidder will provide records of warranty service repairs upon request. The City of Houston shall be the sole judge whether the vehicle in service similar to the unit bid has been proven and tested satisfactorily.

2.0 CAB & CHASSIS:

- 2.1 Cab:
 - 2.1.1 Aluminum
 - 2.1.2 Air Ride Driver and Passenger Seat
 - 2.1.3 High Back Driver Seat
- 2.2 Chassis:
 - 2.2.1 50000 GVWR
 - 2.2.2 Air Disc Front Brakes and maximum capacity air compressor
 - 2.2.3 Vertical Exhaust
- 2.3 Transmission:
 - 2.3.1 Fuller fo16E308L-V10 Automated
 - 2.3.2 With clearance for mounting PTO gearbox
 - 2.3.3 Direct mount hydraulic pump on right side of transmission
- 2.4 Steering:
 - 2.4.1 Power Steering, OEM standard

3.0 BODY:

- 3.1 Reference Warren 10/12 Dump Body, Flamless, 12' or City Approved Equal
 - 3.1.1 Yardage 10/12
 - 3.1.2 Floor / Material 3/16 AR400
 - 3.1.3 Front / Material 60" 3/ 16 AR400
 - 3.1.4 Side / Material 46-3/16 AR400
 - 3.1.5 Vertical Side Brace No
 - 3.1.6 Horizontal Brace No
 - 3.1.7 Hoist / Cylinder VTLW-74135
 - 3.1.8 Hydraulics Yes
 - 3.1.9 Tarp Tie Rails
 - 3.1.10 Body Steps (2) Each Side
 - 3.1.11 (2) Steps Below Body (D/5)

SECTION B, PART II TECHNICAL SPECIFICATIONS (CONTINUED)

ITEM NO. 8: CAB AND CHASSIS MOUNTED WITH A 10/12 CUBIC YARD DUMP BODY

3.0 BODY (Continued):

- 3.2 Tailgate:
 - 3.2.1 Air Operated Gas
 - 3.2.2 Panel 9
 - 3.2.3 Material 3/16 AR400
 - 3.2.4 Height 48
 - 3.2.5 Slope 6"
 - 3.2.6 Chains 5/16"
 - 3.2.7 Double Acting Yes
 - 3.2.8 High Lift Gate No
 - 3.2.9 Side Swing – Ground Operating No
 - 3.2.10 Center Opening No
 - 3.2.11 Material Gate None

- 3.3 Dump Body Options:
 - 3.3.1 Cabshield Variable Width ½
 - 3.3.2 Asphalt Apron 8"
 - 3.3.3 Bolt On No
 - 3.3.4 Body Lights
 - 3.3.5 LED Yes

- 3.4 Dump Body Install:
 - 3.4.1 Hydraulic Oil 30 Gal
 - 3.4.2 Hydraulic Hoses/Fittings Yes
 - 3.4.3 Pump 22 gal w/air shift CW (400-80263)
 - 3.4.4 Console Clutch Shift Air
 - 3.4.5 Misc Mounting Material
 - 3.4.6 Conspicuity Tape No
 - 3.4.7 Mudflaps and Brackets Yes
 - 3.4.8 Chrome Turnouts No
 - 3.4.9 Splash/Gravel Guards No
 - 3.4.10 Side Boards Metal - 2x6 (center board pockets)
 - 3.4.11 Covers No
 - 3.4.12 Delivery Fuel/Charges: Yes

4.0 PAINT:

- 4.1 White or City Approved Equal

5.0 PTO – POWER TAKE OFF:

- 5.1 Muncie CS Series (AUTO) or City Approved Equal

6.0 TARP SYSTEM – INSTALLED:

- 6.1 Donovan Bullet Electric System
 - 6.1.1 HD, Bent, Aluminum Side Arms
 - 6.1.2 TARP Size 90" x 17" Mesh
 - 6.1.3 Cab Operated

7.0 ASSEMBLY:

- 7.1 Unit shall be delivered completely assembled, properly lubricated, fueled, and ready for use.

8.0 LITERATURE:

- 8.1 Two (2) Complete sets of parts, service, and operator's instruction manuals shall be delivered with the unit(s). DVD's or CD's are acceptable.

SECTION B, PART II TECHNICAL SPECIFICATIONS (CONTINUED)

9.0 DELIVERY/INSPECTION:

- 9.1 The unit(s) with all specified equipment shall be delivered One Hundred eighty-five (185) calendar days after receipt of City of Houston Purchase Order FOB Destination, full freight allowed (FFA) to the location(s) as stated on each individual purchase order
- 9.2 Unit(s) shall have full tanks of fuel at time of delivery.
- 9.3 Unit(s) shall be accompanied with a copy of the original invoice, warranty policy (ies) and/or certification, as may be required

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

**ITEM NO. 9: CAB AND CHASSIS MOUNTED WITH A 18/20 CUBIC YARD DUMP BODY
PR NO 10206098**

1.0 GENERAL:

1.1 Equipment Description:

- 1.1.1 This specification is for the purchase of a 66,000 GVWR Truck Cab & Chassis to be mounted with an 18/20 Cubic Yard Dump Body for the Department of Public Works & Engineering Department (herein referred to as "PWE"). The Contractor awarded this purchase shall have the experience and technical ability to provide the truck described herein.
Referenced Model: Peterbuilt 367 Chassis or City Approved Equal
- 1.1.2 Cab to Axle shall be no greater than 85 inches.

2.0 CAB & CHASSIS:

2.1 Front Axle and Equipment

- 2.1.1 20,000 lb. axle
- 2.1.2 20,000 lb. suspension
- 2.1.3 Power Steering TRW THP60 Dual or City Approved Equal

2.2 Rear Axle and Equipment:

- 2.2.1 46,000 lb. axle, single-speed, tandem - Locking rear differential
- 2.2.2 46,000 lb. suspension, Hendrickson HMX460 with shocks
- 2.2.3 Oil wheel seals
- 2.2.4 Differential ratio, 5.38, will be geared for truck to run approximately 67 MPH
- 2.2.5 6S6M ABS Brakes

2.3 Bakes and Equipment Air:

- 2.3.1 Moisture ejectors, Berg pull chains or City Approved Equal
- 2.3.2 Air pressure gauge, dash-mounted w/light/buzzer for low air pressure
- 2.3.3 Front and rear dust shields
- 2.3.4 Air Compressor, 18.7 CFM
- 2.3.5 Bendix AD-IS EP heated air dryer or equal
- 2.3.6 Front and rear air disc brakes

2.4 Cab and Equipment:

- 2.4.1 OEM severe service with tilting hood and fenders.
- 2.4.2 Hi-back air suspension, seat with Hi-back fixed single passenger seat.
- 2.4.3 Warning light and buzzer for low oil pressure and high temperature.
- 2.4.4 Heater
- 2.4.5 Assist handles
- 2.4.6 Dual sun visors
- 2.4.7 Tinted glass, all
- 2.4.8 Gauges - to include the following; water temp (eng.), voltmeter, oil temp (trans.) oil pressure (eng), air pressure, and fuel
- 2.4.9 Speedometer/Odometer with trip odometer
- 2.4.10 Tachometer
- 2.4.11 Engine hour meter, which will actuate only with engine running, dash mounted
- 2.4.12 Dual electric horns
- 2.4.13 Mirrors, dual Moto-Mirrors SS each side heated and motorized with switch on dash
 - 2.4.13.1 (2) Convex 8 inch Heated SS mirrors, offset under mirror bracket
- 2.4.14 Arm rest on both doors
- 2.4.15 Factory air conditioning
- 2.4.16 Two (2) Air Horns, 24.5" with shields
- 2.4.17 Engine 2-Speed Fan Clutch
- 2.4.18 AM/FM/WB radio with (2) speakers
- 2.4.19 Tilt wheel, telescoping column
- 2.4.20 Power Lift window, passenger door
- 2.4.21 Painted outside sunvisor
- 2.4.22 Convex mirror over passenger door
- 2.4.23 Dash mounted, air operated PTO control.
- 2.4.24 Cab air suspension

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 9: CAB AND CHASSIS MOUNTED WITH A 18/20 CUBIC YARD DUMP BODY (Continued):

2.0 CAB AND CHASSIS (Continued):

- 2.5 Electrical:
 - 2.5.1 160 amp, Brushless alternator or City approved Equal
 - 2.5.2 Batteries, Optima DT31T AGM 12 V Batteries Minimum 2700 CCA Total
 - 2.5.3 Battery Box, left hand under cab, with non-slip step
 - 2.5.4 Rubber pad under batteries
 - 2.5.5 Plug in, reset able circuit breakers
 - 2.5.6 L.E.D. marker and tail lights

- 2.6 Engine and Equipment:
 - 2.6.1 Diesel 345 gross horsepower, 6 cylinders, minimum 1,150 ft. lbs. Torque.
 - 2.6.2 2013 Emission Compliant
 - 2.6.3 Air cleaner, dry type with restriction indicator, dash mounted
 - 2.6.4 Spin-on fuel/water separator/filter
 - 2.6.5 Fan clutch
 - 2.6.6 Deep Core radiator, 1,000 sq. in. frontal area, minimum.
 - 2.6.7 Cooling system shall be protected with permanent coolant, rated for service to -30F

- 2.7 Exhaust System:
 - 2.7.1 **Exhaust Single LH Back of Cab, (For High Water Rescue)**
 - 2.7.2 Diesel particulate filter, Back of Cab, **(For High Water Rescue)**
 - 2.7.3 Select Catalytic Reduction device provided under right hand door as well with a minimum 20.7 gallon Diesel Exhaust Fluid tank provided

- 2.8 Frame and Equipment:
 - 2.8.1 Minimum frame rating 3,468,000 RBM to meet GVW.
 - 2.8.2 Minimum 60 RH BOC and 70 LH BOC gallon capacity fuel tanks
 - 2.8.3 Frame-mounted towing hook(s) on front
 - 2.8.4 Truck(s) will be delivered with full tanks of fuel

- 2.9 Tires and Wheels:
 - 2.9.1 Front - 315/80R22.5 20 ply steel belted radial tubeless on aluminum disc type wheels (Alcoa 893657 piloted 22.5 x 9.00) M860A Tire tread
 - 2.9.2 Rear – 11R22.5 16 Ply steel belted radial type tubeless for on/off road use with disc type wheels (Accur 28408 piloted 22.5 x 8.25) M843 Tire tread

- 2.10 Transmission and Equipment:
 - 2.10.1 Transmission automatic 5 speed, Allison 3000RDS-P, and must be compatible with horsepower and torque of engine proposed. Must be able to be used both on and off road
 - 2.10.2 SPL100 Greaseless Driveline with SPL170-XL Inneraxle Greaseless Driveline.

- 2.11 Miscellaneous:
 - 2.11.1 Unless specified in the detailed vehicle specifications, the cab-to-axle dimension and/or wheel base shall be as required to properly mount the body on the chassis, with no more than four (4) inches between the Cab and Chassis unless a greater distance is required for proper operation.
 - 2.11.2 Line setting ticket for each unit will be available at the time of inspection.
 - 2.11.3 Color: White OEM standard.
 - 2.11.4 Trailer towing package including air glad hand(s), six and seven-way electrical connections at rear of frame for trailer application(s)
 - 2.11.5 Lincoln Auto lubrication System, NO EXCEPTIONS

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 9: CAB AND CHASSIS MOUNTED WITH A 18/20 CUBIC YARD DUMP BODY (Continued):

3.0 DUMP BODY:

3.1 General:

- 3.1.1 These specifications are intended to describe a dump body, 18 – 20 cubic yard capacity, mounted to a 66,000-lb GVWR cab & chassis.
- 3.1.2 Major components shall be made with AR400 steel, minimum 155,000 PSI yield and 180,000 PSI tensile.
- 3.1.3 Minor components shall be made with ASTM A607 grade class 2 steel, minimum 45,000 PSI yield and 55,000 PSI tensile.
- 3.1.4 Manufacturer's reference is Warren Model WAR700 with front telescoping cylinder

3.2 Specifications:

3.2.1 Capacity/Dimensions:

- 3.2.1.1 18cubic yard water level
- 3.2.1.2 20 cubic yard with side boards
- 3.2.1.3 Length 16feet
- 3.2.1.4 Width 87 inches
- 3.2.1.5 Side height 46 inches
- 3.2.1.6 Front 60 inches
- 3.2.1.7 Tailgate height 50 inches

3.2.2 Materials:

- 3.2.2.1 Floor 3/16" AR400 Brinnell hardness of 400
- 3.2.2.2 Sides 3/16" AR400 Brinnell hardness of 400
- 3.2.2.3 Front 3/16" AR400 Brinnell hardness of 400
- 3.2.2.4 Tailgate 3/16" AR400 Brinnell hardness of 400
- 3.2.2.5 Corner Post 10 gauge Hi-tensile 50,000 PSI
- 3.2.2.6 Cab Shield 10 gauge Hi-tensile 45,000 PSI Brinnell hardness of 150

3.2.3 Construction:

- 3.2.3.1 Full length welds, no stitch welding
 - 3.2.3.1.1 Long Members to be 10"x4"x1/4
- 3.2.3.2 Under structure crossmember design
- 3.2.3.3 Long members to be 5 inch channel.
- 3.2.3.4 Floor:
 - 3.2.3.4.1 One piece design
- 3.2.3.5 Sides:
 - 3.2.3.5.1 Side sheet constructed of AR400 steel with 24" side to floor radius
 - 3.2.3.5.2 Curbside to have 2-rung ladder
 - 3.2.3.5.3 Each side to have 35-degree full-length horizontal rub rail
- 3.2.3.6 Top rail:
 - 3.2.3.6.1 To be 4" x 4" x 1/8" structural tubing rotated 45-degree for dirt shedding.
- 3.2.3.7 Front:
 - 3.2.3.7.1 Front head panel to be constructed of a one-piece sheet of steel with no weld seams
- 3.2.3.8 Tailgate:
 - 3.2.3.8.1 Three panel design
 - 3.2.3.8.2 Panel constructed of one-piece sheet
 - 3.2.3.8.3 All horizontal bracing, including top rail to be dirt shedding
 - 3.2.3.8.4 Upper tailgate hinge pins; 1-1/2" diameter with steel snap-lock device (no cotter pin)
 - 3.2.3.8.5 Lower tailgate hinge 1-1/2" diameter incorporated into lower vertical tailgate brace.
 - 3.2.3.8.6 Lower latch assembly, 3/4" pin, 5/8" catch bar plate and reinforced with 1/4" backing plate.
 - 3.2.3.8.7 Two (2) coil-proof spreader chains (loose).
 - 3.2.3.8.8 Tail gate shall be air operated

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 9: CAB AND CHASSIS MOUNTED WITH A 18/20 CUBIC YARD DUMP BODY (Continued):

3.0 DUMP BODY (Continued):

3.2 Specifications (Continued):

3.2.3 Construction (Continued):

- 3.2.3.9 Corner post:
 - 3.2.3.9.1 Full depth enclosed with cut-out to house lights
- 3.2.3.10 Cab-shield:
 - 3.2.3.10.1 One piece - 30" in length
 - 3.2.3.10.2 Mount two Whelen strobe lights – amber, located on front face of cab shield, with Switch in cab, fuse protector/indicator light - all wiring enclosed
- 3.2.4 Rear Hinge:
 - 3.2.4.1 Platform design with pins, block and hinge bearings
 - 3.2.4.2 Rear pins not to rotate
 - 3.2.4.3 Block to have grease zerks, fed by Lincoln Auto Lube System
 - 3.2.4.4 Unit to have two body props
- 3.2.5 Provide and install Whelen 5G "Smart L.E.D." lighthead:
 - 3.2.5.1 One each side in the rear body stanchion facing left side and right side,
 - 3.2.5.2 One each side in the rear body stanchion facing rearward
 - 3.2.5.3 Two (2) forward facing in the leading edge of the cab shield
- 3.2.6 Towing:
 - 3.2.6.1 Units to be equipped with mounting plate
 - 3.2.6.2 Plate to be mounted to truck frame and sufficiently reinforced to provide mounting for the following:
 - 3.2.6.3 Holland Pintle Hitch PH200
 - 3.2.6.4 Two folding "D" rings Buyer model B48 3 x 3 inch ID and 1 inch OD
 - 3.2.6.5 One six way, and one 7 way pin receptacles with weather-tight door hinge
 - 3.2.6.6 Air and Electrical connections
- 3.2.7 Hydraulic:
 - 3.2.7.1 Hydraulic system to use direct mount pump with relief setting of 2,000 PSI
 - 3.2.7.2 Hydraulic tank maximum capacity to operate system
 - 3.2.7.3 Provide filter system on return line
- 3.2.8 PTO/Controls:
 - 3.2.8.1 Allison automatic transmission
 - 3.2.8.2 Air brakes
 - 3.2.8.3 Chelsea power-shift with electric-over-air-control and EOS-100 over-speed switch
 - 3.2.8.4 "Power tower" operating controls
 - 3.2.8.5 Control console to include:
 - 3.2.8.5.1 One lever
 - 3.2.8.5.2 Console
 - 3.2.8.5.3 Cable
 - 3.2.8.5.4 Mounting hardware
 - 3.2.8.6 Provide in cab warning light "cab body up"
- 3.2.9 Miscellaneous:
 - 3.2.9.1 Mud flaps - anti-sail:
 - 3.2.9.1.1 Heavy duty fiber
 - 3.2.9.1.2 Reinforced with metal mounting inserts
 - 3.2.9.1.3 Hole punched center of mud flap -to fold and connect mud flap to bed
 - 3.2.9.1.4 Body to have "J" hooks to secure mud flaps

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 9: CAB AND CHASSIS MOUNTED WITH A 18/20 CUBIC YARD DUMP BODY (Continued):

3.0 DUMP BODY (Continued):

3.2 Specifications (Continued):

3.2.9 Miscellaneous:

3.2.9.2 Mud flaps - anti-sail:

3.2.9.2.1 Heavy duty fiber

3.2.9.2.2 Reinforced with metal mounting inserts

3.2.9.2.3 Hole punched center of mud flap -to fold and connect mud flap to bed

3.2.9.2.4 Body to have "J" hooks to secure mud flaps

3.2.10 Shovel/Broom racks:

3.2.10.1 Two racks for long-handled shovel and push broom

3.2.10.2 Angle racks so that items will be secure while dumping

3.2.11 State Inspection and Weight Certificate:

3.2.11.1 Supplier shall provide state inspection and weight certification for each vehicle

3.2.11.2 Supplier will complete the document and post in an appropriate location

3.2.12 Paint:

3.2.12.1 One coat primer

3.2.12.2 Bottom of bed black acrylic enamel

3.2.12.3 Exterior white acrylic enamel to match cab and chassis

3.2.13 Tarp:

3.2.13.1 Electric full width/length tarp with in cab controls, motor shall not over speed or continue operations when nested or extended.

4.0 SAFETY ITEM:

4.1 Each unit shall have one (1) set (two each) wheel chocks

4.1.1 Units shall be rubber in material

4.1.2 Width shall be minimum eight inches (8")

4.1.3 Height shall be minimum four inches (4")

4.1.4 Length shall be minimum four inches (4")

4.1.5 Rope length shall be a minimum four feet (4')

4.1.6 Units shall be reflective

4.2 Each unit electrical shall meet all DOT requirements for reflectors, lights and warning labels

4.3 Successful bidder shall provide State Inspection and Weight certification for each vehicle

4.4 Successful bidder shall complete and post required documents in appropriate location(s)

4.5 Dump bed shall be provided with reflective chevrons in alternating red and white and shall be provided in a "V" pattern over all practical surfaces of the dump body tailgate

5.0 WARRANTY:

5.1 Minimum, five (5) years/100,000 miles warranty on parts and labor

5.2 Hydraulic pump, valve and cylinders- 36 months for material and workmanship

5.3 All other items - 36 months for material and workmanship

6.0 LITERATURE:

6.1 Two (2) sets of Parts Manuals

6.2 Two (2) sets of Service Manuals

SECTION B - PART II: TECHNICAL SPECIFICATIONS (CONTINUED):

7.0 DELIVERY/INSPECTION:

- 7.1 The truck unit(s) specified above, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the location(s) shown on the purchase order(s) within **one hundred eighty (180) calendar days** after receipt of City of Houston Purchase Order.
- 7.2 Unit(s) shall have full tanks of fuel at time of delivery.
- 7.3 Unit(s) shall be accompanied with a copy of the original invoice, warranty policy(ies) and/or certification, as may be required.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

**ITEM NO. 10: CAB AND CHASSIS MOUNTED WITH A 19 - TON CRANE TRUCK BODY
PR NO 10206829**

1.0 GENERAL:

1.1 Equipment Description:

- 1.1.1 This specification is for the purchase of a 19 ton Crane Truck for the Department of Public Works & Engineering Department (herein referred to as "PWE"). The Contractor awarded this purchase shall have the experience and technical ability to provide the truck described herein.
- 1.1.2 Referenced Model is: PETERBILT 348 Chassis or City Approved Equal

2.0 CAB & CHASSIS:

2.1 Cab:

- 2.1.1 Aluminum
- 2.1.2 Air Ride Driver and Passenger Seat
- 2.1.3 High Back Driver Seat

2.2 Chassis:

- 2.2.1 62000 GVWR
- 2.2.2 Air Disc Front Brakes and maximum capacity air compressor
- 2.2.3 Vertical Exhaust

2.3 Transmission:

- 2.3.1 Fuller fo16E308L-V10 Automated
- 2.3.2 Clearance for mounting PTO gearbox
- 2.3.3 Direct mount hydraulic pump on right side of transmission

3.0 BODY:

- 3.1 Reference Body: Manitex 1970C 19-ton Boom lift Crane with Multil-Vac Oil System – Standard Features
- 3.2 19-ton base rating at 5' radius
- 3.3 2 speed hoist with grooved drum
- 3.4 5 ton (4.5 MT) hook and ball
- 3.5 Load Sheave Quick Reeve Boom Head
- 3.6 Hardwired anti-two block with lockout
- 3.7 Boom Hoist Cylinder
- 3.8 System Pressure Gauge
- 3.9 372*NON Continuous Rotation
- 3.10 Removable Boom Rest
- 3.11 Engine Start/Stop
- 3.12 Operator's Service/Parts Manuals
- 3.13 Boom Length and Angle Indicators
- 3.14 Foot Throttle
- 3.15 Electronic Throttle
- 3.16 Bubble Level
- 3.17 3 Section Telescopic Boom
- 3.18 300' of 9/16" (14.3mm) EIPS IWRC Wire Rope
- 3.19 70 Gallon Reservoir with Suction Strainer & Ball Valve
- 3.20 Pedestal, Turret, Rotation Bearing & Swing System
- 3.21 Dual Operator Control Stations
- 3.22 Load Moment Indicator
- 3.23 Audio/Visual Alert with Shutoff
- 3.24 Audible Outrigger/Stabilizer Motion Alarm
- 3.25 A-Frame Outriggers (21'6" Spread Width)
- 3.26 A-Frame Rear Stabilizer
- 3.27 3 Section Hydraulic Pump-Counterwise Rotation is Standard
- 3.28 Subframe for 20' (6.71m) Bed
- 3.29 Outrigger Monitoring System Verification Only
- 3.30 Signal Horn

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 10: CAB AND CHASSIS MOUNTED WITH A 19 TON CRANE TRUCK BODY

4.0 INCLUDED ITEMS:

- 4.1 70' 3 Section Telescopic Boom – Hardwired – Standard
- 4.2 2 Piece 24' – 41' JIB
- 4.3 Standard Mount Installation
- 4.4 Boom Rest
- 4.5 Hotshift PTO (Required for automatic transmission not supplies with knockdowns)
- 4.6 Drive Shaft for Pump Installation (Required for automatic transmission not supplies with knockdowns)
- 4.7 15 ton 1 Sheave Quick Reeve Block
- 4.8 Front Center Stabilizer (Requires additional mounting charge)
- 4.9 Mounting – Front Center Stabilizer
- 4.10 Control Valve for Operation of Single Stabilizer, required with FBS
- 4.11 Custom 20 ft x 102 in Bed with 24 in Head Board Stake Pockets. Rub Rails 36" Stake Sides
- 4.12 Rhino Bed Liner to prevent slipping and protection from the elements
- 4.13 Install 3 grab handles and fold away steps, 1 right front, 1 left front, 1 left rear
- 4.14 Install 6 sliding winches on each side of the bed
- 4.15 Supply customer with lifting straps customer with leather reinforced eyes as follows: 2 of each size straps, 6' x 3", 8' x 3", 10' x 3", 12' x 3" and 14't x 3"
- 4.16 Install 48 x 24 x 24 Job Box on Front Bed

5.0 WARRANTY:

- 5.1 Minimum, five (5) years/100,000 miles warranty on parts and labor
- 5.2 Hydraulic pump, valve and cylinders- 36 months for material and workmanship
- 5.3 All other items - 36 months for material and workmanship

6.0 LITERATURE:

- 6.1 Two (2) sets of Parts Manuals
- 6.2 Two (2) sets of Service Manuals

7.0 DELIVERY/INSPECTION:

- 7.1 The truck unit(s) specified above, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the location(s) shown on the purchase order(s) within **one hundred eighty (180) calendar days** after receipt of City of Houston Purchase Order.
- 7.2 Unit(s) shall have full tanks of fuel at time of delivery.
- 7.3 Unit(s) shall be accompanied with a copy of the original invoice, warranty policy(ies) and/or certification, as may be required.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

**ITEM NO. 11: CAB AND CHASSIS MOUNTED WITH A MIXER TRUCK BODY
PR NO 10206880**

1.0 GENERAL:

1.1 Equipment Description:

1.1.1 This specification is for the purchase of a 66,000 GVWR Cab & Chassis Mounted with a Mixer Truck Body for the Department of Public Works & Engineering (herein referred to as "PWE"). The Contractor awarded this purchase shall have the experience and technical ability to provide the truck described herein.

1.1.2 Referenced Model is: PETERBILT 367 Chassis or City Approved Equal

2.0 CAB & CHASSIS:

2.1 Cab:

2.1.1 Aluminum

2.1.2 Air Ride Driver and Passenger Seat

2.1.3 High Back Driver Seat

2.2 Chassis:

2.2.1 66,000 GVWR.

2.2.2 Air Disc Front Brakes and maximum capacity air compressor

2.2.3 Vertical Exhaust

2.3 Transmission:

2.3.1 Fuller fo16E308L-V10 Automated

2.3.2 With clearance for mounting PTO gearbox

2.3.3 Direct mount hydraulic pump on right side of transmission

3.0 BODY FEATURES (Reference Body McNeilus)

3.1 Standard Mixer Body

3.2 Charge Hopper

3.2.1 Hopper Style: Flip up

3.2.2 Down in reverse

3.3 Chute

3.3.1 Chute Swing: Manual

3.3.2 Extension First: Standard, Steel

3.3.3 Extension Second: Standard, Steel

3.3.4 Extension Third: Standard, Steel

3.3.5 Foldover: Transitional

3.3.6 Foldover: Full Foldover handle

3.3.7 Foldover: Manual Operation

3.3.8 Hydraulics: Engine Driven Chute Lifter (STD)

3.3.9 Hydraulics: Chute Power Up/Down (STD)

3.3.10 Lock: Air Lock

3.3.11 Main: 5' 'Main Chute

3.3.12 Misc: Standard Clevis

3.3.13 Rack, Extension (First): L Bracket, Passenger Side (3)

3.3.14 Weld Extensions: Stitched

3.3.15 Weld, Foldover: Solid

3.3.16 Weld, Main: Stitched

3.4 Collector

3.4.1 Bib, Rubber

3.4.2 Style, Standard

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 11: CAB AND CHASSIS MOUNTED WITH A MIXER TRUCK BODY

- 3.5 Mixer Controls:
 - 3.5.1 Cab Configuration: Box
 - 3.5.2 Drum Controls: Drum Revolution Counter
 - 3.5.3 Drum Controls: Remote Drum Start/Stop
 - 3.5.4 Drum Controls: Cable
 - 3.5.5 Pendant, Rear: with 25' Cable
 - 3.5.6 Pendant, Rear: Pendant on Ladder Platform
 - 3.5.7 Pendant, Rear: Cable Wrap Bracket on Fender End
 - 3.5.8 Rear Box: Cable Control Box, Rear, Aluminum

- 3.6 Drum:
 - 3.6.1 Capacity: 10.5 Yards
 - 3.6.2 Discharge Opening: 42"
 - 3.6.3 Fins: ¼ in (6.35 mm) Nominal
 - 3.6.4 Fins, Surge: Bolted
 - 3.6.5 Hatch, Bolted: One(1)
 - 3.6.6 Head: Head Impeller (HBB)
 - 3.6.7 Head: ¼ in NOMINAL
 - 3.6.8 Profile: Standard
 - 3.6.9 Skin: ¼ in (6.35 mm) Nominal Skin Thickness
 - 3.6.10 Tail Cone: ¼ in (6.35 mm) Thickness Nominal
 - 3.6.11 Transmission: Standard Lube
 - 3.6.12 Transmission: Pmb 7.1 Straight Drive
 - 3.6.13 Type: Steel Drum

- 3.7 Fenders:
 - 3.7.1 Mudflaps, Brackets: Standard
 - 3.7.2 Mudflaps Front: White Plastic
 - 3.7.3 Mudflaps,, Rear: White Plastic
 - 3.7.4 Overlap: No
 - 3.7.5 Rear: Steel Skin
 - 3.7.6 Rear Supports: Steel, Straight
 - 3.7.7 Rear Width: 96 in Width over Fenders

- 3.8 Hydraulics:
 - 3.8.1 Motor: 5.4 Cubic Inch Eaton
 - 3.8.2 Standard PTO Shaft
 - 3.8.3 Main Pump: 5.4 Cubic Inch Eaton
 - 3.8.4 Reservoir: Composite
 - 3.8.5 Reservoir Location: In Pedestal

- 3.9 Lighting:
 - 3.9.1 Lighting Type: LED-Trucklite
 - 3.9.2 Backup Alarm: STD 12-36V Backup Alarm
 - 3.9.3 Bumper, ICC: Stop/Tail/Turn/Backup between frame rails
 - 3.9.4 Fenders, Rear: Stop/Tail/Turn
 - 3.9.5 ICC Three Bar: On Charge Hopper
 - 3.9.6 License Plate: On Fender, Driver Side
 - 3.9.7 Night Pour: Two Trucklite LED ON Rear Pedestal
 - 3.9.8 Night Pour: Night Pour Lights in Reverse

- 3.10 Miscellaneous:
 - 3.10.1 Bumper: Bumper Rear, 6 in Round, Bolted
 - 3.10.2 Decals: English
 - 3.10.3 Lube System: Remote Roller lube on A-Frame
 - 3.10.4 Tag, Frame Cover: After frame Deck, Alum Diamond Plate

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 11: CAB AND CHASSIS MOUNTED WITH A MIXER TRUCK BODY

- 3.11 Paint:
 - 3.11.1 Body Clear Coat: YES
 - 3.11.2 Body Color #1: N85020: White Match Cab
 - 3.11.3 Category: Standard Template
 - 3.11.4 Configuration: One Color, Low Complexity
 - 3.11.5 Cab/Hood Paint: No Cab/Hood Paint
 - 3.11.6 Frame Paint: No Frame Paint
- 3.12 Pedestal, Front:
 - 3.12.1 Notch: Notch Pedestal is Acceptable, if necessary
 - 3.12.2 Pedestal Style: Standard
 - 3.12.3 Thickness: ¼ in (6.35 mm) nominal
- 3.13 Pedestal, Rear:
 - 3.13.1 Bracing: Knee Braces
 - 3.13.2 Ladder Grab Rails: Yes
 - 3.13.3 Ladder Platform: Wide
 - 3.13.4 Platform Gate: Upper Ladder Platform Gate
 - 3.13.5 Thickness: ¼ in (6.35 mm) nominal
- 3.14 Water System
 - 3.14.1 Nozzles, Injection: Single
 - 3.14.2 Tee, Injection: Cast
 - 3.14.3 Valves, Injection: Standard Ball Valves
 - 3.14.4 Washout, Lower: Ball Valve
 - 3.14.5 Washout, Upper: Upper washout without drain
 - 3.14.6 Water line Routing: Standard
 - 3.14.7 Water Tank 1: 125 GAL Steel
 - 3.14.8 Water Tank Fill: Top Fill
 - 3.14.9 Water Tank Location: Side Mount, Driver Side

5.0 WARRANTY:

- 5.1 Minimum, five (5) years/100,000 miles warranty on parts and labor
- 5.2 5 Year Limited Warranty (Hydraulics)

6.0 LITERATURE:

- 6.1 Two (2) sets of Parts Manuals
- 6.2 Two (2) sets of Service Manuals

7.0 DELIVERY/INSPECTION:

- 7.1 The truck unit(s) specified above, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the location(s) shown on the purchase order(s) within **one hundred eighty (180) calendar days** after receipt of City of Houston Purchase Order.
- 7.2 Unit(s) shall have full tanks of fuel at time of delivery.
- 7.3 Unit(s) shall be accompanied with a copy of the original invoice, warranty policy(ies) and/or certification, as may be required.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

**ITEM NO. 12: CREW CAB 6 PASSENGER PICKUP MOUNTED WITH SERVICE BODY
PR NO 10218144**

1.0 GENERAL:

- 1.1 Equipment Description:
 - 1.1.1 This specification is intended to describe vehicle(s) that will be used as a utility truck by the Houston Police Department, Tactical Operations Division Bomb Squad. The vehicle(s) consists of a high canopy cab with work storage area for x-ray machine & chassis service body.
- 1.2 Prime Contractor/Supplier:
 - 1.1.2 These specifications require the contractor/supplier to furnish and deliver the complete unit(s). i.e. cab & chassis.
- 1.3 Quantity:
 - 1.3.1 Identical units shall be furnished when more than one unit is ordered.

2.0 CAB AND CHASSIS:

- 2.1 General:
 - 2.1.1 4x4 Cab & Chassis with Regular Cab or City-approved equal. GVWR shall be not less than 14,000 lbs. with a 60" Cab-to-Axle and 179" Wheelbase.
 - 2.1.2 Reference Model: Ford F-350/Chevrolet C3500HD
- 2.2 Cab:
 - 2.2.1 OEM air conditioning, heating and defroster shall be provided
 - 2.2.2 High Canopy w/closed cell flush doors
 - 2.2.3 AM/FM radio shall be provided
 - 2.2.4 Electric windows and door locks shall be provided.
 - 2.2.5 Cloth 40/20/40 bench type seat
 - 2.2.6 Manufacturer's standard ABS brakes
 - 2.2.7 Two (2) 110 Volt Receptacles
 - 2.2.8 Electric Adjustable side mirrors.
 - 2.2.9 Rubber Floor Mats.
 - 2.2.10 Arm Rests
 - 2.2.11 Two (2) Cup Holders
 - 2.2.12 Electric windows and door locks shall be provided.
 - 2.2.13 Cloth 40/20/40 bench type seat
 - 2.2.14 Pre-Wire Chassis Cab for Two (2) Customer Radios
 - 2.2.15 Two (2) Antenna Leads and Bases
- 2.2 Engine:
 - 2.2.1 **6.7 L V8 DIESEL** engine that will meet the current EPA engine emission levels shall be provided
- 2.3 Transmission:
 - 2.3.1 A 6-speed automatic transmission shall be provided
 - 2.3.2 Oil Cooler Transmission
- 2.4 Compartments:
 - 2.4.1 Storage for X-Ray Machine
 - 2.4.2 Zolatone Finish Inside Compartments
 - 2.4.3 Closed Cell Door Construction
 - 2.4.4 Horizontally Hinged Doors-180 Degree Opening Angle
 - 2.4.5 Stainless Steel D-Ring Slam Latches
 - 2.4.6 Dri-Deck
 - 2.4.7 Slideout Tray in Transverse Compartment with Vault
 - 2.4.8 Composite Shelving Tracks
 - 2.4.9 Shelving Construction and Layout
 - 2.4.10 Shelf Dividers and Retainer Clips
 - 2.4.11 Inverter
 - 2.4.12 Alliance Wireless Technologies Backup Camera
 - 2.4.13 General Wiring Requirements
 - 2.4.14 Low Voltage Alarm

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO.12: CREW CAB 6 PASSENGER PICKUP TO BE MOUNTED WITH SERVICE BODY

2.0 CAB AND CHASSIS (Continuous):

2.4 Compartments (Continuous):

- 2.4.15 Floor Mounted Center Console
- 2.4.16 Four Outlet 12 Volt Panel
- 2.4.17 Non-Lockable Map Box
- 2.4.18 Rear Sliding Cargo Drawer

3.0 BODY:

- 3.1 Body Description
 - 3.1.1 Body Frame Construction
 - 3.1.2 Brand FX 60CA Service Body
 - 3.1.3 Driver's Side Body Side Pack
 - 3.1.4 Passenger's Side Body Side Pack
 - 3.1.5 Stainless Steel Wheel Well Liners
 - 3.1.6 Heavy duty front springs
 - 3.1.7 Side Steps
 - 3.1.8 Bumper, O.E.M. Standard
 - 3.1.9 Skid Plates
 - 3.1.10 Colors, Solid, O.E.M. Standard
 - 3.1.11 White Exterior Color
 - 3.1.12 Mirrors, Extended Manually
 - 3.1.13 Steering, Power
 - 3.1.14 Backup Alarm
 - 3.1.15 Cruise Control
 - 3.1.16 Viper LED 2-Way Security & Remote Start System
 - 3.1.17 Apparatus Operations and Maintenance Manuals
 - 3.1.18 Window Tinting
 - 3.1.19 Class V Trailer Hitch
 - 3.1.20 Full Size Spare Tire and Wheel with Lockable Carrier
 - 3.1.21 Wipers, Intermittent
 - 3.1.22 Hub Caps, O.E.M. Standard
 - 3.1.23 Anti-Lock Braking System (O.E.M. Standard)
 - 3.1.24 Minimum of 2 key pod type controls for keyless entry
 - 3.1.25 Jack
 - 3.1.26 30 gallon fuel tank capacity
 - 3.1.27 3,600-lb Front Axle

4.0 EMERGENCY LIGHTING PACKAGE:

- 4.1 Zone B/D Warning Lights
- 4.2 AFT Zone B/D Warning Lights
- 4.3 Whelen Vertex Super LED Front Flashers
- 4.4 Lower Zone A Warning Lights
- 4.5 Lower Zone C Warning Lights
- 4.6 Upper Zone C Warning Lights
- 4.7 Whelen 100 Siren Amplifier and Switches
- 4.8 Speaker
- 4.9 "Do Not Move Apparatus" Light
- 4.10 ICC and Work Lighting
- 4.11 Perimeter Enhancement Light(s)

5.0 PAINTING:

- 5.1 Paint Body OEM Color to match chassis
- 5.2 All walkways shall have anti-skid paint applied
- 5.3 All service body compartment tops shall have anti-skid paint applied

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

6.0 WARRANTY:

- 6.1 Minimum, five (5) years/100,000 miles warranty on parts and labor
- 6.2 5 Year Limited Warranty (Hydraulics)

7.0 LITERATURE:

- 7.1 Two (2) sets of Parts Manuals
- 7.2 Two (2) sets of Service Manuals

8.0 DELIVERY/INSPECTION:

- 8.1 The truck unit(s) specified above, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the location(s) shown on the purchase order(s) within **one hundred eighty (180) calendar days** after receipt of City of Houston Purchase Order.
- 8.2 Unit(s) shall have full tanks of fuel at time of delivery.
- 8.3 Unit(s) shall be accompanied with a copy of the original invoice, warranty policy(ies) and/or certification, as may be required.

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

**ITEM NO. 13: CAB AND CHASSIS MOUNTED WITH SEWER JET BODIES
PR NO. 10206930**

1.0 GENERAL:

1.1 Equipment Description:

- 1.1.1 This specification is for the purchase of seventeen 26,000 GVWR Cab and Chassis mounted with sewer jet bodies for the Department of Public Works & Engineering Department (herein referred to as "PWE"). The Contractor awarded this purchase shall have the experience and technical ability to provide the truck described herein.
- 1.1.2 Referenced Model is: PETERBILT 337 Chassis or City Approved Equal

2.0 CAB & CHASSIS:

2.1 Chassis:

- 2.1.1 26,000-lb. GVWR.
- 2.1.2 Air Disc Front Brakes and maximum capacity air compressor
- 2.1.3 Vertical Exhaust

2.2 Cab:

- 2.2.1 Cab to Axle dimension 126 in.

2.3 Transmission:

- 2.3.1 Allison 3000RDS-P Transmission, Gen 5
- 2.3.2 Clearance for mounting PTO gearbox
- 2.3.3 Direct mount hydraulic pump on right side of transmission

3.0 BODY:

3.1 101535TM Truck Mount / Water Tank:

- 3.1.1 3,000 PSI
- 3.1.2 50 GPM
- 3.1.3 1,0000 Gallon High_Density Poly – (25,900 GVWR)
- 3.1.4 Single Filter Assembly
- 3.1.5 25' Fill Hose w/ Storage Rack
- 3.1.6 2" Aux. Drain Valve-Street Side Rear
- 3.1.7 Baffle Balls
- 3.1.8 Main Tank Water Sight Guage (1) Std
- 3.1.9 Material distribution chute pivots 90° for distribution of patching mix from hopper
- 3.1.10 Locking in a horizontal position for ease in shoveling patching mix and in an upward position for travel

3.2 Water Pump:

- 3.2.1 3,000 PSI @ 50 GPM Giant Water pump
- 3.2.2 Air Purge
- 3.2.3 Wash down System – 43H with gun and 25ft hose
- 3.2.4 Multi-Flow Valve
- 3.2.5 Degreaser Injection System. 20 gallon tank with 12 pump

3.3 Engine:

- 3.3.1 CAT 127 HP Diesel with Clutch
- 3.3.2 Safety Lanyard (1) Emergency Kit
- 3.3.3 Fuel Tank Chassis
- 3.3.4 Veneer Throttle 20'
- 3.3.5 Electric Throttle Upgrade
- 3.3.6 Digital Gauge Package & Tachometer Low Pressure High Temp Shutdown
- 3.3.7 Engine Shroud / Belt Guard / Aluminum
- 3.3.8 Silent Pak (Residential Muffler)

3.4 Hose Reel and Accessories:

- 3.4.1 Dual Jet Hose Reel
1,000' x ½" & 1,000 x ¾ Jet Hose Reel
- 3.4.2 Articulating Real Option Hydraulic Articulation Gear

SECTION B PART II TECHNICAL SPECIFICATIONS (CONTINUED):

ITEM NO. 13: CAB AND CHASSIS MOUNTED WITH SEWER JET BODIES (Continued):

3.0 BODY (Continued):

- 3.4 Hose Reel and Accessories (Continued):
 - 3.4.3 Standard Level Wind
 - 3.4.4 Double Roller Level wind 45 Degree
 - 3.4.5 Manual Footage Counter on 1/2" Reel
 - 3.4.6 Level Wind w/ Counter on 3/4 " Reel
 - 3.4.7 Leader hose 3/4 " per foot
 - 3.4.8 3 /4" Jet Hose per foot
 - 3.4.9 1/2 " Leader Hose-per foot
 - 3.4.10 1/2 " Jet Hose per foot
 - 3.4.11 Tiger Tail (1) Standard

- 3.5 Nozzle Options:
 - 3.5.1 Nozzle Rack (1) 3/4 "
 - 3.5.2 15 Degree Nozzle (1) 3/4 "
 - 3.5.3 30 Degree Nozzle (1) 3/4 "
 - 3.5.4 Nozzle Skid Assy 6" (1) 3/4 "
 - 3.5.4.1 1½ " Chisel Dawg Rotator Nozzle
 - 3.5.4.2 ½ " Red Dawg Rotator Nozzle
 - 3.5.4.3 ½" 12 Jet Red Dawg Nozzle
 - 3.5.4.4 ¾" Chisel Dawg Nozzle
 - 3.5.4.5 ¾" Red Dawg Rotator Nozzle
 - 3.5.4.6 ¾" Red Dawg 12 Jet Cleaning Nozzle

- 3.6 Electrical Options:
 - 3.6.1 Arrow Stick w/ Control Box & Mounting Bracket
 - 3.6.2 Light – Strobe light w/ Limb Guard
 - 3.6.3 Light – Panel Light
 - 3.6.4 Light – Work light (engine-pump area)
 - 3.6.5 Light – Work light (Arrow stick DS)
 - 3.6.6 Light – Work light (Arrow stick PS)
 - 3.6.7 LED Upgrade Marker and Tall lights only
 - 3.6.8 3000 Watt Inverter Mounted in Camera Tool Box

- 3.7 Tool Box Options:
 - 3.7.1 Tool Tray, Above frame – Aluminum 14" x 14" x 60" – 1 Standard
 - 3.7.2 Locking Below Frame – Aluminum 18" x 18" x 36"
 - 3.7.3 Locking Above Frame – Aluminum 15" x 33" x 40"

- 3.8 Accessories:
 - 3.8.1 Hydrant Wrench
 - 3.8.2 Manhole Hook
 - 3.8.3 Manhole- Upper Roller Aluminum
 - 3.8.4 Traffic Cone Rack – Reel Deck Mount
 - 3.8.5 Side Ladder w/ Handles – PS
 - 3.8.6 Push Camera w/ Locator

- 3.9 Frame
 - 3.9.1 6" Frame
 - 3.9.2 DOT Lighting Package

- 4.0 Liner Options
 - 4.1.1 Speed Liner Frame & Real

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

5.0 WARRANTY:

- 5.1 Minimum, five (5) years/100,000 miles warranty on parts and labor
- 5.2 5 Year Limited Warranty (Hydraulics)

6.0 LITERATURE:

- 6.1 Two (2) sets of Parts Manuals
- 6.2 Two (2) sets of Service Manuals

7.0 DELIVERY/INSPECTION:

- 7.1 The truck unit(s) specified above, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the location(s) shown on the purchase order(s) within **one hundred eighty (180) calendar days** after receipt of City of Houston Purchase Order.
- 7.2 Unit(s) shall have full tanks of fuel at time of delivery.
- 7.3 Unit(s) shall be accompanied with a copy of the original invoice, warranty policy(ies) and/or certification, as may be required.

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 14: CAB & CHASSIS MOUNTED WITH COMBINATION JET/VACUUM TRUCK BODIES PR NO. 10206932

1.0 GENERAL:

1.1 Equipment Description:

1.1.1 This specification is for the purchase of Cabs and Chassis mounted with Combination Jet/vacuum Machine Truck for the Department of Public Works & Engineering Department (herein referred to as "PWE"). The Contractor awarded this purchase shall have the experience and technical ability to provide the truck described herein.

1.1.2 Referenced Model is: PETERBILT 348 Chassis or City Approved Equal

2.0 CAB & CHASSIS:

2.1 Cab:

2.1.1 Aluminum

2.1.2 Air Ride Driver and Passenger Seat

2.1.3 High Back Driver Seat

2.2 Chassis:

2.2.1 62,000 GVWR.

2.2.2 Air Disc Front Brakes and maximum capacity air compressor

2.2.3 Vertical Exhaust

2.3 Transmission:

2.3.1 Fuller fo16E308L-V10 Automated

2.3.2 With clearance for mounting PTO gearbox

2.3.3 Direct mount hydraulic pump on right side of transmission

3.0 DEBRIS BODY OPTIONS:

3.1 3/16" ASTM A-572 Grade 50 Exten High Strength Steel Debris Tank

3.2 1/4" Thick Steel longsills

3.3 12" stainless steel float ball shut off in debris tank

3.4 top loading material backed debris deflection body inlet cannon with 8" cleanout

3.5 basket to hold 25' fire hose without need to disconnect always curbside front

3.6 Full opening rear tailgate with stainless steel "sure seal" rod and solid core gasket

3.7 Four (4) hydraulic rear door locks

3.8 Dual (2) tailgate lift cylinders – open/close

3.9 Front mounted hoist cylinder, 55,000 lb. capacity power up and down

3.10 Cam-Loc fittings for drain hoses (per set) 6" includes flanges

3.11 Dual 12" stainless steel float ball shut off in debris tank

3.12 Debris body baffle plate – required with HX package or 4,400 CFM vacuum system

3.13 Five (5) year debris tank warranty against rust through, distortion, or cracking

3.14 Debris body flush out system

3.15 Level indicator – float type mounted on tailgate with external pointer

3.16 Pump off system /3", 450 GPM with 25' of lay-flat hose and cam-loc fittings

3.17 Filter screens – Interior for pump off and drain valve (flange, elbow and screen)

3.18 24" standpipe for pump off and drain valve

3.19 Splash shield – rear door

3.20 Purge valve at gravity drain valve (1-1/4" ball valve)

4.0 WATER TANK OPTIONS

4.1 Water tank 3/16" ASTM A240 type 304L stainless steel

4.2 4" high anti-siphon ring with (4) 2-1/2" holes

4.3 water tank level sight tube on curb side – clear plastic hose

4.4 2" drain valve at bottom of water tank

4.5 3" fill line with 2-1/2" fire hose connection – curbside

4.6 3" water strainer with stainless steel screen on water tank fill line

4.7 3" supply line to water pump to be mounted at rear of tank and as low as point possible

4.8 No baffles in water tank

4.9 Five (5) year water tank warranty against rust through, distortion or cracking

4.10 Baffles in the water tank – non-corroding (not available on 750 or 500 gallon water tanks)

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 14: CAB & CHASSIS MOUNTED WITH COMBINATION JET/VACUUM TRUCK

5.0 VACUUM SYSTEM OPTIONS:

- 5.1 True 8" diameter vacuum system
- 5.2 Three (3) Vacuum Relief Valves set to crack at 16" HG
- 5.3 Discharge silencer w/ rain cap and bottom drain
- 5.4 Cyclone separator with 20" chamber
- 5.5 Vacuum pump driven via transfer case rated 500 HP
- 5.6 Roots type vacuum pump 3,500 CFM and 16" Hg
- 5.7 Noise and vibration dampening mounts on transfer case and vacuum pump
- 5.8 Stainless steel Vee-Wire filter screen at blower inlet
- 5.9 Vacuum relief valve 6" air operated
- 5.10 Upgrade to roots type vacuum pump 4,500 CFM and 18" Hg

6.0 WATER PUMP SYSTEM OPTIONS:

- 6.1 80 GPM @ 2,000 PSI shaft drive water pump heavy duty 1410drive shaft
- 6.2 Water pump drive: direct from PTO via drive shaft
- 6.3 3" water strainer with stain less steel screen on water tank fill line
- 6.4 Adjustable low pressure water spray gun with 50' X ½" hose and quick connects, mounted rear of cab on curb side, 800 PSI MAX
- 6.5 Low point drain valves – water lines
- 6.6 Multi-Flow – Shaft drive water pump
- 6.7 Air purge system – MC system
- 6.8 3" ball valve on water supply line to the water pump
- 6.9 drain valves for high pressure water cylinders (or valve lifters on Uraca)
- 6.10 Giant GP8000 series water pump rated 80 GMP @ 2000 PSI
- 6.11 Cold water recirculation via automatic transmission
- 6.12 100' X ½" hand gun reel, retractable with 100' x 1/2" hose

7.0 BOOM OPTIONS:

- 7.1 8" front mounted telescoping tube in tube boom inside is true 8"
- 7.2 Nine (9) foot telescoping extension – 26' reach from center of truck
- 7.3 180 degree power rotation via direct hydraulic gear (worm) drive = (90 degree driver side, 90 degree curb side)
- 7.4 Dual 4" lift cylinders
- 7.5 Cab protection rack
- 7.6 9" rubber connector hose at articulation bearing
- 7.7 Bottom hose guide on center of hose reel articulate bearing
- 7.8 Remote lube for boom lift and rotation

8.0 HOSE REEL OPTIONS:

- 8.1 Front frame mounted hose reel with 180 degrees hydraulically powered gear box
- 8.2 Hose reel spool capacity of 800 feet of 1" hose
- 8.3 1-1/2" heavy duty spool swivel for water, rated to 4000 PSI working pressure
- 8.4 Telescoping level wind
- 8.5 Footage counter on level wind with side open feature
- 8.6 Interior hose expansion ribs

9.0 CONTROLS, GAUGES, ACCESSORIES OPTIONS:

- 9.1 Cab mounted air shift control panel for blower, water pump, and hydraulics, standard, international is dash mounted. Operator control panel to include: sewer hose level wind, reel speed and direction, articulation control (band brake release), engine tachometer, vacuum pump hour meter, water pump hour meter, water pressure gauge, hydraulic pressure gauge, vacuum gauge, electric engine throttle control, and boom joystick
- 9.2 3 Function remote pendant with 30 feet of cable – up/down, in/out, left/right for the boom
- 9.3 Emergency stop de-energize water flow valve and break vacuum
- 9.4 If automatic transmission – interlock for throttle control
- 9.5 Low water level display on control panel

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

ITEM NO. 14: CAB & CHASSIS MOUNTED WITH COMBINATION JET/VACUUM TRUCK

10.0 LIGHTING OPTIONS

- 10.1 Strobe beacon light – front – Whelen 2022LPA
- 10.2 Strobe beacon light – rear – Whelen 2022LPA
- 10.3 Rear arrow light – halogen – 44” wide low profile – Whelen TA837A
- 10.4 (1) boom work light – standard (truck-lite 80360)
- 10.5 (1) rear work light – standard (truck-lite 80360)
- 10.6 (1) side of truck / pump compartment work light (truck-lite 80360)
- 10.7 Three additional work light – boom,. Rear, pump compartment (per pair) must match with H5, H6, or H7
- 10.8 Hand spot light w/25’ cord and retractable reel
- 10.9 Truck-lite LED stop, turn, and tail lights (cab not included)

11.0 STORAGE, TOOL BOXES, ENCLOSURE OPTIONS

- 11.1 Tool box – steel 30” wide x 24” tall x 24” deep
- 11.2 Two (2) galvanized steel tube trays mounted over TANDEM axles / tires – 10 ft long
- 11.3 Tool box – steel 36” wide x 18” tall x 24” deep
- 11.4 Traffic cone holder
- 11.5 Traffic cone holder
- 11.6 Nozzle rack – 6 nozzles, 1”
- 11.7 Tube rack mounted on tank – passenger side – four tube rack – non folding (tubes not include)
- 11.8 Tube rack mounted on tank – driver’s side – four tube tack – non folding (tubes not included)

12.0 CHASSIS OPTIONS

- 12.1 Customer supplied chassis specifications must be approved by GapVax engineering department prior to acceptance of chassis
- 12.2 6” chassis sub-frame
- 12.3 DOT lighting / fenders / mud flaps / body and talegate safety props, ICC lights
- 12.4 70 gallons AW-46 hydraulic oil, level/temperature gauge, shutoff on suction
- 12.5 Rear DOT bumper
- 12.6 Triangle kit
- 12.7 Back up alarm – 97dBa
- 12.8 Fire Extinguisher 5 lb
- 12.9 Front bumper – may not be required in all states
- 12.10 Allison 10 bolt PTO upgrade – used for all 2013 chassis or newer
- 12.11 Tow hooks front
- 12.12 tow hooks rear
- 12.13 back up alarm with auto sensor (not available with option J5 or J16)
- 12.14 Paint body and boom – white
- 12.15 Paint frame, blower, silencer, boom base

13.0 MISCELLANEOUS OPTIONS

- 13.1 25 feet of vacuum tubing:
 - 13.1.1 3 each of 8”x5’
 - 13.1.2 1 each of 8”x5’ with fluidizer holes
 - 13.1.3 each of 8”x5’ with bolt on crown
- 13.2 Six 8” tube clamps
- 13.3 Two 80 GPM sewer cleaning nozzles: (1) 30 degree and (1) 15 degree
- 13.4 (1) tiger tail hose guide
- 13.5 operations and maintenance manual
- 13.6 fill hose 50’ x1/2”
- 13.7 Leader hose 10’ x 1”
- 13.8 1” sewer hose – 2,500 PSI x 800 ft plastic
- 13.9 Manhole lifting hook
- 13.10 Hydrant wrench
- 13.11 1” four wire extender
- 13.12 Tiger tail (total of two)
- 13.13 (5) traffic cones – 28” lime green with reflective stripe
- 13.14 (5) traffic cones – 28” lime green with reflective stripe
- 13.15 Nozzle package

SECTION B PART II TECHNICAL SPECIFICATIONS: (Continued)

14.0 WARRANTY:

- 14.1 Minimum, five (5) years/100,000 miles warranty on parts and labor
- 14.2 5 Year Limited Warranty (Hydraulics)

15.0 LITERATURE:

- 15.1 Two (2) sets of Parts Manuals
- 15.2 Two (2) sets of Service Manuals

16.0 DELIVERY/INSPECTION:

- 16.1 The truck unit(s) specified above, with delivery tickets and/or other required documents shall be delivered Prepaid F.O.B. Destination to the location(s) shown on the purchase order(s) within **one hundred eighty (180) calendar days** after receipt of City of Houston Purchase Order.
- 16.2 Unit(s) shall have full tanks of fuel at time of delivery.
- 16.3 Unit(s) shall be accompanied

**SECTION C
GENERAL TERMS AND CONDITIONS**

1.0 COMPETITIVE BIDDING:

1.1 It is the intent of the City of Houston to solicit the lowest and best responsible bid or price under competitive conditions. All materials and/or equipment shall be new unless stated otherwise. Prospective bidders are advised that the specifications within this bid invitation are not to be considered restricted to any referenced manufacturer.

2.0 AWARD:

2.1 The City reserves the right to consider and make awards of bids on articles of similar nature that will in all respects serve the purpose for which the purchase is being made. The City reserves the right to be the sole judge as to whether such articles will serve the purpose.

2.2 Unless otherwise specified, the City reserves the right to accept or reject in whole or in part any bid submitted or to waive any informalities that are in the best interests of the City.

3.0 CONDITIONS PART OF BID:

3.1 In the event of any conflict, the terms and provisions incorporated in the bid specifications shall control over the terms and provisions of the General Terms & Conditions for any or all purposes. Otherwise, all the terms and provisions appearing within the General Terms & Conditions shall be given full effect and shall be construed in harmony to the maximum extent by the parties hereto.

3.2 The failure of the City to insist, in any one or more instances, upon performance of any of the terms, covenants or conditions of this Contract (Purchase Order), General Terms & Conditions or Specifications shall not be construed as a waiver or relinquishment of the future performance of such term, covenant or condition by the City, but the obligation of the Contractor/Supplier with respect to such future performance shall continue in full force and effect.

4.0 SHIPPING TERMS:

4.1 Prices shall be prepaid F.O.B. destination to the delivery locations, Houston, TX, as indicated on individual City of Houston purchase orders. Contractor/Supplier shall retain title and control of all goods until they are delivered and the contract of coverage (Purchase Order) has been completed. All risk of transportation and all related charges shall be the responsibility of the Contractor/Supplier. All claims for visible or concealed damage shall be filed by the Contractor/Supplier. The City will notify the Contractor/Supplier promptly of any damaged goods and shall assist the Contractor/Supplier in arranging for inspection.

5.0 SILENCE OF SPECIFICATIONS:

5.1 The apparent silence of these specifications as to any detail or the apparent omission from them of a detailed description concerning any point shall be regarded as meaning that only the best commercial practice shall prevail and only materials and workmanship of first quality are acceptable. All interpretations of these specifications shall be made upon the basis of this statement.

6.0 SPECIFIED EQUIPMENT, OR EQUIVALENT:

6.1 Wherever in the specifications any materials or processes are indicated or specified by patent or proprietary name and/or by name of manufacturer, such specifications shall be deemed to be used for the purpose of facilitating descriptions of the performance, materials and/or processes desired and shall be deemed to be followed by the words, "or equivalent", if not so stated in the specifications herein.

6.2 The burden of proof shall rest with the bidder, in the course of a technical evaluation, to prove that the proposed item(s) are equivalent to the performance, materials, processes, or articles specified.
DETERMINATION AS TO WHETHER THE ITEM(S) BID IS(ARE) EQUIVALENT TO THOSE SPECIFIED SHALL REST SOLELY WITH THE CHIEF PROCUREMENT OFFICER AND THE RECEIVING DEPARTMENT.

GENERAL TERMS & CONDITIONS: (Continued)

7.0 BRAND NAMES:

7.1 Any manufacturer's names, trade names, brand names, or catalog numbers used in the specifications are for the purpose of describing and establishing the general quality level, design and performance desired. Such references are not intended to limit or restrict bidding by other Contractor/Suppliers, but are intended to approximate the quality design or performance that is desired. Any bid that proposes like quality, design or performance, will be considered. Equivalent products will be considered, provided a complete description and product literature is provided. Unless a specific substitution is made, the assumption will be that the item bid is exactly as specified on the Invitation to Bid.

8.0 PATENTS:

8.1 THE CONTRACTOR/SUPPLIER AGREES TO INDEMNIFY AND SAVE HARMLESS THE CITY, ITS AGENTS EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") FROM ALL SUITS AND ACTIONS OF EVERY NATURE AND DESCRIPTION BROUGHT AGAINST THEM OR ANY OF THEM, FOR OR ON ACCOUNT OF THE USE OF PATENTED APPLIANCES, PRODUCTS OR PROCESSES, AND IT SHALL PAY ALL ROYALTIES AND CHARGES WHICH ARE LEGAL AND EQUITABLE. EVIDENCE OF SUCH PAYMENT OR SATISFACTION SHALL BE SUBMITTED, UPON REQUEST OF THE CHIEF PROCUREMENT OFFICER, AS A NECESSARY REQUIREMENT IN CONNECTION WITH THE FINAL ESTIMATE FOR PAYMENT IN WHICH SUCH PATENTED APPLIANCE, PRODUCTS OR PROCESSES ARE USED.

9.0 RELEASE:

9.1 CONTRACTOR/SUPPLIER AGREES TO AND SHALL RELEASE THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") FROM ALL LIABILITY FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THIS AGREEMENT, EVEN IF THE INJURY, DEATH, DAMAGE, OR LOSS IS CAUSED BY THE CITY'S SOLE OR CONCURRENT NEGLIGENCE AND/OR THE CITY'S STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY.

10.0 INDEMNIFICATION:

10.1 CONTRACTOR/SUPPLIER AGREES TO AND SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") HARMLESS FOR ALL CLAIMS, CAUSES OF ACTION, LIABILITIES, FINES, AND EXPENSES (INCLUDING, WITHOUT LIMITATION, ATTORNEYS' FEES, COURT COSTS, AND ALL OTHER DEFENSE COSTS AND INTEREST) FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THIS AGREEMENT INCLUDING, WITHOUT LIMITATION, THOSE CAUSED BY:

- (1) CONTRACTOR/SUPPLIER'S AND/OR ITS AGENTS', EMPLOYEES', OFFICERS', DIRECTORS', CONTRACTORS', OR SUBCONTRACTORS' (COLLECTIVELY IN NUMBERED PARAGRAPHS 1-3, "CONTRACTOR/SUPPLIER") ACTUAL OR ALLEGED NEGLIGENCE OR INTENTIONAL ACTS OR OMISSIONS;
- (2) THE CITY'S AND CONTRACTOR/SUPPLIER'S ACTUAL OR ALLEGED CONCURRENT NEGLIGENCE, WHETHER CONTRACTOR/SUPPLIER IS IMMUNE FROM LIABILITY OR NOT; AND
- (3) THE CITY'S AND CONTRACTOR/SUPPLIER'S ACTUAL OR ALLEGED STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY, WHETHER CONTRACTOR/SUPPLIER IS IMMUNE FROM LIABILITY OR NOT.

10.2 CONTRACTOR/SUPPLIER SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY HARMLESS DURING THE TERM OF THIS AGREEMENT AND FOR FOUR YEARS AFTER THE AGREEMENT TERMINATES. CONTRACTOR/SUPPLIER'S INDEMNIFICATION IS LIMITED TO \$500,000 PER OCCURRENCE. CONTRACTOR/SUPPLIER SHALL NOT INDEMNIFY THE CITY FOR THE CITY'S SOLE NEGLIGENCE.

GENERAL TERMS & CONDITIONS: (Continued)

10.0 INDEMNIFICATION: (Continued)

10.3 INDEMNIFICATION PROCEDURES:

(1) Notice of Claims. If the City or Contractor/Supplier receives notice of any claim or circumstances which could give rise to an indemnified loss, the receiving party shall give written notice to the other party within 10 days. The notice must include the following:

- (a) a description of the indemnification event in reasonable detail,
- (b) the basis on which indemnification may be due, and
- (c) the anticipated amount of the indemnified loss.

This notice does not estop or prevent the City from later asserting a different basis for indemnification or a different amount of indemnified loss than that indicated in the initial notice. If the City does not provide this notice within the 10 day period, it does not waive any right to indemnification except to the extent that Contractor/Supplier is prejudiced, suffers loss, or incurs expense because of the delay.

(2) Defense of Claims

(a) Assumption of Defense. Contractor/Supplier may assume the defense of the claim at its own expense with counsel chosen by it that is reasonably satisfactory to the City. Contractor/Supplier shall then control the defense and any negotiations to settle the claim. Within 10 days after receiving written notice of the indemnification request, Contractor/Supplier must advise the City as to whether or not it will defend the claim. If Contractor/Supplier does not assume the defense, the City shall assume and control the defense, and all defense expenses constitute an indemnification loss.

(b) Continued Participation. If Contractor/Supplier elects to defend the claim, the City may retain separate counsel to participate in (but not control) the defense and to participate in (but not control) any settlement negotiations. Contractor/Supplier may settle the claim without the consent or agreement of the City, unless it (i) would result in injunctive relief or other equitable remedies or otherwise require the City to comply with restrictions or limitations that adversely affect the City, (ii) would require the City to pay amounts that Contractor does not fund in full, (iii) would not result in the City's full and complete release from all liability to the plaintiffs or claimants who are parties to or otherwise bound by the settlement.

11.0 INSURANCE: (See Exhibit No. 2, Pre-Approved Certificate of Insurance)

11.1 Prior to award and/or starting work, Contractor/Supplier must present a Certificate of Insurance evidencing the insurance coverage specified herein. This is a mandatory requirement. Only unaltered, original insurance certificates are acceptable. Photocopies are unacceptable.

*Exception: Proof of insurance coverage is not required by Contractor/Supplier if the specified equipment will be dropped-shipped by manufacturer, or delivered by a common carrier, and this contract agreement (Purchase Order) does not require Contractor/Supplier to perform a labor or service component at a City facility. Prior to award, Contractor/Supplier must present a written statement attesting to this exception.

11.2 Contractor shall maintain in effect certain insurance coverage and shall furnish certificates of insurance, in duplicate form, before beginning its performance under this Agreement. All policies except Professional Liability and Workers' Compensation must name the City as an additional insured. The issuer of any policy (1) shall have a Certificate of Authority to transact insurance business in Texas or (2) shall be an eligible non-admitted insurer in the State of Texas and have a Best's rating of at least B+ and a Best's Financial Size Category of Class VI or better, according to the most current edition Best's Key Rating Guide. Contractor shall maintain the following insurance coverages in the following amounts:

GENERAL TERMS & CONDITIONS: (Continued)

11.0 INSURANCE: (Continued)

11.2 INSURANCE COVERAGES: (Continued)

11.2.1 Commercial General Liability insurance including Contractual Liability insurance: \$500,000 per occurrence; \$1,000,000 aggregate

11.2.2 Workers' Compensation including Broad Form All States endorsement: Statutory amount

11.2.3 Automobile Liability insurance: \$1,000,000 combined single limit per occurrence
Defense costs are excluded from the face amount of the policy.
Aggregate Limits are per 12-month policy period unless otherwise indicated.

11.2.4 Employer's Liability:
Bodily injury by accident \$100,000 (each accident)
Bodily injury by disease \$100,000 (policy limit)
Bodily injury by disease \$100,000 (each employee)

11.3 All insurance policies must require on their face, or by endorsement, that the insurance carrier waives any rights of subrogation against the City. The Contractor shall give 30-day written notice to the Director if any of its insurance policies are cancelled, materially changed or non-renewed. Within the 30 day period, Contractor shall provide other suitable policies in lieu of those about to be canceled, materially changed, or non-renewed so as to maintain in effect the required coverage. If Contractor does not comply with this requirement, the Director, at his or her sole discretion, may:

11.3.1 Immediately suspend Contractor from any further performance under this Agreement and begin procedures to terminate for default, or

11.3.2 Purchase the required insurance with City funds and deduct the cost of the premiums from amounts due to Contractor under this Agreement.

11.3.3 All certificates of insurance submitted by Contractor shall be accompanied by endorsements for additional insured coverage in favor of the City for Commercial General Liability and Automobile Liability policies; and waivers of subrogation in favor of the City for Commercial General Liability, Automobile Liability, and Worker's Compensation/Employers' Liability policies.

11.3.4 For pre-approved endorsement forms, see Exhibit No. 2 or proceed to Business Forms, Sample Certificate of Insurance at <http://purchasing.houstontx.gov/forms.shtml>

FORWARD CERTIFICATE TO BUYER AT: **City of Houston/Finance Department
Strategic Procurement Division
P.O. Box 1562
Houston, Texas 77251-1562**

12.0 WORKER'S COMPENSATION INSURANCE:

12.1 On any City award with a labor component or any award where Supplier delivery people make deliveries for City sites, Worker's Compensation Insurance as shown in the Insurance Section is required.

13.0 DRUG DETECTION AND DETERRENCE PROCEDURE: (See Online Forms)

13.1 It is the policy of the City to achieve a drug-free workforce and workplace. The manufacture, distribution, dispensation, possession, sale, or use of illegal drugs or alcohol by Contractors while on City Premises is prohibited. Contractor shall comply with all the requirements and procedures set forth in the Mayor's Drug Abuse Detection and Deterrence Procedures for Contractors, Executive Order No. 1-31 ("Executive Order"), which is incorporated into this Agreement and is on file in the City Secretary's Office.

GENERAL TERMS & CONDITIONS: (Continued)

13.0 DRUG DETECTION AND DETERRENCE PROCEDURE (Continued):

- 13.2 Before the City signs this Agreement, Contractor shall file with the Contract Compliance Officer for Drug Testing ("COD"):
- 13.2.1 a copy of its drug-free workplace policy,
 - 13.2.2 the Drug Policy Compliance Agreement substantially in the form set forth in "Table 2 – Documents and Forms", together with a written designation of all safety impact positions, and
 - 13.2.3 if applicable (e.g. no safety impact positions), the Certification of No Safety Impact Positions, substantially in the form set forth in "Table 2 – Documents and Forms."
- 13.3 If Contractor files a written designation of safety impact positions with its Drug Policy Compliance Agreement, it also shall file every 6 months during the performance of this Agreement or on completion of this Agreement if performance is less than 6 months, a Drug Policy Compliance Declaration in a form substantially similar to Exhibit "G." Contractor shall submit the Drug Policy Compliance Declaration to the COD within 30 days of the expiration of each 6-month period of performance, and within 30 days of completion of this Agreement. The first 6-month period begins to run on the date the City issues its Notice to Proceed, or if no Notice to Proceed is issued, on the first day Contractor begins work under this Agreement.
- 13.4 Contractor also shall file updated designations of safety impact positions with the COD if additional safety impact positions are added to Contractor's employee workforce.
- 13.5 Contractor shall require that its subcontractors comply with the Executive Order, and Contractor shall secure and maintain the required documents for City inspection.

14.0 MINORITY AND WOMEN BUSINESS ENTERPRISES (NOT APPLICABLE):

- 14.1 Contractor shall comply with the City's Minority and Women Business Enterprise ("MWBE") programs as set out in Chapter 15, Article V of the City of Houston Code of Ordinances. Contractor shall make good faith efforts to award subcontracts or supply agreements in at least 0% of the value of this Agreement to MWBEs. Contractor acknowledges that it has reviewed the requirements for good faith efforts on file with the City's Office of Business Opportunities ("OBO") and will comply with them.

15.0 REJECTIONS:

- 15.1 Articles not in accordance with samples and specifications must be removed by the Contractor/Supplier and at his expense. All disputes concerning quality of supplies delivered under this offer will be determined by the Chief Procurement Officer or designated representative.
- 15.2 All articles enumerated in the offer shall be subject to inspection on delivery by an officer designated for the purpose and if found inferior to the quality called for, or not equal in value to the Department's samples, or deficient in weight, measurements, workmanship or otherwise, this fact shall be certified to the Chief Procurement Officer who shall have the right to reject the whole or any part of the same.

16.0 FORCE MAJEURE:

- 16.1 Timely performance by both parties is essential to the award. However, neither party is liable for delays or other failures to perform its obligations to the extent the delay or failure is caused by Force Majeure. Force Majeure means fires, floods, explosions, and other acts of God, war, terrorist acts, riots, court orders, and the acts of superior governmental or military authority.
- 16.2 This relief is not applicable unless the affected party does the following:
- 16.2.1 uses due diligence to remove the Force Majeure as quickly as possible; and
 - 16.2.2 provides the other party with prompt written notice of the cause and its anticipated effect.
- 16.3 The City may perform or solicit functions itself during periods of Force Majeure. Such performance does not constitute a default or breach of this award by the City.
- 16.4 If the Force Majeure continues for more than 30 days, the Chief Procurement Officer or Director upon written authorization by the Chief Procurement Officer may terminate this award by giving 30 days' written notice to Supplier. This termination is not a default or breach. SUPPLIER WAIVES ANY CLAIM IT MAY HAVE FOR FINANCIAL LOSSES OR OTHER DAMAGES RESULTING FROM THE TERMINATION

EXCEPT FOR AMOUNTS DUE AT THE TIME OF THE TERMINATION.

GENERAL TERMS & CONDITIONS: (Continued)

17.0 TAXES:

17.1 The City is exempt from the Federal Excise and Transportation Tax, and the limited Sales and Use Tax. Unless the Bid Form or Specifications specifically indicate otherwise, the bid price must be net exclusive of above-mentioned taxes. A Contractor/Supplier desiring refunds of, or exemptions from, taxes paid on merchandise accepted by the City, must submit the proper forms, and the Chief Procurement Officer, if satisfied as to the facts, may approve or issue the necessary certificates.

18.0 INVOICING:

18.1 In order to expedite payments all invoices must be submitted in triplicate, itemized as to quantity, part and/or model number, description in the same order and form as in the City of Houston Purchase Order. Variations will only delay payment. In addition, invoices must show the name of the Department, Division or Section to which the merchandise was delivered, and the City of Houston Purchase Order Number.

18.2 All delivery tickets must have a description of the item delivered.

18.3 Mail invoices and a copy of the signed City of Houston Equipment/Receiver Report to the Accounts Payable Section of the Department and to the address, as noted on individual purchase orders.

18.4 Delivery tickets and packing slips will contain the same information as the invoice.

18.5 The City of Houston Equipment/Receiver Report must be signed by the receiving employee with their City Employee Number and must be signed by Contractor/Supplier Representative.

19.0 PAYMENT:

19.1 The City of Houston's standard payment term is to pay 30 days after receipt of invoice or receipt of goods or services, whichever is later, according to the requirements of the Texas Prompt Payment Act (TX. Gov't Code, Ch. 2251). However, the City will pay in less than 30 days in return for an early payment discount from vendor as follows:

- Payment Time - 10 Days: 2% Discount
- Payment Time - 20 Days: 1% Discount

19.2 If the City fails to make a payment according to the early payment schedule above, but does make the payment within the time specified by the Prompt Payment Act, the City shall not receive the discount, but shall pay no other penalty. When the payment date falls on a Saturday, Sunday, or official holiday when City offices are closed and City business is not expected to be conducted, payment may be made on the following business day.

20.0 PROMPT PAYMENT OF SUBCONTRACTORS:

20.1 Supplier shall make timely payments to all persons and entities supplying labor, materials or equipment for the performance of this award. **SUPPLIER SHALL DEFEND AND INDEMNIFY THE CITY FROM ANY CLAIMS OR LIABILITY ARISING OUT OF SUPPLIER'S FAILURE TO MAKE THESE PAYMENTS.**

21.0 INSPECTIONS AND AUDITS:

21.1 The City reserves all rights to review all payments made to Suppliers by auditing at a later date. Subject to such audit, any overpayments may be recovered from the Supplier.

21.2 Representatives of the City have the right to examine the books of all subcontractors and/or suppliers supplying goods and/or services under the prime award insofar as those books and records relate to performance under the prime award.

21.3 City representatives may have the right to perform, or have performed, (1) audits of Supplier's books and records, and (2) inspections of all places where work is undertaken in connection with this award. Supplier shall keep its books and records available for this purpose for at least three years after this award terminates. This provision does not affect the applicable statute of limitations.

22.0 CONTRACTOR DEBT:

22.1 If Contractor/Supplier, at any time during the term of this agreement, incurs a debt, as the word is defined in Section 15-122 of the Houston City Code of Ordinances, it shall immediately notify the City Controller in writing. If the City Controller becomes aware that Contractor/Supplier has incurred a debt, the City Controller shall immediately notify Contractor/Supplier in writing. If Contractor/Supplier does not pay the debt within 30 days of either such notification, the City Controller may deduct funds in an amount equal to the debt from any payments owed to Contractor/Supplier under this agreement, and Contractor/Supplier waives any recourse therefor.

GENERAL TERMS & CONDITIONS: (Continued)

23.0 SUCCESSORS & ASSIGNS:

- 23.1 Contractor/Supplier may not assign this (Purchase Order) or dispose of substantially all of its assets without the written consent of the Chief Procurement Officer. Contractor/Suppliers failure to obtain such consent shall be an event of default, authorizing the Purchasing Agent to terminate this contract (Purchase Order) according to its terms.

24.0 CONTAMINATED MATERIALS:

- 24.1 Each Supplier shall be required to identify their source of supply. No material will be accepted from a hazardous or toxic waste site, regardless of whether the site has been identified by either a Local, State or Federal Agency. No contaminated, toxic, hazardous waste products or heavy metal product shall be contained in these deliveries. If any material supplied to the City is found to be contaminated or contain heavy metal products, it will be the responsibility of the Supplier to remove and replace the contaminated product at their expense and at no cost to the City. The City has the option to solicit the removal of any contaminated material and charge back the Supplier any and all costs involved.

25.0 CHANGE ORDERS:

- 25.1 At any time during the Agreement Term, the Chief Procurement Officer, or designated representative, may issue a change order to increase or decrease the scope of services, or change plans and specifications, as may be necessary to accomplish the general purposes of this Agreement. Contractor/Supplier shall furnish the services or deliverables in the change order in accordance with the requirements of this Agreement plus any special provisions, specifications, or special instructions issued to execute the additional work.

- 25.2 Contractor/Supplier shall not make any changes to the specifications contained herein without written authorization from the Chief Procurement Officer or designated representative.

25.2.1 The City may refuse to accept all or part of the work performed or equipment/supplies delivered if changes are made to the specifications without the written authorization of the Chief Procurement Officer or designated representative. The City shall not be responsible for costs incurred by the Contractor/Supplier on unauthorized change orders.

25.2.2 A letter with supporting documentation of the requested change(s) shall be submitted to the Chief Procurement Officer, and the Chief Procurement Officer must approve any requested changes by written authorization PRIOR TO ANY CHANGES BEING PERFORMED. Documentation acceptable to the Chief Procurement Officer as evidence of Contractor/Supplier's change(s) shall reference the City's bid specification by section(s) and page number(s). The face of the envelope containing this letter shall clearly state "CHANGE ORDER REQUEST". The letter shall reference the CITY BID INVITATION NUMBER, EQUIPMENT DESCRIPTION and CITY PURCHASE ORDER NUMBER(S). Failure to provide clear and concise evidence as stated above and in the format requested will result in denial until Contractor/Supplier complies with these provisions. Documentation shall be mailed to:

Chief Procurement Officer
City of Houston, Finance Department
Strategic Procurement Division
P. O. Box 1562
Houston, TX 77251-1562

- 25.3 The Chief Procurement Officer, or designated representative, may issue change orders, subject to the following limitations:

25.3.1 City Council expressly authorizes the Chief Procurement Officer or Director to approve a Change Order of \$50,000 or less. A change order of more than \$50,000 over the approved contract (Purchase Order) amount must be approved by the City Council.

25.3.2 The total of all Change Orders issued under this section may not increase the Original Agreement amount by more than 25%.

25.3.3 For any items described in a Change Order that the Contractor/Supplier is otherwise required to provide under the Original Agreement, the City is not obligated to pay additional money to Contractor/Supplier.

GENERAL TERMS & CONDITIONS: (Continued)

26.0 TERMINATION OF AGREEMENT:

26.1 By the City for Convenience:

26.1.1 The Chief Procurement Officer may terminate this Contract (Purchase Order) at any time upon 30 calendar days' notice in writing to the Contractor/Supplier. Upon receipt of such notice, Contractor/Supplier shall, unless the notice directs otherwise, discontinue all services in connection with the performance of the Contract (Purchase Order) and shall proceed to cancel promptly all existing orders and contracts insofar as such orders and contracts are chargeable to this Contract (Purchase Order). As soon as practicable after the receipt of notice of termination, the Contractor/Supplier shall submit a statement to the appropriate department(s) showing in detail the services performed or items delivered under this Contract (Purchase Order) to date of termination. The City agrees to compensate the Contractor/Supplier for that portion of the prescribed charges for which the services were actually performed or items delivered under this Contract (Purchase Order) and not previously paid.

26.2 By the City for Default by Contractor/Supplier:

26.2.1 In the event that the materials and/or services furnished by the Contractor/Supplier do not conform to the standard set forth herein, or if the deliveries and servicing of this Contract (Purchase Order) do not conform to the requirements detailed herein, the City through a written notice from the Purchasing Agent to the Contractor/Supplier describing such default may as its options:

(1) Terminate the Contract (Purchase Order) for default and the City shall have no further obligation under the Contract (Purchase Order).

(2) Allow the Contractor/Supplier to cure default within 30 calendar days from receipt of notice unless the Chief Procurement Officer specifies a longer period of time in the notice. The City, at its sole option, may extend the proposed date of termination to a later date. If prior to the proposed date of termination, Contractor/Supplier cures such default to the City's satisfaction, then the proposed termination shall be ineffective. If Contractor/Supplier fails to cure such default prior to the proposed date of termination, then the City may terminate its performance under this Contract (Purchase Order) as of such date and have no further obligation under the Contract (Purchase Order).

26.2.2 In the event of failure to deliver any or all of the items or to perform required services, the City may cover its loss by reasonably procuring from another source the items not delivered or the services not performed. Contractor/Supplier shall be responsible for, and shall pay to the City immediately upon demand, the difference in price between that offered by the Contractor/Supplier and that which the City was forced to pay for covering Contractor/Supplier's failure to deliver or perform services.

26.3 By the Contractor/Supplier for Default by City:

26.3.1 Default by the City shall occur if the City fails to perform or observe the terms and conditions of this Contract (Purchase Order) required to be performed or observed by the City, and the Contractor/Supplier gives notice in writing to the City of the act or omission claimed by the Contractor/Supplier to constitute default on the part of the City.

26.3.2 Upon receipt of such notice in writing from the Contractor/Supplier; however, the City shall have 30 calendar days to cure such default. The Contractor/Supplier, at its sole option, may extend the proposed date of termination to a later date.

26.3.3 If City cures such default prior to the proposed date of termination, the proposed termination shall be ineffective. If the City fails to cure such default prior to the proposed date of termination, then the Contractor/Supplier may terminate its performance under this Contract (Purchase Order) as of such date.

27.0 INTERLOCAL AGREEMENTS:

27.1 Under the same terms and conditionals, this Contract may be expanded to other government entities through interlocal agreements between the City of Houston and the respective government entity that encompass all or part of the products/services provided under this contract. Separate contracts may be drawn to reflect the needs of each participating entity.

EXHIBIT NO. 1

CONTRACTOR/SUPPLIER REFERENCES

In order to receive bid award consideration, the bidder must be able to demonstrate that it has provided, as a contractor/supplier, products that are similar to those offered on the electronic bid form to governmental agencies or other entities within the last two years. The references should be listed in the space provided below. Please attach additional pages as necessary. If references are not included with the bid, the bidder shall be required to provide such references to the City of Houston within five working days from receipt of a written request from the City of Houston to do so. **Bidder's capability and experience shall be a factor in determining the Contractor's responsibility.** The City of Houston reserves the right to determine if such products are appropriately similar to those offered.

1. Entity Name: _____

Address: _____

City & State: _____

Name & Phone Number of Contact: _____

2. Entity Name: _____

Address: _____

City & State: _____

Name & Phone Number of Contact: _____

3. Entity Name: _____

Address: _____

City & State: _____

Name & Phone Number of Contact: _____

4. Entity Name: _____

Address: _____

City & State: _____

Name & Phone Number of Contact: _____

5. Entity Name: _____

Address: _____

City & State: _____

Name & Phone Number of Contact: _____