



**CITY OF BLOOMINGTON**

**401 N Morton St  
Bloomington, IN 47404  
[www.bloomington.in.gov](http://www.bloomington.in.gov)**

**INVITATION TO BID**

**For**

**SPECIALITY VEHICLES, EARTHMOVING EQUIPMENT AND TRUCKS**

**ITB #2016-CON-001**

**RELEASE DATE: June 10, 2016**

**SUBMITTAL DATE: June 28, 2016**

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**INVITATION:** The City of Bloomington Board of Public Works (hereinafter “City”) is seeking sealed bids for various Earthmoving Equipment, Trucks, and Specialized Vehicles. Sealed bids will be received in the City of Bloomington Public Works Department located in City Hall at 401 N. Morton St. Ste.120, Bloomington, Indiana. Sealed bids will be accepted until 4:30 p.m. (local time) June, 28, 2016.

**GENERAL INFORMATION  
PART I**

**1.1 BACKGROUND:** The City will be accepting sealed bids for the following units:

**Specialty Vehicles**

Three Wheel Mechanical Sweeper (1)  
Truck Mounted Regenerative Air Sweeper (1)  
Articulating Aerial Truck W/Chip Box (1)  
Fire Pumper Truck (1)

**Earthmoving Equipment**

Front End Loader (1)  
Backhoe Loader (1)

**Trucks**

3/4 Ton Pickup Truck w/opts (1)  
1 Ton Utility Truck W/Plow (1)

**1.2 SPECIFICATIONS (Exhibit E):** Detailed specification sheets for each unit are included in this Invitation to Bid (ITB). Unless otherwise specifically provided in this bid request, reference to any equipment, material, article, or patented process by trade name, make, model or catalog number in these specifications shall be regarded as establishing a standard of quality, and shall not be construed as limiting competition and equal products may be substituted. Equivalency will be determined by the City.

- 1.2.1 The bidder shall furnish complete detailed specifications on all materials or options they wish to substitute. Any variation or deviation from the listed specifications must be clearly defined and listed on the specification sheet for each unit.
- 1.2.2 When the City approves a substitution by the Bidder, it is with the understanding that the Bidder guarantees the substituted materials or options shall be equal to, or exceed those specified.
- 1.2.3 The City’s decision as to the equality of the substituted specifications shall be final. The cost of any redesign caused by a substitution shall be borne by the Bidder.
- 1.2.4 All units listed in the Invitation to Bid shall be new and the latest model available from the manufacturer.

1.2.5 All units shall be manufactured in the United States, whenever possible, as pursuant to Indiana Code 5-22-15-21.

**1.3 MISCELLANEOUS REQUIREMENTS:** The following requirements are applicable to the delivery of any units that may result from the award of a bid. Any deviation from these requirements may result in a delay in processing of an invoice for payment.

a. FOB Point is to the following address:

City of Bloomington Fleet Department  
800 E Miller Dr.  
Bloomington, IN 47401

b. All Certificates of Origin/Title Work shall list the City as the owner using the address below:

City of Bloomington  
401 N Morton St.  
Bloomington, IN 47404

c. When applicable, each unit shall be delivered with a temporary registration card and plate issued by the State of Indiana. Temporary registration documents must be valid for a minimum of thirty (30) days from delivery date.

**1.4 AWARD:** The award of a Bid, if any award is made, will only be to a responsible and responsive bidder who submitted the best overall value to the City and whose unit, or units, complies with all the specifications prescribed within this invitation.

1.4.1 The City reserves the right to award on an all or-none basis, or award to multiple Bidders.

1.4.2 If an award is to be made, it may be made at the Board of Public Works meeting **June 28, 2016**, or at a subsequent meeting. The City reserves the right to rescind any award if it is determined the offer is not in the best interest of the City, or if errors, omissions, inaccuracies, non-compliance, or any deficiencies are discovered after the award has been issued.

1.4.3 If the City determines that all bids received should be rejected, Bidders shall be notified by the Purchasing Manager accordingly. The City may or may not resubmit the Invitation to Bid request.

1.4.4 Bid tabulations shall be available to all Bidders who submitted a Bid. Results shall not be given over the telephone, or prior to the award of a contract.

1.4.5 Bids may be withdrawn any time *prior* to the scheduled deadline for receipt of bids; no bid may be modified or withdrawn for a period of sixty (60) calendar days thereafter.

**1.5 KEY DEADLINE DATES:**

Event	Time	Day	Date
Invitation to Bid Issuance Date	N/A	Friday	June 10, 2016
Last Date to Submit Inquires	5:00 p.m. Local Time	Thursday	June 23, 2016
Affirmative Action Plan Due	5:00 p.m. Local Time	Monday	June 27, 2016
<b>Bid Submittal Deadline</b>	4:30 p.m. Local Time	Tuesday	June 28, 2016
<b>Bid Opening</b>	5:30 p.m. Local Time	Tuesday	June 28, 2016

**GENERAL CONDITIONS  
PART II**

**2.1 SUBMISSION INSTRUCTIONS:** Sealed bids shall be submitted to the attention of the City of Bloomington Public Works Board. The original hard copy bid submittal packet shall be clearly marked "ITB #2016-CON-001 - Vehicle/Equipment". Bids will be due to the address listed below on or before 4:30 p.m. local time, Tuesday, June 28, 2016. No electronic or facsimile offers will be accepted.

Sealed bids will be opened and read aloud at the Board of Public Works meeting on Tuesday, June 28, 2016, at 5:30 p.m. local time. Any bids received after the deadline will be returned unopened.

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**Submit Bids To:**

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City of Bloomington Board of Public Works  
 Vehicle and Equipment Bid #2016-CON-001  
 Attn: Kyla Cox Deckard, President  
 401 N Morton Dr. Suite 120  
 Bloomington, IN 47404

- 2.1.1 Bidders may bid on one (1) or more units however, each bid submitted must include a separate Bid Submittal Form clearly defining the unit on which the Bidder is submitting a bid on.
- 2.1.2 It is the Bidder's responsibility to assure actual delivery of bid documents with the City prior to the established deadline. To confirm receipt of your submittal, please contact Christina Smith at 812.349.3589, or [smithc@bloomington.in.gov](mailto:smithc@bloomington.in.gov).
- 2.2 **BID SUBMITTAL COSTS:** Those submitting bids do so entirely at their expense. There is no expressed or implied obligation by the City to reimburse any individual or firm for any costs incurred in preparing or submitting bids, or providing additional information when requested by the City.
- 2.3 **ACCEPTANCE:** Submission of any bid indicates acceptance of the conditions and requirements contained in the ITB unless clearly and specifically noted otherwise in the bid documents.
- 2.4 **INQUIRIES AND ADDENDA:** It is Bidder's responsibility to clarify any details in question before a bid is submitted. All questions should be emailed to the attention of Julie Martindale, Purchasing Manager at [martindj@bloomington.in.gov](mailto:martindj@bloomington.in.gov). Email inquiries shall include "ITB #2016-CON-001" in the subject line.

**Inquires may be submitted in written form via email until 5:00 p.m. local time, Thursday, June 23, 2016.**

- 2.4.1 Inquires shall reference the specification unit title (i.e., Fire Pumper), specification line number, and page number, or the ITB section number relevant to the question presented for clarification.
- 2.4.2 Responses shall be in written form via email to the requesting Bidder within one (1) business day when possible.
- 2.4.3 If necessary, an addendum or addenda will be issued, and accessible on the City's RFP page which is located here: <https://bloomington.in.gov/rfp>.
- 2.4.4 It is the Bidder's responsibility to access the City's RFP webpage prior to submitting a bid to insure no updates, additions, omissions, or corrections have been posted.
- 2.4.5 Any ambiguities or inconsistencies shall be brought to the attention of the City through written communication or via **email** by 5:00 p.m. local time June 23, 2016.

2.4.6 The City assumes no liability for assuring accurate, complete, or on time e-mail transmissions, or receipts.

**Bid questions should be addressed to:**

Julie Martindale, Purchasing Mgr.  
401 N Morton St, Ste. 240  
Bloomington, IN 47404  
[martindj@bloomington.in.gov](mailto:martindj@bloomington.in.gov)

- 2.5 COMPLIANCE:** The Bidder warrants and agrees that its performance under any award or contract that may be rendered from this bid will at all times comply with all local, state and federal laws, codes, rules, ordinances and regulations.
- 2.6 BID REJECTION:** The City reserves the right to reject any and all bids, in whole or in part, to waive any and all informalities, and to disregard all non-conforming, non-responsive or conditional bids.
- 2.7 BID SUBMITTAL FORMAT AND FORM (Exhibit A):** In order to facilitate the bid opening, Bidders are required to submit their bid(s) on the Bid Submittal Form included in this packet. Every unit a Bidder submits a bid on shall require its own Bid Submittal Form.
- 2.7.1 The bid price shall be a delivered price. All units will be shipped F.O.B. destination as specified in this invitation. No additional fuel surcharges, delivery or destination fees will be allowed that are not clearly detailed and included in the bid submittal for each unit.
- 2.7.2 Specification sheets for each unit shall be included denoting which specifications were met, or exceeded. If deviations are necessary, they must clearly be defined on the specification sheet. The total unit price must also be documented on the last page of each set of specifications. The last page of each specification must also include an authorized signature to be considered valid.
- 2.7.3 Detailed pricing sheets shall be submitted which include the cost breakdown of all standard equipment and features on the unit(s).
- 2.7.4 Brochures and detailed cut sheets shall be supplied for each unit.
- 2.7.5 Properly executed E-verify Affidavit must be included with the bid submittal. If a Bidder submits a bid for multiple units, only one (1) copy of the affidavit is required.

- 2.7.6 Bid, Offer or Proposal for Sale or Lease of Materials form. Each submittal shall include a completed form. The form is included with this packet. This form also includes a Non-Collusion Affidavit which is required for a bid to be considered valid. The form shall be completed and notarized. Offers submitted without proper signatures and notarization will be considered invalid and shall be deemed non-compliant.
- 2.7.7 For each unit upon which a Bidder submits a bid, bid documents shall be submitted in this order:
1. City of Bloomington Bid Submittal Form with pricing, manufacturer, model and year for the unit.
  2. Bid Bond or certified check.
  3. Completed and signed specifications sheets.
  4. Detailed pricing sheets.
  5. Brochures or cut sheet information.
  6. E-Verify Affidavit properly executed.
  7. Bid, Offer or Proposal for Sale or Lease of Materials form.

Any bid submitted that deviates from these instructions may be considered non-responsive and may be disqualified at the discretion of the City.

### **GENERAL REQUIREMENTS PART III**

- 3.1 BID BOND:** Each bidder shall include with their bid documents either a certified check, or cashier's check drawn on an acceptable bank, or a bid bond made payable to City of Bloomington in the sum equal to five percent (5%) of the bid. Bidders may submit separate bid bonds for each unit being bid upon OR may submit one (1) bid bond equal to 5% of the combined total of all bids submitted.
- 3.2 BIDDER REGISTRATION:** Upon notification of an award, a Bidder must meet the approval requirements of the City. Therefore, the Bidder shall submit a current and completed Request for Taxpayer Identification Number and Certification form (IRS Form W-9) to the Controller's Office as soon as they have been notified of a bid award. A substitute IRS W-9 form can also be obtained from the City of Bloomington website located here: <http://bloomington.in.gov/controller>. The completed documents must be submitted to the address listed on the forms.
- 3.3 PAYMENT PREFERENCE:** The City's preferred method of payment is Electronic Funds Transfer (EFT). Payments processed through an EFT save dollars by increasing efficiency and streamlining the payment process. This eliminates the cost of paper, printing, postage, paperwork, and time.

If awarded a bid, the Bidder shall submit a completed EFT form to the Controller's office through one of the methods listed on the form. The form is located on the City of Bloomington website located here: <http://bloomington.in.gov/controller>.

**3.4 TAX EXEMPTION:** The City of Bloomington is exempt from payment of all state and federal sales taxes. Tax documents are available upon request.

**3.5 PAYMENT INFORMATION AND INVOICE SUBMITTAL:** Payment for invoices shall be processed upon receipt of an acceptable original invoice, and after the unit has been received, and verified for accuracy.

Invoice(s) shall be submitted to the following address and **NOT** included with the delivery documents when unit is delivered.

City of Bloomington Controller's Office  
Attn: Julie Martindale  
PO Box 100  
Bloomington, IN 47402

Invoices shall include the following information:

- Company name and address
- Date of shipment
- Total amount due
- Unit price
- Extended price
- Quantity
- Description of goods
- PO number

3.5.1 Surcharges (i.e., fuel surcharges, restocking, etc.) shall NOT be added to invoices as an additional line item unless approved in writing from the Purchasing Manager.

3.5.2 The City is exempt from the payment of sales taxes. Any charges for taxes from which the City is exempt shall be deducted from invoices before payment is made.

**3.6 ABANDONMENT:** Notwithstanding any other provision of this Award, if funds for the continued fulfillment of the Award by the City are at any time not forthcoming or are insufficient, through failure of any entity to appropriate the funds or otherwise, then the City shall have the right to terminate this Award or Contract without penalty by giving written notice documenting the lack of funding in which instance, unless otherwise agreed by the City and Recipient, this Award shall terminate and become null and void. The City agrees that it shall make its best effort to obtain sufficient funds, including but not limited to, including in its budget for each fiscal period during the term of this Award a request for sufficient funds to meet its obligations under the Award in full.

**3.7 AFFIRMATIVE ACTION PLANS (Exhibit B)** – (REQUIRED ON CONTRACTS OVER \$10,000)

Each Bidder submitting an offer for over \$10,000.00 shall submit and have approved by the City of Bloomington Contract Compliance Officer, Barbara McKinney, his/her written Affirmative Action Plan at least twenty-four (24) hours prior to the deadline for submission of bids.

Each Bidder must insure that all employees and applicants for employment are not discriminated against because of race, religion, color, sex, national origin, ancestry, disability, sexual orientation, gender identity, veteran status or housing status. All the protected classes must be included in your Affirmative Action Plan for it to be acceptable.

In addition to other requirements, your plan MUST include a workforce breakdown, an internal grievance procedure, a non-retaliation statement, designation of a person by name or position who is responsible for implementation of the Plan, applicability to both applicants and employees, recruitment of minorities, equal access to training programs, and an explanation of your method of communicating the operations of your Affirmative Action Plan to employees and prospective applicants.

Barbara McKinney, Contract Compliance Officer, may be contacted at (812) 349-3429, 8:00 a.m. to 5:00 p.m. Monday through Friday. The Affirmative Action Plan paperwork is provided in this Invitation to Bid.

**3.8 E-VERIFY AFFIDAVIT (Exhibit C)**: Bidders are required to enroll in and verify the work eligibility status of all newly-hired employees through the E-Verify program. The E-verify affidavit must be properly executed and submitted with the bid documents.

**3.9 NON-COLLUSION AFFIDAVIT (Included in Exhibit D)**: Bidder is required, pursuant to Indiana Code 5-22-16-6, to affirm it has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by the Bidder, entered into any combination, collusion or agreement with any person relative to the price to be offered by any person nor to prevent any person from making an offer nor to induce anyone to refrain from making an offer and that this offer is made without reference to any other offer.



**BID SUBMITTAL FORM**

**TO:** City of Bloomington Board of Public Works  
Attn: Kayla Cox Deckard, President  
401 N Morton St. Ste. 120  
Bloomington, IN 47404

Bids must be sealed and either mailed or hand delivered to the address shown on this form. No faxed or emailed Bids will be allowed. Bids received after the submittal date and time will be returned to the Bidder unopened.

**Bidder Information:**

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

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

Name (print): \_\_\_\_\_

Address: \_\_\_\_\_

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

E-Mail: \_\_\_\_\_

UNIT	DESCRIPTION	PRICE FOR UNIT
1.		\$

Bidders shall provide year, manufacturer, model in the description field.

Price per unit should include all costs including all applicable fees.



City of Bloomington Human Rights Commission  
2016

RE: Affirmative Action and Living Wage Ordinance

To: Prospective Bidders/Vendors

Affirmative Action: All bidders and vendors with the City of Bloomington for projects in excess of \$10,000.00 must submit an affirmative action plan to my office. This plan must insure that applicants are employed and that employees are treated in a manner that provides equal employment opportunity and tends to eliminate inequality based upon race, religion, color, sex, national origin, ancestry, disability, sexual orientation, gender identity, veteran status and housing status. Please note that the last four categories are new, adopted by the Common Council in September, 2015.

Even if your company already has a plan on file with the City, you must check with me to make sure that it complies with our current and recently updated requirements. If you already have a plan, but it does not cover all of the City's current requirements, you may submit a separate supplement with your plan to fill any gaps.

You must submit your written affirmative action plan (or supplement) to me at least twenty-four hours before the bid, quote or proposal deadline. You must submit your plan to me separately from your bid or quote. The twenty-four hours will give me sufficient time to review your and the other plans. I recommend that you submit your affirmative action plan to me earlier, if possible, so that you and I will have time to work out any problems that may be in your plan. Vendor's who fail to submit acceptable plans by the deadline are subject to disqualification.

I strongly advise you to confirm with me that I have received your plan and that it meets our requirements well before the submittal deadline. We will make every effort to work with you to clear up problems. But it remains your responsibility to confirm that I received your plan and that it complies with our requirements. If you fail to confirm that I received and approved your plan, you risk losing your eligibility to submit a bid or quote. We will be glad to provide a receipt upon request. Please let us know if you want a receipt when you submit your plan.

You must insure that all the protected classes listed above are included in your plan. In addition to other requirements, your plan MUST include a current workforce breakdown, an internal grievance procedure, a non-retaliation statement, designation of a person by name or position who is responsible for implementing the plan, applicability to both applicants and employees, recruitment of minorities, equal access to training programs, and an explanation of your methods of communicating the operations of your affirmative action plan to your employees and prospective applicants.

Accompanying this letter you will find the following materials:

- (1) A workforce breakdown form. You **MUST** submit a workforce breakdown (sometimes called a "utilization report") with your Affirmative Action plan. This form is provided for your convenience. If you already have a current form you have completed for another jurisdiction that includes the same type of information, you may substitute a copy of that form instead of using our form. Your workforce breakdown figures must be updated every six months. Even if you already have an acceptable affirmative action plan on file with my office, you should submit a new workforce breakdown each time you bid for a City Contract, to be sure we have up-to-date figures.
- (2) An Affirmative Action Plan checklist. I will use this checklist to review your affirmative action plan. If you compare your plan with this list, you should be able to tell whether your plan fulfills the City's requirements. If you omit any of the elements on the checklist, your plan will not be approved.
- (3) A sample affirmative action plans. These may be useful if your company has never designed an affirmative action plan before. Feel free to adopt this plan as your own or to amend it to meet your needs.

Additional materials, such as the City of Bloomington's Contract Compliance Regulations, are available from my office upon request.

**Living Wage:** Also, please be aware that you may be required to comply with the Bloomington Living Wage Ordinance. Whether the LWO applies to your project depends upon the size and type of your project and the number of people you employ. If you have questions about the applicability of the LWO, click on the LWO flow chart at: [www.bloomington.in.gov/livingwage](http://www.bloomington.in.gov/livingwage) or call me. For 2016, the living wage for covered employees is \$12.32 an hour.

If you have any questions, contact me at 812.349.3429 or email me at the following address: [mckinneb@bloomington.in.gov](mailto:mckinneb@bloomington.in.gov). My office hours are Monday through Friday, 8-5.

Thank you.

Barbara E. McKinney, Human Rights Director/Contract Compliance Officer

## BLOOMINGTON HUMAN RIGHTS COMMISSION

### Model Affirmative Action Plan for

\_\_\_\_\_, Inc., declares its policy to provide equal opportunity in employment, training and advancement, and to administer its employment practices without regard to race, color, religion, sex, national origin, ancestry, disability, sexual orientation, gender identity, veteran status, or housing status.. Our policy of nondiscrimination will prevail throughout every aspect of our employment practices, including recruitment, hiring, training and all other terms and conditions of employment. We shall implement an affirmative action plan to make it widely known that equal employment opportunities are available on the basis of individual merit. We shall survey and analyze our employment workforce annually to determine what steps, if any, are needed to conform effectively to this equal employment policy.

#### Responsible Officer

Mr. or Ms. \_\_\_\_\_ (or the \_\_\_\_\_ officer) is the equal employment opportunity officer for our company and is responsible for implementing this affirmative action policy.

#### Publication of Policy

Our employees will be made aware of our commitment to affirmative action through the following procedures:

- posting notices on employee bulletin boards,
- including our policy statement and plan in our personnel manual,
- regularly sending out notice of our policy in paycheck envelopes,
- and training supervisors to recognize discriminatory practices.

We will make potential employees aware of our policy through the following procedures:

- including the words "Equal Opportunity Employer" in all of our advertisements and notices for \_\_\_\_\_ job openings,
- notifying employment agencies about our commitment, and
- sending notice of our policy to unions.

#### Implementing Our Policy

Our affirmative action plan will be implemented by widening our recruitment sources. We shall advertise in newspapers and other media that reach people in protected classes. We shall send job notices to schools with large percentages of students in the protected classes and to local groups that serve these classes.

We shall examine our hiring practices periodically to insure that we consider only job-related qualifications in filling our positions. We shall discard irrelevant educational requirements and unnecessary physical requirements. We shall retain only job-related questions on our employment application.

We shall keep affirmative action information on each applicant, but separate from his or her application. We shall keep records on our hiring decisions to evaluate the success of our affirmative action measures. We shall decide placement, duties, benefits, wages, training prospects, promotions, layoffs and terminations without regard to race, sex, religion, color, national origin, ancestry, disability, sexual orientation, gender identity, veteran status or housing status.

## Grievance Procedure

If an employee feels he or she has been discriminated against on the basis of race, sex, religion, color, national origin, ancestry, disability, sexual orientation, gender identity, veteran status or housing status, he or she may bring the complaint to his or her immediate supervisor. If the complaint is not resolved readily at that level, he or she may submit it to \_\_\_\_\_ (personnel officer, corporate president, other) who will make a final decision on its validity. This grievance process does not preclude his or her complaining to local, state or federal civil rights agencies. We will not retaliate against an employee or applicant for voicing a grievance or for filing a complaint with the appropriate agency.

Our current workforce breakdown is shown on the attached form.

\_\_\_\_\_  
Corporate President

\_\_\_\_\_  
Date

## AFFIRMATIVE ACTION PLAN CHECKLIST

NOTE: This is **not** an Affirmative Action Plan

Effective Date: \_\_\_\_\_

<b>Contractor: Plan MUST Include:</b>	<b>Yes</b>	<b>No</b>	<b>Comments:</b>
Policy statement of equal employment opportunity	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Covers:</b> Applicants for employment	<input type="checkbox"/>	<input type="checkbox"/>	
Employees	<input type="checkbox"/>	<input type="checkbox"/>	
<b>On basis of:</b> Race	<input type="checkbox"/>	<input type="checkbox"/>	
Religion	<input type="checkbox"/>	<input type="checkbox"/>	
Color	<input type="checkbox"/>	<input type="checkbox"/>	
Sex	<input type="checkbox"/>	<input type="checkbox"/>	
National Origin	<input type="checkbox"/>	<input type="checkbox"/>	
Ancestry	<input type="checkbox"/>	<input type="checkbox"/>	
Disability	<input type="checkbox"/>	<input type="checkbox"/>	
Sexual Orientation	<input type="checkbox"/>	<input type="checkbox"/>	
Gender Identity	<input type="checkbox"/>	<input type="checkbox"/>	
Veteran Status	<input type="checkbox"/>	<input type="checkbox"/>	
Housing Status	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Designates a person responsible for implementation of the Plan</b>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Provides for communication of the policy:</b>			
Within the Organization	<input type="checkbox"/>	<input type="checkbox"/>	
Outside the Organization (e.g., recruitment sources, unions)	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Applies to all terms and conditions of employment (e.g., hiring, placement, promotion, duties, wages, benefits, use of facilities, layoff, discipline, termination)</b>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Provision for: Recruitment from minority groups</b>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Provision for: Equal access to training programs</b>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Grievance Procedure</b>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Prohibits retaliation for filing grievances</b>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Workforce Breakdown (figures up to date within 6 months)</b>	<input type="checkbox"/>	<input type="checkbox"/>	



STATE OF \_\_\_\_\_ )  
 ) SS:  
COUNTY OF \_\_\_\_\_ )

**AFFIDAVIT REGARDING E-VERIFY**

The undersigned, being duly sworn, hereby affirms and says that:

1. The undersigned is the \_\_\_\_\_ of \_\_\_\_\_.  
(Job title) (Company name)

2. The company named herein that employs the undersigned has contracted with or is seeking to contract with the City of Bloomington to provide services.

3. The undersigned hereby states that, to the best of his/her knowledge and belief, the company named herein does not knowingly employ an "unauthorized alien," as defined at 8 United States Code 1324a(h)(3).

4. The undersigned hereby states that, to the best of his/her knowledge and belief, the company named herein is enrolled in and participates in the E-verify program.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed name

STATE OF \_\_\_\_\_ )  
 ) SS:  
COUNTY OF \_\_\_\_\_ )

Before me, a Notary Public in and for said County and State, personally appeared \_\_\_\_\_ and acknowledged the execution of the foregoing this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

\_\_\_\_\_  
Notary Public  
\_\_\_\_\_  
Printed name

My Commission Expires: \_\_\_\_\_  
County of Residence: \_\_\_\_\_

**CITY OF BLOOMINGTON  
 BID, OFFER OR PROPOSAL FOR SALE OR LEASE OF MATERIALS**

**EXHIBIT D  
 (2 pgs.)**

\_\_\_\_\_  
 (PLEASE TYPE OR PRINT MATERIAL NAME)

\_\_\_\_\_  
 (DATE)

1. Governmental Unit: City of Bloomington Board of Public Works
2. County: Monroe
3. Bidder (Firm): \_\_\_\_\_
- Address: \_\_\_\_\_
- City/State/Zip Code: \_\_\_\_\_
4. Telephone Number: \_\_\_\_\_
5. Agent of Bidder (if applicable): \_\_\_\_\_

Pursuant to notices given, the undersigned offers bid(s) City of Bloomington Board of Public Works. In Accordance with the following attachment(s) which specify the class or item number or description, quantity, unit price and total amount.

The Contract will be awarded by classes or items, in accordance with specifications. Any changes or alterations in the items specified will render such bid void as to that class or item. Bidder promises that he/she has not offered nor received a less price than that price stated in his/her bid for the materials included in said bid. Bidder further agrees that he/she will not withdraw his/her bid from the office in which it is filed. A certified check or bond will be filed with each bid if required, and liability for breach shall be enforceable upon the contract, the bond or certified check or both as case may be.

\_\_\_\_\_  
 SIGNATURE OF BIDDER OR AGENT

**BID OFFER OR PROPOSAL**

Attach separate sheet listing each item bid based on specifications published by governing body. The following is an example of this bid format:

CLASS OR ITEM	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT

**NON-COLLUSION AFFIDAVIT**

STATE OF INDIANA    )  
                                   ) SS:  
 \_\_\_\_\_ COUNTY    )

The undersigned bidder or agent, being duly sworn on oath, says that he/she has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership representative represented by him/her, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to induce anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He/She further says that no person or persons, firms, or corporation has, have or will receive directly or indirectly, any rebate, fee, gift, commission or thing of value on account of such sale.

\_\_\_\_\_  
 BIDDER (FIRM)

\_\_\_\_\_  
 SIGNATURE OF BIDDER OR AGENT

Subscribed and sworn to me this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

My Commission Expires: \_\_\_\_\_  
Notary Public

County of Residence: \_\_\_\_\_

**ACCEPTANCE**

There now being sufficient unobligated appropriated funds available, the contracting authority of City of Bloomington Board of Public Works hereby accepts the terms of the attached bid for classes or items numbered and promises to pay the undersigned bidder upon delivery of the price quoted for the materials stipulated in said bid.

**BOARD OF PUBLIC WORKS MEMBERS:**

\_\_\_\_\_  
KELLY M. BOATMAN, VICE-PRESIDENT

\_\_\_\_\_  
KYLA COX DECKARD, PRESIDENT

\_\_\_\_\_  
MELANIE CASTILLO-CULLATHER, SECRETARY

## EXHIBIT E

THE FOLLOWING PAGES ARE THE SPECIFICATIONS FOR THE VEHICLES, TRUCKS AND EARTHMOVING EQUIPMENT.

*Unless otherwise specifically provided in this bid request, reference to any equipment, material, article, or patented process by trade name, make or catalog number in these specifications shall be regarded as establishing a standard of quality and performance and shall not be construed as limiting competition so equal products may be substituted. Equivalency will be determined by the City.*

*Julie Martindale C. P. M.*

*City of Bloomington*

# 3 WHEEL MECHANICAL SWEEPER

Replacement for 460 (Street)

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?			SPEC DEVIATIONS
1	General	The sweeper furnished under this proposal shall be the manufacturer's latest model and design. Any Additions, deletions, or variations from the specifications must be noted. These specifications shall be construed as minimum. Should the manufacturer's latest specifications exceed these, they shall be considered minimum and shall be furnished. It is also required that the bidder furnish descriptive literature and any additional specifications or information necessary to qualify the equipment he proposes to furnish	Yes	[ ]	No	[ ]
2	Chassis	3-wheel configuration with strut type dual rear wheel steering and stub axle front drive wheels. Drive wheels are to be protected when dumping into trucks or containers by heavy duty bumpers with rubber pads and to have full fenders, skid plate protection, and jack pads. Chassis to be wishbone reinforced, unitized type, welded and fabricated of heavy plate, with tow hooks front and rear on each side	Yes	[ ]	No	[ ]
3	Engine	A. 4 Cylinder turbocharged diesel engine minimum 74 HP at 2200 RPM and 195 ft. -lbs. torque at 1700 RPM with a minimum displacement of 276 cu in (4.5L)	Yes	[ ]	No	[ ]
		B. Cylinder liners individually replaceable, wet sleeve flanged designed	Yes	[ ]	No	[ ]
		C. Mounted on rubber mountings to absorb vibration and reduce noise	Yes	[ ]	No	[ ]
		D. Equipped with governor, electric starter, full flow oil filter, fuel / water separator, radiator recovery system, and dual safety element dry-type air cleaner with restriction indicator	Yes	[ ]	No	[ ]
		E. Filled with 50/50 anti-freeze / water mixture	Yes	[ ]	No	[ ]
4	Transmission	A. Variable displacement pump with two (2) separate variable displacement motors, automatically controlled to produce required torque at set pressure	Yes	[ ]	No	[ ]
		B. Single foot pedal to automatically produce required torque at set pressure. Power shall be evenly distributed through planetary torque hubs from wheel drive motors without side loading	Yes	[ ]	No	[ ]
		C. Protected by 10 micron filter with "in cab" restriction indicator to prevent contamination and resulting damage	Yes	[ ]	No	[ ]
		D. Single pedal control for forward / reverse	Yes	[ ]	No	[ ]
5	Steering	Rear Steer, dual control, fully hydrostatic power assist with manual override in case of engine cutout. Safety maneuverable at all sweeping speeds with minimum turning radius of not more that 15 feet (1572 mm).	Yes	[ ]	No	[ ]
6	Fuel Tank	Minimum capacity 35 gallons, located outside of operators compartment	Yes	[ ]	No	[ ]

# 3 WHEEL MECHANICAL SWEEPER

Replacement for 460 (Street)

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?				SPEC DEVIATIONS
7	Brakes	Service brakes to be full power, fully enclosed internal expanding type protected from dust by enclosed double dust shield with not less the 256 square inches (1651 cm <sup>2</sup> ) of brake lining area. Parking brake positively and mechanically applied to the drive wheels not dependent upon any electrical circuit	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	State braking system here:
8	Axles	Front are to be stub type with a minimum capacity or 10,000 lbs. (4536kg) each, Rear are to be strut type with a minimum capacity of 7400 lbs. (3356kg) Shock absorbing four (4) springs suspension (rear guide wheel)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	
9	Cab	Fully enclosed, all steel cab with doors opening from rear automotive type door latch and handles. Rubber sealer strips around doors are to be provided. Door windows shall be see-thru. Windshield to be tinted safety glass with visors. Rear windows to be sliding type for ventilation. Visibility from operators position shall be all-around with no less that 4,000 square inches (2.38 m <sup>2</sup> ) total glass area. Seats to be vinyl upholstered, foam cushioned bucket type with torsion spring suspension mounting and seat belt Rear view mirrors to include on inside cab and two outside west coast style with convex inserts. All controls shall be centralized and within easy reach of the operator. Fresh Air heater/ventilator/cab pressurized/defroster/air conditioner/cab dome light. AM/FM Radio. Limb guards.	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	
10	Electrical	A. System to be supplied by a maintenance free 12 volt, 150 minimum reserve capacity 625 CCA battery and 105 amp minimum alternator	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	
		B. System shall include sealed multiple beam headlights, stop and tail lights, side broom lights, directional signal with hazard switch, lighted gauges and or illuminated instrument panel and electric back up alarm. Cab mounted strobe light with caged protector.	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	
11	Tires	First line quality, mounted on heavy duty, disc type wheels not less that 11R22.5H (16 ply) Front, Dual 10R17.5H (16 ply) Rear	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	
12	Fenders	Front required	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	

# 3 WHEEL MECHANICAL SWEEPER

Replacement for 460 (Street)

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?		SPEC DEVIATIONS
13	Hydraulic	Power provided by shaft and gear driven pumps (no belts). Shall include a 30 gallon baffled reservoir with site glass. Staggered height ports with the highest being brooms and hopper, next propulsion and the lowest for steering circuit. Reservoir vent equipped with 10 micron, spin on filter. Both suction and return lines for drive to have 10 micron filters with cab mounted restriction indicators. All oil added must pass through a 10 micron filter. Oil thermostatically cooled with integral cooler/radiator. Cooler protected by a 125 PSI bypass valve. Pressure hydraulic fittings to be flat faced "O" ring or "O" ring boss type. Pressure circuits to have quick-disconnect check ports	Yes [ ]	No [ ]	
14	Tank Capacity	Fuel: 35 Gallons minimum	Yes [ ]	No [ ]	
15	Safety	First aid kit and fire extinguisher mounted in cab.	Yes [ ]	No [ ]	
16	Instruments	Full vision illuminated instrument panel shall include key locking ignition, speedometer, odometer, fuel, water temperature, engine oil pressure and volt meter gauges. Engine hour meter and tachometer shall be provided.	Yes [ ]	No [ ]	
17	Gutter Brooms	Vertical digger type, hydraulically driven for maximum digging power, dual, right and left hand mounted in back of front wheels. Must be raised, lowered and adjusted for wire wear hydraulically and hydraulically positioned for sweeping by the operator with a single control located in the cab.	Yes [ ]	No [ ]	
		Must be designed so that side brooms will self-adjust to maintain initial forward and outward tilt for correct broom contact pattern. Must have variable speeds, six way (in/out, up/down, forward/backward) flexibility. Diameter shall be 35 inches (914mm) long and shall protrude a minimum of 13 inches (330mm) outside of front tire for maximum operator control. To protect side broom assembly, side brooms must incorporate a clutch type shear pin system.	Yes [ ]	No [ ]	
18	Main Broom	Main broom to be hydraulically driven and not less than 68 inches (1727 mm) long and 35 inches (889) in diameter. Must be hydraulically raised and lowered by the operator with controls located in the operator's compartment. Main broom to be prefab disposable type filled with polypropylene fiber. Sweeping path with one side broom to be a minimum of 8 feet (2.4 m) wide. Broom to be spring suspended with tension adjustment to allow for ground pressure and broom wear changes.	Yes [ ]	No [ ]	

# 3 WHEEL MECHANICAL SWEEPER

## Replacement for 460 (Street)

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?		SPEC DEVIATIONS
19	Conveyor	Capable of loading hopper to 100% of rated material volume, reversible in direction without reversing main broom. Multiple ply, fabric reinforced, pliable conveyor belt with molded full width cleats (squeegee type not acceptable), hydraulically driven with relief valve.	Yes [ ]	No [ ]	
20	Hopper	Front end forward dumping, hydraulically elevated and pivoted for direct discharge at variable heights from ground level to 9.5 feet (2895mm) and with a maximum clearance height of 16 feet (4.87 m).	Yes [ ]	No [ ]	
		Lifting capacity of 9000 pounds (4900 kg) net load and a volumetric capacity of 3.5 cubic yards(2.7 m3) and a material volume of 3 cubic yards (2.3 m3). Dump cycle to be approximately 60 seconds. Rear dumping not acceptable.	Yes [ ]	No [ ]	
21	Water System	Water capacity of not less that 220 gallons (833 L). Spray nozzles located in front to side brooms and main broom, on-off and variable controls located in cab, equipped with provision to disengage water spray pump while sweeping. Pump shall be gear type with pressure relief. Integral overflow flusher type conveyor/hopper wash down to be provided. Water tanks shall be constructed of heavy gauge polyethylene, for corrosion resistance, with inspection hatch. Water fill gauge visible for operator's compartment. Water system filter and fill hose storage basket to be located on the exterior of the sweeper for easy access. The fill hose is to be 2.5 inches (63.5 mm) in diameter and 16 feet 8 inches (5100 cm) in length complete with designated hydrant coupling. Centrifugal pump capable of running dry indefinitely without any damage to the system with 100 mesh stainless filter. Lower roller wash - out system.	Yes [ ]	No [ ]	
22	Paint	All visible exposed exterior surfaces, including axles, frame, funning gear, and fuel tank (except trim, chrome, glass, and rubber) shall be shot blasted, prime coated and sprayed with two (2) component urethane acrylic enamel (URAC). Color is to be white. "Help Keep Bloomington Clean" shall be painted on front hopper lid.	Yes [ ]	No [ ]	
23	Warranty	Shall furnish a standard service and warranty policy and pay any costs of inspections and adjustment that may be necessary in accordance with the warranty. The warranty shall have a coverage of no less that one (1) year or 1250 hours. Because the maintenance of the equipment is very important to maintaining good operating condition, it is essential that repair parts and service be adequate and available. Supplier shall state clearly in his/hers proposal where a complete stock of repair parts and service facilities are available	Yes [ ]	No [ ]	

# 3 WHEEL MECHANICAL SWEEPER

Replacement for 460 (Street)

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
24	Delivery (FOB Destination)	Please state number of business days after ARO		
25	Training	Please state in detail		
26	Demo	Unit quoted must be available for demonstration upon request		

Base cost of 3 wheel sweeper: \$

**\*\*\* UNIT SHALL BE DELIVERED TO CITY OF BLOOMINGTON FLEET DEPT. FULLY SERVICED WITH (1) EACH:  
SHOP MANUAL, PARTS CATALOG, OPERATING AND SERVICE MANUALS. \*\*\***

Unit to be delivered with six (6) full sets of keys

There shall be a daily charge of \$50.00 that will be assessed for each day that the delivery is delayed (late).

*Signature is required below to acknowledge acceptance of all bid requirements*

Sign Here: \_\_\_\_\_

Print Name Here: \_\_\_\_\_

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

# TRUCK MOUNTED REGENERATIVE AIR SWEEPER

Replacement for 467 (Street)

*Any variations to the specifications are to be clearly noted.*

AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
1	General The sweeper furnished under this proposal shall be the manufacturer's latest model and design. Any additions, deletions, or variations from the specifications must be noted. These specifications shall be construed as minimum. Should the manufacturer's latest specifications exceed these, they shall be considered minimum and shall be furnished. It is also required that the bidder furnish descriptive literature and any additional specifications or information necessary to qualify the equipment he proposes to furnish.	Yes [ ] No [ ]	
2	Chassis Dual steer International 440 or equal. For safety, service, parts availability, etc., the chassis shall be of commercially available conventional cab type configuration	Yes [ ] No [ ]	
	Shall have a minimum of 32,000 GVW rating	Yes [ ] No [ ]	
	Wheel base shall be not more than 177 inches	Yes [ ] No [ ]	
	Cab to axle shall be not more than 110 inches	Yes [ ] No [ ]	
	Yield strength of the Rail, High Strength; 80,000 PSI, 3/8" X 3 3/32" X 10 1/4".	Yes [ ] No [ ]	
	Front tow hooks shall be provided	Yes [ ] No [ ]	
	For safety, the rear of the sweeper shall be equipped with a rear panel to provide under ride protection. When dumping debris, material shall not be discharged on top of the rear panel	Yes [ ] No [ ]	
3	Chassis Engine Truck engine shall be 2010 Emission Compliant, Cummins ISB 6.7200 or equivalent, turbocharged diesel, 200 HP @ 2400 RPM, 520ftlbs. @ 1600 RPM	Yes [ ] No [ ]	
	Truck engine shall be equipped with a vertical after treatment device, dual cans, RH/LH mounted, vertical tailpipe behind cab	Yes [ ] No [ ]	
	The cooling system shall be protected to -40 degrees F	Yes [ ] No [ ]	
	Engine shall be equipped with high capacity dry type air cleaner with safety element and restriction indicator, spin on fuel filter, full flow oil filter, and fuel/water separator	Yes [ ] No [ ]	
	Engine shall be equipped with block heater.	Yes [ ] No [ ]	
	Radiator fan shall be viscous drive type	Yes [ ] No [ ]	
4	Transmission A. Automatic transmission shall have five forward speeds and one reverse. (Allison RDS 2500 or equal)	Yes [ ] No [ ]	
	B. Transmission shift pattern shall be illuminated for night operation. Shift operation shall be by push button in lieu of shift lever.	Yes [ ] No [ ]	
	C. Transmission shall be equipped with heavy duty oil cooler and magnetic drain plugs.	Yes [ ] No [ ]	
	D. Synthetic transmission fluid (TES-295 compliant) shall be provided	Yes [ ] No [ ]	

5	Steering	Steering shall be full power with dual operator controls. Turning radius shall not exceed 19 ft. 6 in from curb to curb. Front axle steering cut shall be 50 degrees.	Yes [ ]	No [ ]	
6	Fuel Tank	One(1) 50 gallon fuel tank shall be shared by both engines and shall be easily accessible without raising or shifting any components. A fuel gauge, in cab, shall be supplied. Sight tube is not acceptable	Yes [ ]	No [ ]	
		Diesel emissions shall be EPA 2014, with onboard diagnostics (OBD), GHG certified and have a minimum capacity of 5 U.S. gallons diesel emissions fluid	Yes [ ]	No [ ]	
7	Brakes	Full air dual circuit type with auto slack adjusters, and dust shields, front and rear. Rockwell WABCO ABS brakes shall be supplied. Hydraulic shall not be acceptable.	Yes [ ]	No [ ]	<i>State braking system here:</i>
		Air compressor shall be 18.7 CFM minimum. Air shall be equipped with a Bendix AD-IP air dryer. Parking brake shall be spring applied rear wheel drum and shoe.	Yes [ ]	No [ ]	
8	Axles	A. Front axle shall be I-beam type, 68 inch track; minimum capacity of 11,000 lbs. Front axle shall have 12,000 lbs. minimum capacity leaf spring suspension and shock absorbers as standard equipment to avoid high stress area and cracking of the chassis.	Yes [ ]	No [ ]	
		B. Rear Axle shall have minimum capacity of 21,000 lbs. Rear suspension shall be provided through a twin air spring suspension system having a minimum capacity of 23,000 lbs.	Yes [ ]	No [ ]	
		C. Two speed rear axle shall have a 6.17/8.42:1 ration for proper sweeping speeds. An auxiliary transmission for sweeping is not acceptable.	Yes [ ]	No [ ]	
9	Cab	Steering shall be full power with dual operator controls	Yes [ ]	No [ ]	
		Each steering column shall have tilt	Yes [ ]	No [ ]	
		Dual, nonsuspension, high back with integral headrest, covered with cloth for air circulation, fixed back with 3 point seat belts shall be included	Yes [ ]	No [ ]	
		Sweeper shall include two (2) heated and remote control, outside west coast type mirrors with lower 7.44 inch convex lens for easy viewing of the side broom during sweeping	Yes [ ]	No [ ]	
		For safety during night sweeping, switches shall be illuminated so that they can be readily identified without the use of the cab dome light	Yes [ ]	No [ ]	
		Switches shall be clearly identified by name and symbol	Yes [ ]	No [ ]	
		Cab interior environment shall be fully air conditioned including a fresh air heater/defroster/ventilator	Yes [ ]	No [ ]	

9b	Cab (cont.)	Cab shall have full flow through ventilation for optimal temperature control and operator comfort	Yes [ ]	No [ ]	
		Windshield wiper shall be two speeds with washer	Yes [ ]	No [ ]	
		Wipers shall have intermittent feature	Yes [ ]	No [ ]	
		Interior of cab shall have acoustical insulation for low operating noise, automotive type trim, and center sweeper console	Yes [ ]	No [ ]	
		Dash shall be faced with soft molded plastic	Yes [ ]	No [ ]	
		All glass shall be tinted safety glass	Yes [ ]	No [ ]	
		Each operator position shall have adjustable sun visor	Yes [ ]	No [ ]	
		Doors shall be keyed alike locks	Yes [ ]	No [ ]	
		Door windows shall be roll up type with opening vent windows	Yes [ ]	No [ ]	
		Side windows shall have defogger	Yes [ ]	No [ ]	
		Dash mounted stereo with two (2) speakers mounted on the rear cab wall above the windows. Outside is a whip antenna mounted on the cab	Yes [ ]	No [ ]	
10	Electrical	Chassis alternator shall not be less than 160 amps. Shall be a 12 volt negative ground system. Dual batteries shall be maintenance free, 12 volt, and 1850 CCA total. For safety, all electrical circuits must be protected by blade type fuses. The battery shall be positively disconnected from the sweeper with an in-cab switch for safety reasons during service and maintenance work and for not draining the battery on case the sweeper is not being used for an extended period of time.	Yes [ ]	No [ ]	
		Warning lights shall indicate glow plug, air brakes, stop and tail light failure, charging system, park brake, engine oil system, hydraulic oil filter restriction and low spray water.	Yes [ ]	No [ ]	
11	Instruments	Chassis engine instruments shall include warning low fuel, low oil pressure, high coolant temperature and low battery voltage (visual and audible) to warn the operator of a potential problem before any damage to engine occurs	Yes [ ]	No [ ]	
		Truck instruments shall include warning lights for battery	Yes [ ]	No [ ]	
		Hydraulic functions shall be controlled by rocker switches located in the cab mounted control panel	Yes [ ]	No [ ]	
		Console shall have left/right primary driver switch	Yes [ ]	No [ ]	
		Instruments shall include air cleaner restriction gauge mounted on air cleaner	Yes [ ]	No [ ]	
All console switches including transmission controls and all gauges shall be illuminated	Yes [ ]	No [ ]			

12	Lighting	All lighting shall be DOT approved including combination stop and tail lights, back up lights, sealed multiple beam head lights, high beam - low beam switch, adjustable side broom and main broom spotlights, clearance and running lights, front parking and signal lights, four way flashers, dome light, illuminated rocker switches, self canceling directional signals, and hazard switch	Yes [ ]	No [ ]	
		LED rear brake, turn, and tail lamps provide a high degree of lamp visibility as well as significantly longer service life. These LED lamps are designed to have a usable life of up to 100,000 hours	Yes [ ]	No [ ]	
		Front and rear clearance lights	Yes [ ]	No [ ]	
		Front and rear directional lights with emergency flasher shall be provided	Yes [ ]	No [ ]	
		Work lights for each gutter broom and the rear broom shall be provided	Yes [ ]	No [ ]	
		All console and switches and gauges shall be illuminated	Yes [ ]	No [ ]	
		An automatic back up light and electric alarm shall be activated when transmission is placed into revers	Yes [ ]	No [ ]	
		License plate holder shall be illuminated	Yes [ ]	No [ ]	
13	Tires	Vehicle shall have two (2) rear side combination light/reflectors	Yes [ ]	No [ ]	
		Front and rear tires shall be first line quality tubeless radial tires, 11R x 22.5, 14 ply rating. Tire shall be mounted on 10 stud hub piloted steel disc 22.5 inch x 8.25 inch rims. Rear axle equipped with dual tires for load capacity and stability. Rear mud flaps shall be supplied. All wheels interchangeable to allow for emergency change at the job site.	Yes [ ]	No [ ]	
14	Sweeper Engine	Auxiliary diesel engine shall be 4 cylinder, turbocharged, dynamically counter balanced 276 CID (John Deere 4045T or equal). Engine must be EPA Tier 4 "final" and CARB emission compliant. Engine must be EPA Tier 4i Emission compliant but subject to change based on EPA emission compliant engine availability and future emission regulatory changes	Yes [ ]	No [ ]	
		Auxiliary engine horsepower rating shall be 74 (55 kW) @ 2400 RPM, torque 224 lb. ft. @ 1600 RPM	Yes [ ]	No [ ]	
		Auxiliary engine shall drive the blower "fan" by a heavy-duty five (5) "V" groove power belt for simplicity and ease of maintenance	Yes [ ]	No [ ]	
		Auxiliary engine shall have ECU for throttle control and management of after treatment system	Yes [ ]	No [ ]	
		Auxiliary engine shall be protected by a dual safety element dry type air cleaner & restriction indicator that indicates it is time to service the filter element	Yes [ ]	No [ ]	

14b	Sweeper Engine (cont.)	Auxiliary engine shall be filled with 50/50 mixture antifreeze/water for cold weather storage and/or operation	Yes [ ]	No [ ]	
		For greater heat dissipation, less noise and lower cost of maintenance, auxiliary engine shall have individually replaceable wet sleeve cylinder liners	Yes [ ]	No [ ]	
		To accommodate both easy access and sound attenuation, the engine shall be enclosed on both sides by two access doors, one on each side of the sweeper body. These doors provide access to serviceable items without tilting the hopper	Yes [ ]	No [ ]	
15	Hydraulic System	Hydraulic pump shall be a gear driven, gear style pump for maintenance free operation, having a flow capacity of 7.7 GPM @ 2500 RPM. A belt driven or PTO driven hydraulic pump is not acceptable	Yes [ ]	No [ ]	
		Reservoir capacity shall be not less than 23 gallons and have an exterior sight gauge.	Yes [ ]	No [ ]	
		The reservoir must be located in the enclosed auxiliary engine compartment for quick inspections without tilting the hopper	Yes [ ]	No [ ]	
		Hydraulic Oil Level Gauge W/Thermometer on tank shall be provided	Yes [ ]	No [ ]	
		All hydraulic circuits shall have quick disconnect pressure check ports for ease of maintenance	Yes [ ]	No [ ]	
		Hydraulic oil cooler shall be standard to provide adequate cooling with fresh air intake and accessible without raising the hopper	Yes [ ]	No [ ]	
		To minimize the hazards of potential leakage, all high pressure fittings shall be O-ring Face Seal (ORFS) type	Yes [ ]	No [ ]	
16	Pneumatic System	The hydraulic system shall operate below 200°F	Yes [ ]	No [ ]	
		There shall be a PR4 protector type pressure protector for the chassis air system	Yes [ ]	No [ ]	
		A separate air tank for all sweeper air components shall be provided	Yes [ ]	No [ ]	
		All pneumatic cylinders shall be interchangeable	Yes [ ]	No [ ]	
		All pneumatic cylinders must be rated to 150 PSI and have a separate rod seal and wiper to prevent contamination entering the cylinder.	Yes [ ]	No [ ]	
		Each cylinder shall be controlled by a single, two position, solenoid valve mounted on a manifold with common input and exhaust	Yes [ ]	No [ ]	
17	Sweeper Electrical System	There shall be a filter with a polycarbonate bowl to filter out contaminants down to 5 microns to prevent contamination in the air system	Yes [ ]	No [ ]	
		Sweeper engine shall have one (1) 925 CCA, 12 volt battery.	Yes [ ]	No [ ]	
		Sweeper engine shall have a 95 amp. Alternator	Yes [ ]	No [ ]	
		Sweeper shall have a rear facing backup camera for additional safety and operator awareness of surroundings.	Yes [ ]	No [ ]	
		Sweeper shall have an electronic backup alarm for additional warning and safety when chassis is in reverse	Yes [ ]	No [ ]	
Sweeper warning lights shall include body up and body full load	Yes [ ]	No [ ]			

17b	Sweeper Electrical System (cont.)	Sweeper wiring harnesses shall be color-coded and function stamped with appropriate circuit name every four inches, i.e. "Ignition", "Side Broom" on each wire	Yes [ ]	No [ ]	
		All electrical circuits must be protected by manually resettable circuit breakers	Yes [ ]	No [ ]	
		Two (2) Rear Bumper Mounted Strobes shall be provided			
		Two (2) work lights shall be supplied for both left hand and right hand gutter brooms, each work light shall have an independent in cab	Yes [ ]	No [ ]	
		Two (2) LED work lights shall be supplied for both left hand and right hand gutter brooms, each work light shall have an independent in cab control switch	Yes [ ]	No [ ]	
18	Sweeper Controls	All sweeper controls shall be mounted on a stationary central console that allows for use from either right or left positions. This allows the operator to view all important auxiliary engine information from either operating position	Yes [ ]	No [ ]	
		The controls shall include all sweep, spray water, and lighting functions	Yes [ ]	No [ ]	
		The controls for sweeping, spray water, and lighting functions shall be conventional rocker switches	Yes [ ]	No [ ]	
		Controls for auxiliary engine ignition and throttle, side broom down pressure and manual reset circuit breakers shall be located in the control console.	Yes [ ]	No [ ]	
		Controls for sweep system shall include sweep/resume feature; allowing the automatic raise when chassis transmission gear selector is put into reverse of side brooms and pick up head	Yes [ ]	No [ ]	
		Controls shall include a single switch that facilitates the deployment of all previously set sweeper functions. The single switch shall control at least, pickup head position, side broom position, and broom tilt position if so equipped	Yes [ ]	No [ ]	
19	Side Gutter Brooms	The right and left side broom shall be a free floating trailing arm design with inward motion safety to prevent damage when sweeping and encountering a fixed obstacle	Yes [ ]	No [ ]	
		The trailing arm shall be of a parallelogram design for simple, nonbinding action/motion and for constant bristle and wear patterns	Yes [ ]	No [ ]	
		The side brooms shall be 42inch diameter minimum, with hydraulic driven rotation	Yes [ ]	No [ ]	
		Brooms shall be pneumatically raised, lowered and suspended	Yes [ ]	No [ ]	
		Adjustable down pressure shall be pneumatically controlled by the operator from the cab in order to maintain proper surface contact consistently during vertical broom travel	Yes [ ]	No [ ]	
		The broom hydraulic motor drive shall provide not less than 6045 in/lbs. of torque for superior digging power	Yes [ ]	No [ ]	

19b	Side Gutter Brooms (cont.)	The side broom assemblies shall have greaseless pivot pins	Yes [ ]	No [ ]	
		The side broom assemblies shall be held in the storage position by a positive means to support broom during travel	Yes [ ]	No [ ]	
		Each side broom shall be controlled from in the cab by simple rocker switches.	Yes [ ]	No [ ]	
		The variable speed control provides the ability to alter the rotational speed on the Side brooms to adjust to changing road or sweeping conditions from light, bulky to heavy debris	Yes [ ]	No [ ]	
		Electrically operated tilting mechanism allows operator to change inward/outward tip of the right Side broom. Angle can be changed from the cab while sweeping. This shall allow efficient sweeping of irregular surface that could require special manual setting of the broom	Yes [ ]	No [ ]	
20	Blower	Blower shall be driven by a four (4) minimum "V" groove power belt for maximum performance and simplicity of construction, with manual tension adjustment not requiring repositioning of the engine	Yes [ ]	No [ ]	
		Shared power system shall provide all horsepower for fan speed of 3400 RPM to effectively convey the bulk of material into the debris hopper; debris types such as but not limited to trash, sand, gravel, dirt, leaves and other organics	Yes [ ]	No [ ]	
		Blower shall be a closed face turbine type, with 8 vanes minimum constructed of Hardox® 500 steel for optimal combination of hardness and abrasion resistance for maximum service life	Yes [ ]	No [ ]	
		For longevity of the fan and maximum bearing life, the impeller must be balanced to within .5 ounce inches	Yes [ ]	No [ ]	
		The blower shall be constructed using a robotic arc welder for accuracy and repeatability to a minimum of 0.0225 in., including features such as touch sensing, weaving and seam tracking information to precisely lay a quality weld that's in accordance with AWS D1.1 standards	Yes [ ]	No [ ]	
		The blower housing shall be constructed of 10 gauge steel minimum and lined with 0.25" thick minimum Linatex natural rubber for maximum extended wear in abrasive environments	Yes [ ]	No [ ]	
		The blower housing shall be constructed using a robotic arc welder for accuracy	Yes [ ]	No [ ]	
		Blower housing shall have an inspection door for access to blower without removing the blower housing or looking into the air exhaust opening	Yes [ ]	No [ ]	
		Blower housing shall not be an integral part of the hopper	Yes [ ]	No [ ]	
		The blower shall be mounted and supported on both sides by heavy-duty greaseable bearings	Yes [ ]	No [ ]	
The blower must not be directly exposed or open to the dust separator to preclude carryover of material from the separator into the blower and blower housing.	Yes [ ]	No [ ]			

21	Pick up Head	The pickup head is a spring balanced, all steel fabricated pickup head with separated upper and lower chambers where pressurized air is blasted from the upper chamber through an elongated blast orifice, to the lower vacuum chamber	Yes [ ]	No [ ]	
		The pickup head shall be not less than 85 inches wide and 28 inches long or a total area of 2400 square inches minimum	Yes [ ]	No [ ]	
		The pickup head shall have a minimum of 14 inch diameter pressure hose that connects the blower outlet with the pickup head	Yes [ ]	No [ ]	
		The pickup head shall have a minimum 12 inch diameter suction hose with a quick disconnect coupling at the lower area near the pickup head. The quick disconnect shall enable the operator to inspect the suction hose as well as the inlet area of the pickup head without tilting the hopper	Yes [ ]	No [ ]	
		The pressure side shall be equipped with an electric actuated pressure relief valve/vacuum enhancer/leaf bleeder, for optimum leaf and light debris sweeping. The control for this feature must be in cab positional information for operator	Yes [ ]	No [ ]	
		The front and rear debris curtains shall be removable without removing the pickup head from the unit	Yes [ ]	No [ ]	
		The pickup head shall be equipped with side mounted adjustable steel runners with carbide inserts with a minimum width of 1 inch for maximum pickup performance and long life	Yes [ ]	No [ ]	
22	Hopper	The pickup head shall be raised and lowered hydraulically by a rocker switch on the control panel inside the cab	Yes [ ]	No [ ]	
		Volumetric capacity shall be 7 cubic yards minimum	Yes [ ]	No [ ]	
		Hopper shall be constructed of 10 gauge steel sides, and quarter inch floor	Yes [ ]	No [ ]	
		The hopper floor angle shall be a minimum of 10 degrees to assist in easy dump off of debris	Yes [ ]	No [ ]	
		The hopper shall have an external hopper prop. No exception to this feature shall be accepted if body is raised to dump	Yes [ ]	No [ ]	
		A removable, adjustable, abrasion resistant "scoop" style steel deflector shall be located at the suction inlet. This scoop is to direct material to the center of the hopper for optimal loading	Yes [ ]	No [ ]	
		The hopper rear door shall be hinged at the top and opened by means of a hydraulic cylinder	Yes [ ]	No [ ]	
		The hopper rear door shall open at a minimum of 90 degrees	Yes [ ]	No [ ]	
The rear hopper door shall have an external door prop. No exception to this feature shall be accepted	Yes [ ]	No [ ]			
The hopper rear door shall include an automatic lock mechanism for a tight fit and optimal sealing between the hopper and the rear door	Yes [ ]	No [ ]			

22b	Hopper (cont.)	The rear door seal shall be a water resistant heavy-duty reinforced D style rubber seal for optimal sealing. Foam seals that can absorb moisture and freeze are not acceptable	Yes [ ]	No [ ]	
		An inspection door is built into the left side of the hopper, the door allows odd sized debris to be put in the hopper manually	Yes [ ]	No [ ]	
		Dump control shall consist of weatherproof toggle switches located on the exterior right side of sweeper along with In cab dump switches, hopper raise/lower and hopper door open/close, shall be included	Yes [ ]	No [ ]	
23	Dust Separator	Dirt separation from the air stream shall be accomplished by means of a Labyrinth style dust separator that is installed at the air return outlet of the hopper. The separator shall be designed so that it will not plug with regular debris	Yes [ ]	No [ ]	
		To allow inspection and cleaning of the separator interior, the dust separator shall have minimum of two hinged inspection doors made of abrasion resistant steel	Yes [ ]	No [ ]	
24	Spray Water System	The water tank shall be a removable, 240 gal. total capacity. Constructed of rust proof polyethylene	Yes [ ]	No [ ]	
		The water tank shall be frame mounted with no part sharing any common wall with the hopper and shall not raise during body dumping for better weight distribution	Yes [ ]	No [ ]	
		A 16 ft. 8 inch fill hose with NST coupling with strainer shall be supplied	Yes [ ]	No [ ]	
		A water level gauge shall be provided on the control console within the cab	Yes [ ]	No [ ]	
		All water lines shall be color coded for easy identification	Yes [ ]	No [ ]	
		The water filter must be easy to access and clean without tilting the hopper. A ball valve must be provided at the filter inlet to allow cleaning of the	Yes [ ]	No [ ]	
		All water piping shall be external to the operator cab. No water lines capable of leaking or bursting shall be within the cab	Yes [ ]	No [ ]	
		Three (3) water spray nozzles are located at each side broom for optimal dust control. A pivoting bracket is provided to allow for optimum positioning of the side broom spray nozzles	Yes [ ]	No [ ]	
		Seven (7) easily removable water spray nozzles are located inside the pickup head	Yes [ ]	No [ ]	
		Three (3) removable water spray nozzles are located at the lower portion of the suction hose for lubrication of the suction hose and to further enhance dust control	Yes [ ]	No [ ]	
		Shall have two (2) diaphragm type pumps that will provide a combined flow of 8 GPM @ 40 PSI minimum to the pickup head, the suction hose and the side brooms	Yes [ ]	No [ ]	
One water pump is dedicated to supplying water to the pickup head and the suction hose for dust control	Yes [ ]	No [ ]			

24b	Spray Water System (cont.)	One water pump is dedicated to the side brooms for dust control	Yes [ ]	No [ ]	
		Each water pump must have two flow rates, selectable by the operator from within the cab and capable of running dry without damage	Yes [ ]	No [ ]	
		Cab controlled front water spray bar assists with wetting down debris under extremely dusty conditions. Four removable brass nozzles mounted under the front bumper of the truck on copper pipe keep the system corrosion resistant	Yes [ ]	No [ ]	
		Special nozzle assembly in the body door for washing out the body. Fill hose is included that is connected to a hydrant and the wash out system in the body door	Yes [ ]	No [ ]	
		Quick coupling for the water fill hose. Instead of threaded on connection, the water fill hose can be quickly connected and disconnected to the sweeper's water fill connector	Yes [ ]	No [ ]	
		Unit shall include a low pressure wash down system. Also included is a 25' length of 1/2 inch diameter hose and spray nozzle with couplings on both right and left hand side of sweeper	Yes [ ]	No [ ]	
		Functional control of water system dispenses water with the use of the sweeper function rocker switch	Yes [ ]	No [ ]	
25	Sweeper Instrument System	Sweeper engine instruments shall include tachometer, hour meter, oil pressure, fuel, voltage, and coolant temperature for complete information for the operator on the condition of the auxiliary engine, visible from both operator positions	Yes [ ]	No [ ]	
		Sweeper engine instruments shall include an auxiliary engine air intake restriction gauge for ease of maintenance	Yes [ ]	No [ ]	
		Sweeper instruments shall include diagnostic information for the sweeper engine and sweeper functional information to include water level, sweeping mode and transport mode	Yes [ ]	No [ ]	
		Sweeper instruments shall include a "raised" hopper indicator, an "open" hopper door indicator and a "full" hopper indicator to notify the operator	Yes [ ]	No [ ]	
		Controls shall include an in cab switch for vacuum enhancer, with percent open/close display for increased operator awareness for adjustment of pickup head vacuum level for continuous pickup of leaves and bulky debris	Yes [ ]	No [ ]	
26	Paint	All visible exposed exterior surfaces, including axles, frame, running gear, and fuel tank (except trim, chrome, glass, and rubber) shall be shot blasted, primed coated and sprayed with two component urethane acrylic enamel (URAC). Color is to be white.	Yes [ ]	No [ ]	

27	Warranty	Shall furnish a standard service and warranty policy and pay any costs of inspections and adjustment that may be necessary in accordance with the warranty. The warranty shall have a coverage of no less that one (1) year or 1250 hours. Because the maintenance of the equipment is very important to maintaining good operating condition, it is essential that repair parts and service be adequate and available. Supplier shall state clearly in his/hers proposal where a complete stock of repair parts and service facilities are available	Yes [ ]	No [ ]
28	Required Options	LED Strobe lights with caged protector mounted front and rear of unit	Yes [ ]	No [ ]
		10 - BC Fire Extinguisher (mounted in cab)	Yes [ ]	No [ ]
		First-Aid kit (mounted in cab)	Yes [ ]	No [ ]
		Reflective triangle kit (mounted in the cab)	Yes [ ]	No [ ]
		Camera, rear- cab mounted	Yes [ ]	No [ ]
29	Delivery (FOB Destination)	Please state number of business days after ARO		
30	Training	Please state in detail		
31	Demo	Unit quoted must be available for demonstration upon request		

**Base cost of Truck Mounted sweeper: \$**

**Please provide a quote for the following option:**

32	Options	Commercial Cabover Chassis	\$
		Stainless Steel Hopper	\$
		Liner for Hopper	\$
		Hopper Drain	\$
		Hopper Deluge Washout System	\$
		Full -Width Pick Up Magnet	\$
		In Cab Hopper Dump	\$
		Rear Directional Arrow Board	\$

**\*\*\* UNIT SHALL BE DELIVERED TO CITY OF BLOOMINGTON FLEET DEPT. FULLY SERVICED WITH (1) EACH: SHOP MANUAL, PARTS CATALOG, OPERATING AND SERVICE MANUALS. \*\*\***

**Unit to be delivered with six (6) full sets of keys**

There shall be a daily charge of \$50.00 that will be assessed for each day that the delivery is delayed (late).

*Signature is required below to acknowledge acceptance of all bid requirements*

Sign Here: \_\_\_\_\_

Print Name Here: \_\_\_\_\_

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

# ARTICULATING AERIAL TRUCK with CHIP BOX

Replacement for 848

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
1	Cab	Conventional, with tilt hood	Yes [ ] No [ ]	
2	Cab to Axle	120" or as required	Yes [ ] No [ ]	
3	GVW	33,000 lb. minimum	Yes [ ] No [ ]	
4	Frame	110,000 psi minimum with inverted L reinforcement	Yes [ ] No [ ]	
5	Front Axle	Set back 14,000 lb. Minimum	Yes [ ] No [ ]	
6	Rear Axle	21,000 lb. Minimum with <b>driver</b> controlled differential lock, single speed axle recommended for severe service	Yes [ ] No [ ]	
7	Springs	As required for GVW, with rear overload springs	Yes [ ] No [ ]	
8	Shock Absorbers	Double action heavy duty type on front axle	Yes [ ] No [ ]	
9	Hub Seals	Front wheels shall have oil filled hubs	Yes [ ] No [ ]	
10	Wheels	Front - Single piece 9.00" X 22.5" Rear - Single piece 8.25" X 22.5"	Yes [ ] No [ ]	
11	Tires	Front: Goodyear G186 type 315/80R22.5 18 ply or equal	Yes [ ] No [ ]	
		Rear: Goodyear G177 type 11R22.5 16 ply or equal	Yes [ ] No [ ]	
12	Engine	A. In line 6 cyl. diesel 6.7 L & 260 hp min., 750 lb. ft. net torque at minimum of 1,200 rpm	Yes [ ] No [ ]	
		B. 1,250 Watt block heater minimum	Yes [ ] No [ ]	
		C. Dual or two-stage spin-on oil filter	Yes [ ] No [ ]	
		D. Single stage dry type air filter	Yes [ ] No [ ]	
		E. Cruise control or fast idle function	Yes [ ] No [ ]	
		F. Single 2-stage fuel filter with heated fuel-water separator	Yes [ ] No [ ]	
13	State estimated fuel economy	<b>City:</b> <b>Highway:</b>	Yes [ ] No [ ]	
14	Cooling System	A. Increased cooling capacity radiator with overflow recovery system	Yes [ ] No [ ]	
		B. Heavy duty fan	Yes [ ] No [ ]	
		C. All radiator and heater hoses shall have constant type hose clamps	Yes [ ] No [ ]	
		D. Extended life antifreeze	Yes [ ] No [ ]	
15	Transmission	MD-3500 RDS type, automatic 6 speed with auxiliary filter and back up alarm	Yes [ ] No [ ]	
16	Steering	A. Heavy duty power assisted with gear driven power steering pump with external filter	Yes [ ] No [ ]	
		B. Tilt and telescopic steering wheel	Yes [ ] No [ ]	
17	Battery	Dual 12 volt maintenance free with 1800 total C. C. A. minimum	Yes [ ] No [ ]	
18	Alternator	150 Amp. minimum	Yes [ ] No [ ]	

# ARTICULATING AERIAL TRUCK with CHIP BOX

Replacement for 848

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
19	Brakes	A. Dual air with 13 C.F.M. compressor	Yes [ ]	No [ ]
		B. Bendix AD-SP air drier or equal (spin on cartridge)	Yes [ ]	No [ ]
		C. Heated spitter valve shall be provided on all tanks	Yes [ ]	No [ ]
		D. Front and rear automatic slack adjusters	Yes [ ]	No [ ]
		E. Dust shields on front and rear drums	Yes [ ]	No [ ]
		F. Air compressor shall be piped directly into engine's main air filter eliminating need for an compressor filter	Yes [ ]	No [ ]
		G. On each rear wheel, spring set piggy back type	Yes [ ]	No [ ]
		H. Electric brake controller shall be in easy reach of driver and be wired to a six way plug in rear	Yes [ ]	No [ ]
20	Horn	Dual electric	Yes [ ]	No [ ]
21	Cab (Conventional)	A. Standard with fresh air heater and defroster	Yes [ ]	No [ ]
		B. Two heated coast type (7x16) mirrors	Yes [ ]	No [ ]
		C. Gauges: Water temp, fuel, electric, tachometer, amp. and oil pressure indicators, transmission temp, volt meter and hour meter mounted in dash	Yes [ ]	No [ ]
		D. Fiberglass tilt hood	Yes [ ]	No [ ]
		E. Electric two-speed wipers with intermittent setting and washer	Yes [ ]	No [ ]
		F. Dome lamp	Yes [ ]	No [ ]
		G. Sun visors - both sides	Yes [ ]	No [ ]
		H. Vinyl split bench seat with seat belts-driver /passengers	Yes [ ]	No [ ]
		I. Grab handles mounted on both sides of cab	Yes [ ]	No [ ]
		J. AM/FM radio, tinted glass, and air horn	Yes [ ]	No [ ]
		K. Air conditioning - after factory installations will NOT be acceptable	Yes [ ]	No [ ]
			Vinyl floor mat	Yes [ ]
	Two (2) 12V power outlets	Yes [ ]	No [ ]	
22	Tow hooks	Front	Yes [ ]	No [ ]
23	Fuel tank	Single aluminum 70 Gallon minimum mounted on left side	Yes [ ]	No [ ]
24	Wiring	Rear trailer wiring	Yes [ ]	No [ ]
25	Ground to bottom of platform	60' minimum	Yes [ ]	No [ ]
26	Working height	65' minimum	Yes [ ]	No [ ]
27	Vehicle Height	Vehicle height placard shall be installed in driver's view in cab	Yes [ ]	No [ ]
28	Reach to edge of platform	48' minimum (over center position)	Yes [ ]	No [ ]
29	Side by side boom configuration	For lower travel height	Yes [ ]	No [ ]
30	Lower boom articulation	0 to 125 degrees minimum, with single cylinder	Yes [ ]	No [ ]

# ARTICULATING AERIAL TRUCK with CHIP BOX

**Replacement for 848**

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
31	Upper boom articulation	270 degrees minimum, in relation to lower boom with single lift cylinder. (no chains or cables)	Yes [ ] No [ ]	
32	Outriggers	One (1) set of "A" frame outriggers equipped with double acting pilot operated check valves with independent control valves	Yes [ ] No [ ]	
		The control valve for outriggers along with control valve for chip box shall be located on the rear side of the pedestal placed so operator can view outrigger operation on both sides at central location	Yes [ ] No [ ]	
		1 Pair of plastic 1" X 18" X18" black with handles pads shall be included	Yes [ ] No [ ]	
		Outrigger Pad Holder, 20" L x 20" W x 3" H, Fits 19.5" x 19.5" x 2" And Smaller Pads, Bolt-On, Bottom Washout Holes, 3/4" Lip Retainer	Yes [ ] No [ ]	
33	Pedestal and Turntable	Turntable structure to consist of a 1" thick pedestal top plate and a 1 1/4" turntable base plate	Yes [ ] No [ ]	
		The mounting surfaces on the turntable and pedestal plate are to be machined to provide a surface after all welding is complete	Yes [ ] No [ ]	
34	Rotation	The shear ball bearing rotation ring is to measure not less than 2" thick	Yes [ ] No [ ]	
		360 degree continuous unrestricted rotation shall be provided by the worm gear box, mesh of the pinion gear to the rotation gear shall have complete adjustability	Yes [ ] No [ ]	
		Self locking gear box shall be located on the side of the turntable for ease of maintenance and adjustment	Yes [ ] No [ ]	
		Box to be non-back drivable so the need for a brake is eliminated	Yes [ ] No [ ]	
35	Lower boom Pivot Pin	Maintenance free elbow: nitrided to prevent rust, increase hardness and eliminates the need for grease at the elbow	Yes [ ] No [ ]	
36	Upper Boom Hold Down Clamp	Manual Upper Boom Stow Securing System with support cradle and tie down strap	Yes [ ] No [ ]	

# ARTICULATING AERIAL TRUCK with CHIP BOX

Replacement for 848

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
37	Lower Boom	Shall be fabricated reinforced steel which measures 8" x 12" x 3/8" thick cross section and an overall length of 268" minimum	Yes [ ]	No [ ]
		Shall include a rectangular compression molded high density fiberglass insert which measures 9 3/4" x 13 3/4" with 7/8" thick wall with a clear insulation gap of 24"	Yes [ ]	No [ ]
		Inner surface wax impregnated to cause moisture to bead	Yes [ ]	No [ ]
		Lifting Eye - lifting eye at outer end of lower boom. Rated at 1,000lbs (454kg) lifting capacity	Yes [ ]	No [ ]
38	Upper Boom	Shall be compression molded high density fiberglass which measures a minimum 3/8" wall with clear insulation gap of 21' 1", designed to resist torquing and twisting	Yes [ ]	No [ ]
		Inner surface to be wax impregnated to cause moisture to bead	Yes [ ]	No [ ]
		Lower end to be fabricated reinforced steel for cylinder attachment	Yes [ ]	No [ ]
39	Chainsaw Scabbard	Shall be included	Yes [ ]	No [ ]
40	Long Reach Chainsaw Holder	Shall be included	Yes [ ]	No [ ]
41	Lift Cylinders	Shall be equipped with O-ring expanded high pressure seals, wear rings, threaded end glands, hardened chrome plated rods, and integral holding valves	Yes [ ]	No [ ]
		Rod ends threaded and welded, blind end one piece cast steel equipped with aluminum bronze bearings	Yes [ ]	No [ ]
42	Platform	Fiberglass, one (1) man, side-hung 24" x 24" x 39" deep	Yes [ ]	No [ ]
		Proportional Speed, Upper Control Handle - with safety interlock and interlock guard. Located on the side of the platform nearest the upper boom, mounted on the shaft. Forward/back operates lower boom down/up, tiller operates rotation CW/CCW, and up/down operates upper boom up/down	Yes [ ]	No [ ]
		Shall be equipped with manual emergency platform dump system, 350# capacity with liner installed	Yes [ ]	No [ ]
		Shall be located on curbside when aerial device is mounted behind the cab with the booms stowed to the rear of vehicle and the platform stowed above the cab	Yes [ ]	No [ ]
		Shall be equipped with outside step	Yes [ ]	No [ ]

# ARTICULATING AERIAL TRUCK with CHIP BOX

Replacement for 848

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
43	Platform Liner	Facilitates periodic electrical testing and provides additional insulation	Yes [ ]	No [ ]
		Liner shall be constructed from low density polyethylene with ultra violet inhibitor added	Yes [ ]	No [ ]
		Each new liner shall be tested at 50,000 volts AC RMS for one (1) minute	Yes [ ]	No [ ]
		Platform Floor Liner (Scuff Pad) with Step, 24 x 24 inches (610 x 610 mm)		
		Minimum ¼" wall thickness	Yes [ ]	No [ ]
44	Platform Leveling	Achieved by a single leveling chain and 3/4" fiberglass rods in the upper and lower booms	Yes [ ]	No [ ]
		No cables should be placed around sheaves, thus eliminating dangerous cable wear	Yes [ ]	No [ ]
45	Throttle Control	There shall be two (2) speed throttle control activated automatically by activation of any hydraulic function	Yes [ ]	No [ ]
		Engine shall remain at idle until activation occurs	Yes [ ]	No [ ]
46	Dielectric Rating	unit shall be rated as a category C and meet the requirements as specified in ANSI A92.2-1990	Yes [ ]	No [ ]
47	Control Purging System	Shall be automatic with single handle control which eliminates the possibility of the handle becoming stiff or hard to move in cold weather	Yes [ ]	No [ ]
48	Upper Controls	The one (1) handle control shall provide individual movement of one (1) of the three (3) actuating components or simultaneous movement of more than one of the actuating components	Yes [ ]	No [ ]
		Coordinated control handle enables the operator to move the platform in a straight line vertically or horizontally	Yes [ ]	No [ ]
49	Lower Controls	Conventional three (3) handle ground controls are to be located on turret including selector to activate controls and upper control override	Yes [ ]	No [ ]
50	Hydraulic System	Shall be open center pressure compensating system with a piston pump, ten (10) micron return filter	Yes [ ]	No [ ]
		100 mesh suction filter, 25 gallon reservoir capacity, fluid level and temperature gauge, and two (2) gate valves in the system to eliminate the need to drain the reservoir before servicing the hydraulic system	Yes [ ]	No [ ]
		Pilot system shall operate at a low pressure off the main hydraulic system and activates that spool in the three (3) main control valves at the base	Yes [ ]	No [ ]
		The hydraulic pressure should never exceed 400 PSI at the upper controls	Yes [ ]	No [ ]
		Kendall Glacial Blue Hydraulic Oil or equal	Yes [ ]	No [ ]

# ARTICULATING AERIAL TRUCK with CHIP BOX

Replacement for 848

#	AREAS	SUGGESTED SPECIFICATIONS	<i>Any variations to the specifications are to be clearly noted.</i>	
			MEET SPEC?	SPEC DEVIATIONS
51	Hydraulic Reservoir	Shall include a 30 gallon minimum oil reservoir and flow control to eliminate heat build-up when hydraulic tools are used extensively	Yes [ ]	No [ ]
		Sight and Temperature gauge for hydraulic reservoir	Yes [ ]	No [ ]
52	Safety Harness and Lanyard	One (1) shock-absorbing safety harness and lanyard shall be provided	Yes [ ]	No [ ]
53	Emergency Power System	Shall consist of a 12 volt DC electric motor hydraulic pump which shall operate off the 12 volt truck battery	Yes [ ]	No [ ]
		This emergency pump provides approximately 2.5 gpm oil output to allow the unit to be returned to a stowed position	Yes [ ]	No [ ]
54	Platform Cover	Shall be made from reinforced vinyl material which is waterproof and has exceptional resistance to chafing and tearing	Yes [ ]	No [ ]
		Cover shall be attached under platform top lid by means of a drawstring and shall be easily stored when not in use	Yes [ ]	No [ ]
55	Pump	Pressure compensating hydraulic pump shall be supplied with all necessary materials for hook up	Yes [ ]	No [ ]
56	PTO	Hot Shot PTO shall be provided for specified transmission	Yes [ ]	No [ ]
57	Upper Tool Circuit	Two (2) sets of HTMA approved hydraulic couplers provided at platform with ¼ turn shutoff valve	Yes [ ]	No [ ]
		Incorporates drain back feature to relieve pressure on couplers if disconnected under pressure	Yes [ ]	No [ ]
58	Wheel Chocks	One (1) pair shall be provided with holders	Yes [ ]	No [ ]
59	Tree Trimmer Package	Integral dump/chip body suitable for installation on any chassis with an appropriate GVWR and an approximate CA of 120"	Yes [ ]	No [ ]
60	Compartments	There shall be two (2) small underbody tool boxes a of minimum of 30"L x 22"H x 19"D, installed, one (1) each side at the rear under the chip box	Yes [ ]	No [ ]
		Shall include bottom hinged doors and locking bars	Yes [ ]	No [ ]
		Two (2) cabinets, recessed into flatbed immediately behind cab on each side of truck	Yes [ ]	No [ ]

# ARTICULATING AERIAL TRUCK with CHIP BOX

Replacement for 848

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
60b	Compartments (cont.)	Street side: Single compartment (66 inches long x 50 inches high x 26.5 inches deep) with two (2) barn-style doors and one (1) vertical door. Two (2) full width shelves fixed at 11 inches and 25 inches from top. Rubber matting (0.125 inch thick) in bottom on left side for chainsaw storage. Right side has access to horizontal thru compartment extending to curbside	Yes [ ] No [ ]	
		Curbside: Single compartment (41 inches long x 50 inches high x 26.5 inches deep) with two (2) barn-style doors. Left side has two (2) full width shelves fixed at 11 inches and 25 inches from top. Right side has six (6) material hooks (3-0-3). Platform mounted behind compartment 12 inches high x 25 inches wide x 26.5 inches deep. Horizontal thru compartment (6 inches high) recessed 12 inches, open to street side with vertical partitions spaced 10 inches, 6 inches and 9 inches wide with drop-down door. Access step to T-box compartment top.	Yes [ ] No [ ]	
		Standard features: Bolt-on rotary slam door locks. Gas shock door holders. Door locks are single point with locking cylinders.	Yes [ ] No [ ]	
		Provide flat plate across top of transverse for walking surface	Yes [ ] No [ ]	
		Finish paint interior compartments the same as exterior. Integrated locking system installed	Yes [ ] No [ ]	
61	Dump/Chip Body	Chip Dump Body 14.5 cubic yard capacity, 96 inches wide x 60 inches high x 132 inches long (2438 x 1524 x 3353 mm) with ladder box on curb side of body and single piece tailgate	Yes [ ] No [ ]	
		Structural Channel stringers and floor channel	Yes [ ] No [ ]	
		12 gauge minimum floor plate	Yes [ ] No [ ]	
		14 gauge minimum sides and front with full length die-formed reinforcing ribs	Yes [ ] No [ ]	
		14 gauge roof	Yes [ ] No [ ]	
		Rear top and sides of body reinforced for lower boom support	Yes [ ] No [ ]	
		26-1/2 inches (673 mm) high tailgate, hinged curb side with provision to hold open for dumping	Yes [ ] No [ ]	
		12 gauge minimum rear under body skirt panel	Yes [ ] No [ ]	
	Curb side built-in ladder compartment, 12 inches wide x 25 inches high with wear pads and internal security chain.	Yes [ ] No [ ]		

# ARTICULATING AERIAL TRUCK with CHIP BOX

Replacement for 848

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
61b	Dump/Chip Body (cont.)	Pole pruner compartment, 11 inches high (279.4 mm), above ladder compartment with dual shelves and rear locking door. Upper section of rear door opening is open	Yes [ ]	No [ ]
		Interior of chip body finished with scratch and corrosion resistant liner	Yes [ ]	No [ ]
		Underside of chip body undercoated	Yes [ ]	No [ ]
62	Hoist	Class "C" hydraulic hoist, installed, with 45 degree dump angle and body prop	Yes [ ]	No [ ]
63	Hydraulic Valves for Dump	Shall include selector valve and 4-way control valve with relief and hoses	Yes [ ]	No [ ]
		Provides power from hydraulic system	Yes [ ]	No [ ]
64	Special Short Flatbed	Under pedestal base to extend from front of pedestal base to rear edge of outriggers	Yes [ ]	No [ ]
		Installation shall include four (4) amber clearance lights and four (4) amber reflectors at the front corners of bed	Yes [ ]	No [ ]
		Two (2) stirrup steps, one at each side, for access to flatbed section and the cab guard ladder	Yes [ ]	No [ ]
		Flatbed shall extend approximately 6" to the rear of pedestal	Yes [ ]	No [ ]
		Constructed with 6" channel sub-sill; 3" channel cross sill with 1/8" floor plate decking	Yes [ ]	No [ ]
65	Mud Flaps	Shall have (1) pair of mud flaps installed on the rear of, and one (1) pair in the front of rear tires.	Yes [ ]	No [ ]
66	Cab Guard	Shall be fabricated from expanded metal and steel tubing to protect the top of the cab, windshield, and hood	Yes [ ]	No [ ]
		Shall include a rear window guard to protect the rear window of the cab, also constructed of expanded metal	Yes [ ]	No [ ]
		To be installed and painted the same color of the cab	Yes [ ]	No [ ]
67	Amber Strobe Lights	Lights and reflectors in accordance with FMVSS #108 lighting package (Complete LED, including LED reverse lights), Security Mounted	Yes [ ]	No [ ]
		Custom Strobe Light, Surface Mount LED, Federal Signal (MPS300-A):- Two (2) installed in the front grill- One (1) each side at the front bottom corners of the chip body	Yes [ ]	No [ ]
		4-Corner Strobe Lighting, Amber LED, Two (2) Round Lights in Front Corners of Cab Guard and Two (2) Round Lights at Rear	Yes [ ]	No [ ]
		LED lighting package, security-mounted, with wiring harness in automotive type loom	Yes [ ]	No [ ]
		Two(2) LED strobes mounted in the upper rear corners of the dump body.	Yes [ ]	No [ ]

# ARTICULATING AERIAL TRUCK with CHIP BOX

Replacement for 848

*Any variations to the specifications are to be clearly noted.*

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
68	Work Lights	Custom Flood Light, Details: - Surface mount LED Scene Light, Rigid (86610) - One (1) each side, installed / recessed at top of boom rest support - Wired to rear tractor light switch in the cab	Yes [ ]	No [ ]
		Remote Spot Light, LED, Permanent Mount with Wireless Dash Mounted Controls and Programmable Wireless Remote, Details: - Installed on top of chip box at the front CS - Include metal brush guard	Yes [ ]	No [ ]
		Flood Light, LED, With Aluminum Housing, 4.25" W x 4.25" H, No Switch on the Light, Details: - One (1) each side, at the rear under-ride - Wired to reverse and provide a master switch in the cab	Yes [ ]	No [ ]
69	Air Coupler	An air coupling quick disconnect, female socket for a 3/8" hose shall be located on CS front of tool box	No [ ]	No [ ]
70	Installation of Aerial Device	Shall include hoses, installation of PTO and pump, one access ladder as required, and stand boom support	Yes [ ]	No [ ]
71		Unit shall be tested in accordance with ANSI A92.2-1990	Yes [ ]	No [ ]
72	Installation of Body and Hoist	Shall include all materials and labor required for installation and operation	Yes [ ]	No [ ]
73	Testing	All Dielectric and Stability testing shall be completed according to ANSI requirements	Yes [ ]	No [ ]
74	Painting of Unit	Unit and body shall be primed, than painted two (2) coats of one color polyurethane	Yes [ ]	No [ ]
75	Lights and Reflectors	Shall be in accordance with FMVSS #1108	Yes [ ]	No [ ]
76	Trailer Socket	6-Way trailer socket is to be installed near the pintle hitch	Yes [ ]	No [ ]
77	Pintle Hitch	Holland T60A or equal, installed with safety chain eyes and bracing to chassis frame rails	Yes [ ]	No [ ]
79	Underride Protection	ICC (Underride Protection) Bumper Installed At Rear		
80	Training		Yes [ ]	No [ ]
81	Decals	All function shall be labeled as well as all service points	Yes [ ]	No [ ]
82	Color	Exterior: White	Yes [ ]	No [ ]
83		Interior: Dark Gray	Yes [ ]	No [ ]
84	Warranty	State in detail on truck chassis, engine, transmission, body, hoist, and hydraulic system		
85	Delivery (FOB Destination)	Unit shall be delivered with six (6) sets of keys	Yes [ ]	No [ ]
		Please state number of business days after ARO		

# ARTICULATING AERIAL TRUCK with CHIP BOX

Replacement for 848

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
<b>Cost of Quoted Truck:</b>			\$	

Any variations to the specifications are to be clearly noted.

**Please provide a quote for the following options:**

86	Hybrid Chassis	Using the basic specifications, a Hybrid Truck Chassis	\$	
87	Secondary Engine	A secondary Diesel engine for hydraulic power	\$	
88	Hoses	Set Of 10' Hoses And Couplings For Hydraulic Tools	\$	
89	Chainsaw	Fairmont or equal Chainsaw With 16" Cutting Capacity (Requires 4-8 GPM, 1000-2000 PSI)	\$	
		Fairmont 88.5" Long Reach Chainsaw (Pole Saw) (Requires 5-8 GPM, 1000-2000 PSI)	\$	
90	Boom Latch	Upper boom auto latch	\$	
91	Platform	90 Degree platform rotator	\$	
92	75' Aerial	Elevator for 75' working height	\$	

**\*\*\* UNIT SHALL BE DELIVERED TO CITY OF BLOOMINGTON FLEET DEPT. FULLY SERVICED WITH (2) EACH: SHOP MANUAL, PARTS CATALOG, OPERATING AND SERVICE MANUALS. \*\*\***

Unit to be delivered with 3 full sets of keys.

There shall be a daily charge of \$50.00 that will be assessed for each day that the delivery is delayed (late).

*Signature is required below to acknowledge acceptance of all quote requirements*

Sign Here: \_\_\_\_\_

Print Name Here: \_\_\_\_\_

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

# 3/4 TON SINGLE REAR WHEEL 4WD PICKUP TRUCK WITH DUMP BODY AND SNOW PLOW OPTS

*If you cannot meet our suggested specifications...please describe yours.*

**Replacement for # 828 (Parks)**

AREAS		SUGGESTED SPECIFICATIONS	MEET SPEC?		DESCRIBE DEVIATIONS
1	GVW	9,000 lb. minimum	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
2	Cab To Axle	56"	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
3	Front Suspension	3,800 lb. minimum w/stabilizer bar	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
4	Rear Suspension	6,000 lb. minimum with overloads	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
5	Front Axle	Automatic locking hubs	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
6	Rear Axle	Limited Slip	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
7	Engine	5.4 L minimum V8 Gas w/auxiliary cooler	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
8	Cooling System	Heavy Duty radiator with recovery system	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
9	Alternator	140 amp minimum	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
10	Battery	600 CCA maintenance free minimum	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
11	Transmission	Heavy duty overdrive automatic with auxiliary cooler	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
12	Fuel Tank	Minimum 30 gallon	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
13	Tires	Front and rear to be mud and snow type to meet GVW. Must include spare tire and wheel mounted under rear of bed	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
14	Wheels	Standard steel with hub caps	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
15	Tow Hooks	Front	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
16	Steering /Brakes	Power 4 wheel disc	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
17	Cab	Standard with fresh air heater and defroster; dual camper style mirrors; 12 volt power outlet; dome light, cargo light; electric two-speed wipers with intermittent setting and washer, tilt steering wheel; oil, amp, and temperature gauges and directional signals (ICC approved with road hazard switch); electronic backup alarm, factory tint side & rear, and factory installed air conditioning - after factory installations will <b>NOT</b> be acceptable	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
18	Seat	Vinyl front bench seat	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
19	Floor	Vinyl	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
20	Body	8' Fleetside pickup body. Rear step bumper	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
21	Warning lights	There shall be two (2) amber high profile, high intensity strobe lights mounted on a light bar that is clamped or bolted to the rain rail on the cab. Shall also have 4 corner hide-a-strobe mounted in each corner of the chassis	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
22	Towing Equipment	Trailer hitch receiver, integrated electric brake controller, 7-way sealed connector, fully independent fused trailer circuits. 6 ton pintle hitch with 2" ball and mount shall be included	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
23	Color	Exterior: White	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
		Interior: Blue or Dark Gray	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
24	Shock Absorbers	Double action heavy duty type	Yes <input type="checkbox"/>	No <input type="checkbox"/>	

# 3/4 TON SINGLE REAR WHEEL 4WD PICKUP TRUCK WITH DUMP BODY AND SNOW PLOW OPTS

*If you cannot meet our suggested specifications...please describe yours.*

**Replacement for # 828 (Parks)**

AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?		DESCRIBE DEVIATIONS	
25	Radio	AM/FM	Yes [ ]	No [ ]	
26	Delivery	Unit shall be delivered with three (3) sets of keys	Yes [ ]	No [ ]	
		Please indicate delivery date ARO			
27	Warranty	Please state in detail			
<b>Make/Model/Year:</b>					
<b>Cost of Quoted Truck:</b>				\$	
<b>Please provide a quote for the following options:</b>					
1	Dump bed	Capacity shall be 6000 lb., volume 56 cu. Ft., 8' in length, 12 volt pump motor, slide in installation with 4 bolt down clamps, double action tailgate, control for dump mounted in easy reach of driver, cab shield, and painted black, installed	Yes [ ]	No [ ]	\$
2	Bed Liner	Spray on bed liner- Rhino lining or equivalent - Installer must use hot, high pressure system	Yes [ ]	No [ ]	\$
3	Rustproofing	Rust protection	Yes [ ]	No [ ]	\$
4	Engine	6.0 L minimum Diesel w/auxiliary cooler	Yes [ ]	No [ ]	\$
5	Snow Plow	7 1/2 ft. Western Pro Series plow or <b>approved</b> equal installed	Yes [ ]	No [ ]	\$

**\*\*\* UNIT SHALL BE DELIVERED TO CITY OF BLOOMINGTON FLEET FULLY SERVICED WITH (1) EACH:  
SHOP MANUAL, PARTS CATALOG, OPERATING AND SERVICE MANUALS. \*\*\***

There shall be a daily charge of \$50.00 that will be assessed for each day that the delivery is delayed (late).

Signature is required below to acknowledge acceptance of all quote requirements .

Sign Here: \_\_\_\_\_

Print Name Here: \_\_\_\_\_

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

# ONE TON 4WD UTILITY TRUCK W/SNOW PLOW

## Replacements for 862 (Parks)

Replacements for 862 (Parks)				
#	AREAS	SUGGESTED SPECIFICATIONS	<i>Any variations to the specifications are to be clearly noted.</i>	
			MEET SPEC?	SPEC DEVIATIONS
1	GVW	13,000 lb. Minimum	Yes [ ]	No [ ]
2	Cab to Axle	60"	Yes [ ]	No [ ]
3	Front Axle	Automatic Locking Hubs	Yes [ ]	No [ ]
4	Rear Axle	Limited Slip	Yes [ ]	No [ ]
5	Front Suspension	4,500 lb. Minimum with stabilizer bar	Yes [ ]	No [ ]
6	Rear Suspension	9,350 lb. Minimum with overloads	Yes [ ]	No [ ]
7	Battery	Dual 12V maintenance free with total of 1400 CCA minimum	Yes [ ]	No [ ]
8	Alternator	140 Amp minimum	Yes [ ]	No [ ]
9	Engine	6.5L Minimum <b>diesel</b>	Yes [ ]	No [ ]
10	Fuel Tank	Minimum 35 gallon	Yes [ ]	No [ ]
11	State estimated fuel economy	<b>City:</b> <b>Highway:</b>	Yes [ ]	No [ ]
12	EPA Data	Must include EPA emission and fuel economy values for unit quoted	Yes [ ]	No [ ]
13	Cooling System	Heavy duty radiator with recovery system	Yes [ ]	No [ ]
14	Shock Absorbers	Double action heavy duty type	Yes [ ]	No [ ]
15	Transmission	Heavy duty overdrive automatic with auxiliary cooler with backup alarm	Yes [ ]	No [ ]
16	Steering/Brakes	Power	Yes [ ]	No [ ]
17	Tires	(6) Mud / snow maximum size for GVW	Yes [ ]	No [ ]
18	Wheels	A. (7) Including one (1) spare	Yes [ ]	No [ ]
		B. Standard hubcaps shall be included	Yes [ ]	No [ ]
19	Seat	Vinyl front bench seat	Yes [ ]	No [ ]
20	Floor	Vinyl	Yes [ ]	No [ ]
21	Cab	Standard with fresh air heater and defroster, two heated camper style mirrors, power outlet, dome light, cargo light, electric two-speed wipers with intermittent setting and washer, tilt steering wheel, cruise control, AM/FM radio and air conditioning	Yes [ ]	No [ ]
22	Trailer Brake Controller	There shall be an Integrated trailer brake controller mounted in easy reach of driver	Yes [ ]	No [ ]
23	Running Board	Shall have a minimum 4" black assist step	Yes [ ]	No [ ]
24	Body	Bid as a unit	Yes [ ]	No [ ]
25	Color	Please list standard colors available for body and interior		
26	Curbside Compartment	40" Tall compartments	Yes [ ]	No [ ]
		Front compartment shall have (1) top pull out tray and (3) adjustable shelves	Yes [ ]	No [ ]
		Middle, horizontal compartment shall have (9) drawer cabinets	Yes [ ]	No [ ]
		Rear compartment shall have (3) adjustable shelves. Shelves shall be made to be divided	Yes [ ]	No [ ]
		Ladder rack on top of compartment      (2) Wheel chocks cutout (wheel chocks included)	Yes [ ]	No [ ]
26	Street side Compartment	40" Tall compartments	Yes [ ]	No [ ]
		Front raised compartments shall be vented for tall bottle gas and have retainers	Yes [ ]	No [ ]
		Middle, horizontal compartment shall have (1) adjustable shelf	Yes [ ]	No [ ]
		Rear compartment shall have (2) adjustable shelves. 6' shovel box on top of compartment	Yes [ ]	No [ ]
27	Utility Body Info.	Heavy gauge tread plate on top of compartments. Neoprene seals around edge of compartments. Bottom of all compartments and shelves shall be lined with rubber matting. Stainless steel paddle latches on the doors. Aluminum tread plate rock guards on front	Yes [ ]	No [ ]
28	Floor	10 Gauge treat plate minimum	Yes [ ]	No [ ]
29	Cargo Area	(4) 2,000 lb. Cargo tie down rings. Material rail with (3) hooks curbside	Yes [ ]	No [ ]

# ONE TON 4WD UTILITY TRUCK W/SNOW PLOW

## Replacements for 862 (Parks)

30	Rear Bumper	Recessed with heavy duty machinist 5" jaws vise and bracket. 2" receiver. 6 way trailer plug. Pintle hitch with 2" ball	Yes [ ] No [ ]
31	Lights	Tomar light bar with (2) #800R1 strobes with power supply and light switch in cab. Rear flush mounted lights. Interior compartment lights. All lighting shall be ICC approved	Yes [ ] No [ ]
32	Safety Equipment	10 lb. Fire extinguisher, flare kit and standard first aid kit	Yes [ ] No [ ]
33	Snow Plow	8 ft. Western Pro Series plow or <b>approved</b> equal installed	Yes [ ] No [ ]
34	Rustproofing	Rust protection	Yes [ ] No [ ]
35	Warranty	Must provide a full statement of warranties	
36	Delivery	Please state number of business days after ARO	

**Cost of Truck as specified: \$**

\*\*\* UNIT SHALL BE DELIVERED TO CITY OF BLOOMINGTON FLEET DEPT. FULLY SERVICED WITH (1) EACH:  
SHOP MANUAL, PARTS CATALOG, OPERATING AND SERVICE MANUALS. \*\*\*

Unit to be delivered with three (3) full sets of keys

There shall be a daily charge of \$50.00 that will be assessed for each day that the delivery is delayed (late).

*Signature is required below to acknowledge acceptance of all quote requirements*

Sign Here: \_\_\_\_\_

Print Name Here: \_\_\_\_\_

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

# 4X4 BACKHOE LOADER

Current year U.S. Manufactured

Replacement for 448 (Street)

AREAS		SUGGESTED SPECIFICATIONS	MEET SPEC?				SPEC DEVIATIONS
<i>Any variations to the specifications are to be clearly noted.</i>							
1	Engine	Minimum 100 Sae net h.p. with minimum 276 cu. in. Wet Sleeved, Heavy Duty Turbocharged Diesel with full flow oil filter and cooler. Dry type air cleaner, fuel filter. Shall be equipped with coolant block heater and cold starting aid	Yes	[ ]	No	[ ]	
2	Electrical	12 Volt maintenance free battery with 125 amp alternator	Yes	[ ]	No	[ ]	
3	Front Wheel Drive	Front axle should be equipped with limited slip differential	Yes	[ ]	No	[ ]	
4	Transmission	Four (4) speed with full power shift preferred, minimum forward speed with 21L-24 rear tires, 23.0 m.p.h. minimum	Yes	[ ]	No	[ ]	
5	Differential	Rear heavy duty, outboard mounted planetary type with differential lock up pedal operated. Front Shall be an electrical operated limited-slip traction control	Yes	[ ]	No	[ ]	
6	Tires	<b>Front:</b> 12.5/80-18 12 ply, R4; <b>Rear:</b> 21L- 24 12 ply, R4. Minimum	Yes	[ ]	No	[ ]	
7	Steering	Power, Hydrostatic	Yes	[ ]	No	[ ]	
8	Brakes	Fully enclosed hydraulic self adjusting wet disc brakes with parking brake control	Yes	[ ]	No	[ ]	<i>State braking system here:</i>
9	Hydraulic System	Pressure compensated, load sensing, axial piston type with a minimum 40 gpm and 3600 psi at 2,200 rpm with 10 micron spin on replaceable return oil filter element	Yes	[ ]	No	[ ]	
10	Loader	Single lever control with loading capacity of 6000 lbs. minimum with return to dig	Yes	[ ]	No	[ ]	
11	Bucket	Minimum 1.25 cubic yard capacity multipurpose with bolt on edge. Bucket shall clear the path of rear wheels	Yes	[ ]	No	[ ]	
12	Backhoe	Two (2) pilot lever control, 14' 6" digging depth (8' flat bottom), lifting capacity of 4,000 lbs.	Yes	[ ]	No	[ ]	
13	Hydraulic Thumb	Boom mounted hydraulic thumb mounted on the dipper stick and plumbed on dedicated hydraulic circuit. Thumb to be controlled by the operator	Yes	[ ]	No	[ ]	
14	Auxiliary Hydraulic Function	Hydraulic line (two) shall be plumbed to the end of the boom as to able to connect an impact hammer to the coupler. Function shall be controlled by foot control pedal mounted in the floor area by the rear operator's station. End of the lines at the rear of the boom shall have quick disconnect attached to each line. Function shall be adjustable for flow and pressure. Projector plate installed on the backhoe boom.	Yes	[ ]	No	[ ]	
15	Stabilizers	Maximum 11 ft. 4 in. spread width, equipped with reversible stabilizer feet, hydraulic lockout both retracted and extended	Yes	[ ]	No	[ ]	
16	Buckets	Heavy duty 24"	Yes	[ ]	No	[ ]	
17	Rear Coupler	Universal backhoe bucket coupler that will attach a variety of buckets and attachments	Yes	[ ]	No	[ ]	

# 4X4 BACKHOE LOADER

Current year U.S. Manufactured

Replacement for 448 (Street)

AREAS		SUGGESTED SPECIFICATIONS	MEET SPEC?				SPEC DEVIATIONS
<i>Any variations to the specifications are to be clearly noted.</i>							
18	Cab	Rops enclosed cab with air conditioner, heater, defroster, front & rear wipers, stop, tail and turn lights with front & rear halogen work lights, floor mat, suspension seat, rear view mirror, engine monitor system with visual and audible alarm for low engine oil pressure, high coolant temp. or park brake on. Shall have vandalism protection kit, AM-FM radio, back up alarm, two (2) strobe lights in two (2) corners, and SMV emblem	Yes	[ ]	No	[ ]	
19	Tank Capacity	<b>Fuel:</b> 35 Gallons minimum <b>Hydraulic:</b> 11 Gallons minimum	Yes	[ ]	No	[ ]	
20	Safety	Safety equipment as follows: loader boom service lock bar, draw bar with lock pin, reverse signal alarm, park/emergency brake (automatically applies upon engine shut down), and locking doors and engine shields and vandal protection equipment	Yes	[ ]	No	[ ]	
21	Ride Control	Ride Control shall be standard of the backhoe manufacture	Yes	[ ]	No	[ ]	
22	Warranty	Shall provide a full statement of warranties					
23	Delivery (FOB Destination)	Please state number of business days after ARO					
24	Training	Please state in detail					
25	Demo	Unit quoted must be available for demonstration upon request					
<b>Base cost of Backhoe Loader:</b>			<b>\$</b>				
<b>Option #1</b>	Indeco HP 100-ABF hydraulic hammer or equal with counter weight if needed.		<b>\$</b>				
<b>Option #2</b>	Heavy duty 12" Bucket		<b>\$</b>				
<p><b>*** UNIT SHALL BE DELIVERED TO CITY OF BLOOMINGTON FLEET DEPT. FULLY SERVICED WITH (1) EACH: SERVICE MANUAL, PARTS CATALOG, AND TWO (2) OPERATORS MANUALS. ***</b></p> <p style="text-align: center;"><b>Unit to be delivered with six (6) full sets of keys.</b></p> <p>There shall be a daily charge of \$50.00 that will be accessed for each day that the delivery is delayed (late).</p> <p style="text-align: center;"><i>Signature is required below to acknowledge acceptance of all bid requirements</i></p> <p>Sign Here: _____</p> <p>Print Name Here: _____</p> <p>Company Name: _____</p>							

# FRONT END LOADER

Current year U.S. Manufactured

Replacement for 455 (Street)

AREAS		SUGGESTED SPECIFICATIONS	MEET SPEC?				SPEC DEVIATIONS
		<i>Any variations to the specifications are to be clearly noted.</i>					
1	Engine	A. 400 to 425 Cu In Wet Sleeve 6 cylinder liquid cooled 4 cycle turbocharged heavy duty diesel. Min. 160 net H.P. @ 1800 rpm with a min. 500 ft. lb. Torque at 1100 rpm	Yes	[ ]	No	[ ]	
		B. Engine coolant heater rated at 1000 watt min and cold start aid	Yes	[ ]	No	[ ]	
		C. Replaceable fuel/water separator, full-flow spin on lubrication filter, integral cooler, and dual indicator in cab for service	Yes	[ ]	No	[ ]	
		D. Extended life antifreeze	Yes	[ ]	No	[ ]	
		E. Certified off-road emissions	Yes	[ ]	No	[ ]	
		F. Hydraulic driven, swing out design, reversing cooling fan	Yes	[ ]	No	[ ]	
		G. Cooling system isolated from engine compartment	Yes	[ ]	No	[ ]	
		H. (2) Side accesses for all coolers	Yes	[ ]	No	[ ]	
		I. Daily maintenance check points accessible from ground level	Yes	[ ]	No	[ ]	
		J. Engine oil service interval min. of 500 hours	Yes	[ ]	No	[ ]	
2	Transmission	A. Power shift transmission with lock up torque-convector, min. 4 forward speeds, electronically controlled, adaptive, with load and speed dependent shift modulation and shift modes manual to auto to 1st and auto to 2nd, with kick down or kick up/down	Yes	[ ]	No	[ ]	
		B. Max. speed 25 mph	Yes	[ ]	No	[ ]	
		C. Reverse/back up alarm					
		D. Steering column-mounted shift lever with gearshift, F-N-R, and lock	Yes	[ ]	No	[ ]	
3	Brakes	A. Inboard-mounted hydraulic wet-disk type, self equalizing and self adjusting	Yes	[ ]	No	[ ]	<i>State braking system here:</i>
		B. Automatic spring applied hydraulically released parking brake	Yes	[ ]	No	[ ]	
4	Axles	A. Differentials shall have planetary final drives that are mounted inboard. Front differentials shall have hydraulic lock - unlock capability. Auto differential lock shall be provided.	Yes	[ ]	No	[ ]	
		B. Min. of 24 degrees of oscillation on the rear axle	Yes	[ ]	No	[ ]	
5	Loader	A. One (1) low effort lever joystick for tilt raise control	Yes	[ ]	No	[ ]	
		B. Hinge pin height shall be 12 ft. 6 ins to 13 ft.	Yes	[ ]	No	[ ]	
		C. Straight tipping load a minimum of 20,600 lbs.	Yes	[ ]	No	[ ]	
		D. Breakout force a minimum of 19,800	Yes	[ ]	No	[ ]	
		E. Hydraulic quick coupler installed on the boom which shall be controlled inside the cab	Yes	[ ]	No	[ ]	

# FRONT END LOADER

Current year U.S. Manufactured

Replacement for 455 (Street)

AREAS		SUGGESTED SPECIFICATIONS	MEET SPEC?		SPEC DEVIATIONS
<i>Any variations to the specifications are to be clearly noted.</i>					
5b	Loader (cont.)	F. Coupler capable for department to utilize existing JRB buckets, forks, and or broom attachment	Yes [ ]	No [ ]	
		G. Hydraulic cooling system isolated from engine compartment	Yes [ ]	No [ ]	
		H. Minimum 2 1/2 multipurpose (4 in 1) cubic yard quick coupler bucket with aux. bolt on cutting edge (front/rear) NOTE: Bucket shall clear the path of the tires and wheels	Yes [ ]	No [ ]	
6	Cab	Shall consist of a ROPS enclosed cab with the following features: air condition, heater-defroster and sun visor, front and rear wipers with washers, stop, tail and turn lights with front and rear halogen work lights, sealed, solid state design switches in cab, floor mat, tilt steering wheel, air-suspension deluxe cloth seat with restraints, one (1) inside and two (2) outside rear view mirrors, Engine monitor system with visible and audible alarm for low engine oil pressure, high coolant temp. and park brake on and vandalism protection kit. AM/FM radio with clock, back up alarm, two (2) strobe lights in two (2) corners of the roof of cab, and one (1) SMV emblem on rear of unit	Yes [ ]	No [ ]	
7	Electrical	A. 24 Volt system with heavy duty batteries, 950 CCA min., 120 amp alternator	Yes [ ]	No [ ]	
		B. Master electrical disconnect switch	Yes [ ]	No [ ]	
		C. Multifunctional/multi-language LCD color monitor to include: Digital instruments - Analog display (hyd oil temp, eng. Coolant temp, transmission oil temp, and eng. Oil pressure) / Digital display (eng. Rpm, transmission gear/direction indicator, hour meter, fuel level, diesel exhaust fluid level, speedometer, odometer and average fuel consumption	Yes [ ]	No [ ]	
		D. Horn	Yes [ ]	No [ ]	
		E. Electrical corrosion-prevention package	Yes [ ]	No [ ]	
8	Tires	Four (4) 20.5 X R25 - 12 PR - L2 minimum	Yes [ ]	No [ ]	
9	Steering	Hydraulically powered articulation	Yes [ ]	No [ ]	
10	Fenders	Front and rear required	Yes [ ]	No [ ]	
11	Hydraulics	A. Closed center, load sensing, pressure compensating hydraulic system with the following features: automatic bucket return to dig control. Automatic boom height kick out control	Yes [ ]	No [ ]	
		B. Reservoir sight glass, spin-on filter	Yes [ ]	No [ ]	

# FRONT END LOADER

Current year U.S. Manufactured

Replacement for 455 (Street)

AREAS		SUGGESTED SPECIFICATIONS	MEET SPEC?		SPEC DEVIATIONS
<i>Any variations to the specifications are to be clearly noted.</i>					
11b	Hydraulics (cont.)	C. Ride control automatic type with monitor-adjustable speed settings	Yes [ ]	No [ ]	
		D. Control system for quick-coupler locking pins	Yes [ ]	No [ ]	
		E. Filter and fluid rated life of 4,000 hours	Yes [ ]	No [ ]	
12	Tank Capacity	<b>Fuel:</b> 75 Gallons minimum <b>Hydraulic:</b> 30 Gallons minimum	Yes [ ]	No [ ]	
13	Safety	Safety equipment as follows: articulation bar with lock pins, draw bar with lock pin, raised loader boom lock bar with pins, park/emergency brake (automatically applies upon engine shut down), and locking doors and engine shields and vandal protection equipment, dry type fire extinguisher and approved mounting bucket installed inside cab.	Yes [ ]	No [ ]	
14	Frame	Machine front frame shall be of 4-plate design of vertical plate extending from boom pivot pins reaching to front axle to distribute boom loads on axle	Yes [ ]	No [ ]	
15	Wheelbase	Minimum of 9.5'	Yes [ ]	No [ ]	
16	Warranty	Base warranty of no less that two (2) years /2000 hours and shall provide a full statement of warranties and extended warranty where applicable			
17	Delivery (FOB Destination)	Please state number of business days after ARO			
18	Training	Please state in detail			
19	Demo	Unit quoted must be available for demonstration upon request			
<b>Base cost of Front End Loader: \$</b>					

**\*\*\* UNIT SHALL BE DELIVERED TO CITY OF BLOOMINGTON FLEET DEPT. FULLY SERVICED WITH TWO (2) OPERATOR MANUALS, AND ONE (1) PARTS CATALOG, AND SERVICE MANUAL. \*\*\***

**Unit to be delivered with six (6) full sets of keys.**

There shall be a daily charge of \$50.00 that will be assessed for each day that the delivery is delayed (late).

*Signature is required below to acknowledge acceptance of all bid requirements*

Sign Here: \_\_\_\_\_

Print Name Here: \_\_\_\_\_

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

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
1	Front Bumper	Equipped with a one-piece 10" high bumper, using 10 gauge (0.135" nominal) stainless steel. Bumper shall be mounted directly to the front frame extensions. The bumper shall incorporate two (2) stiffening ribs	Yes ( ) No ( )	
		Shall extend approximately 20" from the face of the cab	Yes ( ) No ( )	
		Extended front gravel shield shall be made of 1/8" (.123") aluminum treadplate material	Yes ( ) No ( )	
2	Bumper Tray	Center bumper tray shall have a diamond plate lid. The lid shall be hinged and shall be secured in the closed position by a latch and held open with a pneumatic shock	Yes ( ) No ( )	
		Hose tray constructed of 1/8" aluminum shall be recessed into the front bumper extension. Tray shall be located in the center of the bumper and be approximately 12" deep	Yes ( ) No ( )	
		Slatted fiberglass flooring shall be provided in the center bumper tray.	Yes ( ) No ( )	
3	Frame Assembly	The frame shall consist of two (2) C-channel frame rails with heavy duty cross members. Each frame rail shall have the following minimum specifications	Yes ( ) No ( )	
		<b>Dimensions:</b> 10-1/4" x 3-1/2" x 3/8"	Yes ( ) No ( )	
		<b>Material:</b> 110,000 PSI minimum yield strength, low alloy steel	Yes ( ) No ( )	
		Section ratio 16.61 cu in.	Yes ( ) No ( )	
		Resistance to bending moment (RBM) 1,827,045 in. lbs.	Yes ( ) No ( )	
		If larger rails are provided, the maximum height of each rails shall not exceed the 10-1/4" dimension by more than 1/2"	Yes ( ) No ( )	
		There shall be a minimum of six (6) cross-members joining the two (2) frame rails in order to make the frame rigid and hold the rails/liners in alignment. The cross-members shall be a combination of a formed steel C-channel design along with heavy duty steel fabricated designs as required for the exact chassis configuration. The cross-members shall be attached to the frame rails with no less than four (4) bolts at each end arranged in a bolt pattern to adequately distribute the cross-member load into the rail/liner and minimize the stress concentrations	Yes ( ) No ( )	
		All frame fasteners shall be high-strength Grade 8, flanged-head threaded bolts and nuts. The nuts shall be Stover locknuts or <i>equal</i> , to help prevent loosening. The frame fasteners shall be tightened to the proper torque at the time of assembly	Yes ( ) No ( )	
		Frame rails and frame liners shall be finished with black paint. The frame cross-members and frame mounted components (suspensions, axles, air tanks, battery boxes, fuel tank and etc.) shall also be painted black	Yes ( ) No ( )	
		The apparatus manufacturer shall supply a full lifetime frame warranty including cross-members against defects in materials or workmanship	Yes ( ) No ( )	
Chassis frame shall have a wheel alignment. The alignment shall conform to the manufacturer's internal specifications All wheel lug nuts and axle U-bolt retainer nuts shall be tightened to the proper torque at the time of alignment. The wheel alignment documentation shall be required at time of delivery	Yes ( ) No ( )			
		Front suspension shall be furnished with two (2) heavy duty, dual acting, shock absorbers, one located on each side	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
Any variations to the specifications are to be clearly noted.				
4	<b>Axles</b>	Rear axle of the vehicle shall be equipped with an ArvinMeritor RS-25-160 <i>or equivalent</i> , single rear axle with single-reduction hypoid gearing and a manufacturer's rated capacity of 27,000 lbs. The shall be equipped with oil-lubricated wheel bearing with oil seals	Yes ( ) No ( )	
		Rear axle hubs shall be made from ductile iron and shall be designed for use with 10 hole hub-piloted wheels	Yes ( ) No ( )	
		Front axle of the vehicle shall utilize an ArvinMeritor FL-941 axle <i>or equal</i> , with a rated capacity of 18,000 lbs. It shall have "easy steer" knuckle pin bushings and 68.5" kingpin centers The axle shall be of I-beam construction and utilize grease-lubricated wheel bearings. The vehicle shall have a nominal cramp angle of 45 degrees, plus two (+2) degrees to minus three (-3) degrees including front suction applications	Yes ( ) No ( )	
		Front axle hubs shall be made from ductile iron and shall be designed for use with 10 hole hub-piloted wheels in order to improve wheel centering	Yes ( ) No ( )	
		Front springs shall be parabolic tapered, minimum 4" wide x 54" long (flat), minimum three (3) leaf, progressive rate with bronze bushings and a capacity of 18,000 lbs. at the ground	Yes ( ) No ( )	
		Vehicle shall be equipped with a Sheppard model M-110, <i>or equal</i> integral power steering gear. The steering assembly shall be rated to statically steer a maximum front axle load of 18,000 lbs. Relief stops shall be provided to reduce system pressure upon full wheel cut, The system shall operate mechanically if the hydraulic system should fail	Yes ( ) No ( )	
5	<b>Rear Suspension</b>	Rear suspension shall be a pair of linear-rate leaf springs with auxiliary "helper" leaf springs and bronze bushings. The variable-rate springs with auxiliary springs ensure that the vehicle rides and handles smoothly under both loaded and unloaded conditions. The suspension shall be rated for maximum axle capacity	Yes ( ) No ( )	
6	<b>Wheels</b>	Front wheels shall be steel hub-piloted disc sized appropriately for the tires	Yes ( ) No ( )	
		Front Wheels shall have stainless steel lug nut covers (for use with aluminum wheels) or chrome plated plastic (for use with steel wheels). Front axle hubs shall be covered with American Real Wheels brand, or equivalent mirror finish, 304L grade, non corrosive stainless steel universal baby moons. All stainless steel baby moons shall carry a lifetime warranty plus a 2 year re-buffing policy. There shall be two (2) baby moons and twenty (20) lug nut covers	Yes ( ) No ( )	
		Rear wheel shall be four hub-piloted steel disc wheels sized appropriately for the tires	Yes ( ) No ( )	
		Rear wheels shall have stainless steel lug nut covers (chrome plated steel lug nut covers not acceptable), or chrome plated plastic lug nut covers. The rear axle hubs shall be covered with Real Wheels brand finish, or equivalent 304l grade, non corrosive stainless steel, spring clip band mount high hats, DOT user friendly. All stainless steel high hats shall carry a lifetime warranty plus a 2 year re-buffing policy. There shall be two (2) high hats and twenty (20) lugnut covers	Yes ( ) No ( )	
		Front tires shall be Michelin 315/80R22.5 tubeless type radial tires with XZA-1 highway tread, <i>or equal</i> . Tires with wheels shall have a weight capacity and speed rating of 18,000 lbs. @75 MPH	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
7	Tires	Rear tires shall be Michelin 12R22.5 tubeless type radial tires with XDN2 mud and snow tread, <i>or equal</i> . Tires and wheels shall have a weight capacity of 27,000 lbs. (dual) @ 75 MPH	Yes ( ) No ( )	
		All tires and wheels shall conform to the Tire and Rim Association requirements	Yes ( ) No ( )	
		Apparatus shall be provided with Real Wheels AirGuard, <i>or equal</i> LED tire pressure indicating valve stem caps. When tire is under inflated by 5-10 PSI, the LED indicator on the cap shall flash red. The indicator housing shall be shock resistant and constructed from polished stainless steel. The indicators shall be calibrated by attaching to the valve stem of a tire at the proper air pressure per load ratings and easily re-calibrated by simply removing and re-installing them during service. Real Wheel part number RWC1234 was superseded by RWC1235 as of June of 2015	Yes ( ) No ( )	
8	Brake System	The front axle shall be equipped with ArvinMeritor 16-1/2" x 6" S-cam brakes with ArvinMeritor automatic slack adjusters, <i>or equivalent brand</i>	Yes ( ) No ( )	
		The rear axle shall be equipped with ArvinMeritor 16-1/2" x 7" S-cam brakes with cast brake drums or an equal brand. Q-Plus shoes shall be provided with up to 24,000 lb. axle ratings and P-Type shoes with over 24,000 lb. axle ratings	Yes ( ) No ( )	
		The rear axle brakes shall be furnished with automatic slack adjusters. ArvinMeritor brand shall be supplied on RS-24-160 and RS-25-160 axles and Haldex brand shall be supplied on RS-26-185 and RS-30-185 axles. Equivalent brands are acceptable	Yes ( ) No ( )	
		A 3 year/unlimited miles parts and 3 year labor rear brake warranty that includes bushings, seals and cams shall be provided	Yes ( ) No ( )	
		The vehicle shall be equipped with air-operated brakes and an anti-lock braking system (ABS). The brake system shall meet or exceed the design and performance requirements of the current Federal Motor Vehicle Safety Standard (FMVSS)-121, and the test requirements of the current NFPA 1901 Standard	Yes ( ) No ( )	
		A dual-treadle brake valve shall correctly proportion the braking power between the front and rear systems. The air system shall be provided with a rapid pressure build-up feature, designed to meet current NFPA 1901 requirements, to allow the vehicle to begin its emergency response as quickly as possible	Yes ( ) No ( )	
		A pressure-protection valve shall be installed to prevent use of the air horns or other air-operated devices should the air system pressure drop below 85 PSI	Yes ( ) No ( )	
		Two (2) air pressure needle gauges, one (1) each for front and rear air pressure, with a warning light and buzzer shall be installed at the driver's instrument panel	Yes ( ) No ( )	
		The braking system shall be provided with a minimum of three (3) air tank reservoirs for a total air system capacity of 5,214 cu. in. One (1) reservoir shall serve as the wet tank and a minimum of one (1) tank shall be supplied for each of the front and rear axles. The total system shall carry a sufficient volume of air to comply with FMVSS-121	Yes ( ) No ( )	
		<b>Minimum Tank Capacities in Cubic Inches:</b>		
Wet    Front    Rear    Total	Yes ( ) No ( )			
1,738    1,738    1,738    5,214				

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
8b	<b>Brake System (cont.)</b>	Spring-actuated emergency/parking brakes shall be installed on the rear axle	Yes ( ) No ( )	
		A Bendix-Westinghouse SR-1 valve, <i>or equal brand</i> , in conjunction with a double check valve system, shall provide automatic emergency brake application when the air brake system pressure falls below 40 PSI	Yes ( ) No ( )	
		A four-channel anti-lock braking system shall be provided. This braking system shall be fitted to both front and rear axles. All electrical connections shall be environmentally-sealed for protection against water, weather, and vibration	Yes ( ) No ( )	
		The system shall constantly monitor wheel behavior during braking. Sensors on each wheel transmit wheel speed data to an electronic processor, which shall detect approaching wheel lock-up and instantly modulate (or pump) the brake pressure up to five (5) times per second to prevent wheel lock-up. Each wheel shall be individually controlled. To improve field performance, the system shall be equipped with a dual-circuit design configured in a diagonal pattern. Should a malfunction occur in one circuit, that circuit shall revert to normal braking action. A warning light at the driver's instrument panel shall signal a malfunction	Yes ( ) No ( )	
		The system shall also be configured to work in conjunction with all auxiliary engine, exhaust, or driveline brakes to prevent wheel lock-up	Yes ( ) No ( )	
		To improve maintenance troubleshooting, provisions in the system for an optional diagnostic tester shall be provided. The system shall test itself each time the vehicle is started, and a dash-mounted light shall go out once the vehicle is moving above 4 MPH	Yes ( ) No ( )	
		A 3 year/300,000 mile parts and labor Anti-Locking Braking System (ABS) warranty shall be provided	Yes ( ) No ( )	
		One (1) Bendix-Westinghouse PP-5, or equal, parking brake control valve shall be supplied on the lower dash panel within easy reach of the driver	Yes ( ) No ( )	
9	<b>Air System</b>	The chassis air system shall be equipped with a Bendix-Westinghouse AD-9, or equal air dryer to remove moisture from the air in order to help prevent the air lines from freezing in cold weather and prolong the life of the braking system components	Yes ( ) No ( )	
		A 1/4" brass quick-release air inlet with a male connection shall be provided. The inlet shall allow a shoreline air hose to be connected to the vehicle, discharging air directly into the wet tank of the air brake system. It shall be located driver door jamb.	Yes ( ) No ( )	
		Air brake lines shall be constructed of color coded nylon tubing routed in a manner to protect them from damage. Brass fittings shall be provided	Yes ( ) No ( )	
		Dual air horns shall be provided, connected to the chassis air system. The horns shall be mounted through the front bumper. The front bumper shall have two (2) holes punched to accommodate the air horns. A pressure protection valve shall be installed to prevent the air brake system from being depleted of air pressure.	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
10	Engine & Transmission	A push-button transmission shift module, Allison model 29538373, or equivalent or better, shall be located to the right side of the steering column within easy reach of the driver. The shift position indicator shall be indirectly lit for after dark operation. The shift module shall have a "Do Not Shift" light and a "Service" indicator light. The shift module shall have means to enter a diagnostic mode and display diagnostic data including oil life monitor, filter life monitor, transmission health monitor and fluid level. A transmission temperature gauge with warning light and buzzer shall be installed on the cab instrument panel	Yes ( ) No ( )	
		The transmission fluid shall be TransSynd synthetic or equal	Yes ( ) No ( )	
		The maximum speed shall be electronic limited to 68 MPH as required by NFPA 1901. Note: Maximum speed may be set at 65 MPH due to tire rating.	Yes ( ) No ( )	
		<b>The vehicle shall utilize a Cummins ISL 2013 or equal or better, electronic engine as described below:</b>	Yes ( ) No ( )	
		450 gross BHP at 2200 RPM	Yes ( ) No ( )	
		1250 lb.-ft. peak torque at 1400 RPM	Yes ( ) No ( )	
		Six (6)-cylinder, charge air cooled, 4-cycle diesel	Yes ( ) No ( )	
		543 cu. in. displacement -- 4.49 in bore x 5.69 in stroke (8.9 liters)	Yes ( ) No ( )	
		16.6:1 compression ratio	Yes ( ) No ( )	
		Interact System controlled viable geometry turbocharged	Yes ( ) No ( )	
		Engine shall be equipped with full-authority electronics (FADEC)	Yes ( ) No ( )	
		Electronic Timing Control fuel system	Yes ( ) No ( )	
		Fuel cooler (when equipped with a fire pump)	Yes ( ) No ( )	
		Fleetguard FS1022 fuel filter (or equal) with integral water separator and water-in-fuel sensor.	Yes ( ) No ( )	
		Fleetguard LF9009 Venturi Combo (or equal) combination full-flow/by-pass oil filter	Yes ( ) No ( )	
		Engine lubrication system, including filter, shall have a minimum capacity of 25 quarts	Yes ( ) No ( )	
		Delco-Remy 39 MT-HD (or equal) 12-volt starter	Yes ( ) No ( )	
		Cummins (or equal) 18.7 cubic foot per minute (CFM) air compressor	Yes ( ) No ( )	
		Corrosion inhibitor additive for coolant system	Yes ( ) No ( )	
		After treatment system consisting of a oxidation catalyst and diesel particulate filter and selective catalyst reduction system	Yes ( ) No ( )	
Ember separator compliant with 2009 NFPA 1901 standard	Yes ( ) No ( )			
The engine shall be compliant with 2013 EPA Emission standards	Yes ( ) No ( )			
Reference curve FR93434EV for ISCAAN	Yes ( ) No ( )			
The engine air intake shall draw air through the front cab grill. The intake opening shall be located on the officer (right) side behind front cab face with a plenum that directs air to the air filter. The air cleaner shall be a 11" diameter dry type that is easily accessed for service. Air cleaner intake piping shall be made from aluminized steel tubing with flexible rubber hoses. Air cleaner intake piping clamps shall be heavy-duty, constant-torque, T-bolt clamps to ensure proper sealing under all temperatures in order to keep dust and other contaminants out of the engine intake air stream and protect the engine	Yes ( ) No ( )			

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
10b	<b>Engine &amp; Transmission (cont.)</b>	The engine exhaust piping shall be a minimum of 4" diameter welded aluminized steel tubing. The muffler shall be mounted horizontally under the right-hand frame rail in back of the cab in order to minimize heat transmission to the cab and its occupants. The exhaust shall be directed away from the vehicle on the right side ahead of the rear wheels in order to keep exhaust fumes as far away as possible from the cab and pump operator position	Yes ( ) No ( )	
		A 5-year/100,000-miles parts and labor warranty shall be provided	Yes ( ) No ( )	
		The vehicle shall utilize an Allison EVS3000P, electronic, 5-speed automatic transmission (or equal)	Yes ( ) No ( )	
		A push button shift module shall be located right side of the steering column, within easy reach of the driver. The shift position indicator shall be indirectly lit for after-dark operation. The shift module shall have a "Do Not Shift" light and a "Service" indicator light that are clearly visible to the driver. The shift module shall have means to enter a diagnostic mode and display diagnostic data	Yes ( ) No ( )	
		A transmission oil temperature gauge with warning light and buzzer shall be installed on the cab instrument panel to warn the driver of high oil temperatures that may damage the transmission	Yes ( ) No ( )	
		The transmission shall have a gross input torque rating of 1250 lb.-ft. and a gross input power rating of 450 HP	Yes ( ) No ( )	
		The gear ratios shall be as follows: (or state yours)		
		1 - 3.49	Yes ( ) No ( )	
		2 - 1.86	Yes ( ) No ( )	
		3 - 1.41	Yes ( ) No ( )	
		4 - 1.00	Yes ( ) No ( )	
		5 - .75	Yes ( ) No ( )	
		R - 5.03	Yes ( ) No ( )	
		The transmission shall have an oil capacity of 23 quarts and shall be equipped with a fluid level sensor (FLS) system, providing direct feedback of transmission oil level information to the driver.	Yes ( ) No ( )	
		A water-to-oil transmission oil cooler shall be provided to ensure proper cooling of the transmission when the vehicle is stationary (no air flow).	Yes ( ) No ( )	
The transmission shall be provided with two (2) engine-driven PTO openings located at the 4 o'clock and 8 o'clock positions for flexibility in installing PTO-driven equipment	Yes ( ) No ( )			
The automatic transmission shall be equipped with a power lock-up device. The transmission lock-up shall prevent down shifting of the transmission when the engine speed is decreased during pump operations, thereby maintaining a constant gear ratio for safe operation of the pump. The transmission lock-up shall be automatically activated when the pump is engaged in gear. The transmission lock-up shall be automatically deactivated when the pump is disengaged for normal road operation	Yes ( ) No ( )			
A 5-year/unlimited miles parts and labor warranty shall be provided	Yes ( ) No ( )			
		One (1) Jacobs (or equal) engine brake shall be installed to assist in slowing and controlling the vehicle as required by NFPA 1901 for vehicles with gross vehicle weight ratings (GVWR) of 36,000 lbs. or greater. An on-off control switch and a high-medium-low selector switch shall be mounted in the cab accessible to the driver	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
11	<b>Secondary Braking</b>	When activated, the engine brake shall cut off the flow of fuel to the cylinders and alter the timing of the exhaust valves. This shall transform the engine into a high-pressure air compressor, driven by the wheels, and the horsepower absorbed by the engine in this mode shall slow the vehicle. The selector switch allows the driver to select the amount of retarding power	Yes ( ) No ( )	
11b		When the on-off switch is in the "on" position, the engine brake shall be automatically applied whenever the accelerator is in the idle position and the automatic transmission is in the lock-up mode. If the accelerator is depressed or if the on-off switch is placed in the "off" position, the engine brake shall immediately release and allow the engine to return to its normal function.	Yes ( ) No ( )	
		The transmission shall include the Allison (or equal) 2nd gear pre-select feature. This option will direct the transmission to down shift to second gear when the throttle is released and the engine brake (or Telma retarder wired to activate with release of throttle) is engaged	Yes ( ) No ( )	
12	<b>Cooling Package</b>	The cooling system shall include an aluminum tube-and-fin radiator with a minimum of 1,408 total square inches of frontal area to ensure adequate cooling under all operating conditions. There shall be a drain valve in the bottom tank to allow the radiator to be serviced. A sight glass shall be included for quick fluid level assessment. The radiator shall be installed at the prescribed angle in order to achieve the maximum operational effectiveness. This shall be accomplished according to established work instructions and properly calibrated angle measurement equipment	Yes ( ) No ( )	
		All radiator and heater hoses shall be silicone. Pressure compensating band clamps shall be used to eliminate hose pinching on all hoses 3/4" diameter and larger. All radiator hoses shall be routed, loomed, and secured so as to provide maximum protection from chafing, crushing, or contact with other moving parts	Yes ( ) No ( )	
		The cooling system shall be filled with a 50/50 mixture of water and antifreeze/coolant conditioner to provide freezing protection to minus 40 (- 40) degrees F for operation in severe winter temperatures	Yes ( ) No ( )	
		There shall be a coolant overflow recovery system provided	Yes ( ) No ( )	
		The system shall include a charge air cooler to ensure adequate cooling of the turbocharged air for proper engine operation and maximum performance	Yes ( ) No ( )	
		Charge air cooler hoses shall be made from high-temperature, wire-reinforced silicone to withstand the extremely high temperatures and pressures of the turbocharged air. The hoses shall incorporate a flexible hump section to allow motion and misalignment of the engine relative to the charge air cooler. Charge air cooler hose clamps shall be heavy-duty, constant-torque, T-bolt clamps to ensure proper sealing under all temperatures in order to keep dust and other contaminants out of the engine intake air stream and protect the engine	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
12b	<b>Cooling Package (cont.)</b>	The fan shall be 30" in diameter with eleven (11) blades for maximum airflow and dynamic balance. It shall be made of nylon for strength and corrosion resistance. The fan shall be installed with grade 8 hardware which has been treated with thread locker for additional security. A fan shroud attached to the radiator shall be provided to prevent recirculation of engine compartment air around the fan in order to maximize the cooling airflow through the radiator. The fan shroud shall be constructed of fiber-reinforced high temperature plastic. The shroud shall be specifically formed with curved surfaces which improves air flow and cooling	Yes ( ) No ( )	
		The cooling system shall include a liquid-to-liquid transmission cooler capable of cooling the heat generated from the transmission. When a transmission retarder is selected the cooler shall have an increased capacity to handle the additional heat load	Yes ( ) No ( )	
13	<b>Fuel System</b>	One (1) 50 gallon fuel tank shall be provided. The tank shall be of an all-welded, aluminized-steel construction with anti-surge baffles and shall conform to all applicable Federal Highway Administration (FHWA) 393.65 and 393.67 standards. The tank shall be mounted below the frame rails at the rear of the chassis for maximum protection. The tank shall be secured with two (2) wrap-around T-bolt type stainless steel straps. Each strap shall be fitted with protective rubber insulation and shall be secured with grade 8 hardware. This design allows for tank removal from below the chassis	Yes ( ) No ( )	
		The fuel tank shall be equipped with a 2" diameter filler neck. The filler neck shall extend to the rear of the vehicle behind the rear tires and away from the heat of the exhaust system as required by NFPA 1901 Standard for Automotive Fire Apparatus. The open end of the filler neck shall be equipped with a twist-off filler cap with a retaining chain	Yes ( ) No ( )	
		The tank shall be plumbed with top-draw and top-return fuel lines in order to protect the lines from road debris. A vent shall be provided at the top of the tank. The vent shall be connected to the filler neck to prevent splash-back during fueling operations. A .50" NPT drain plug shall be provided at the bottom of the tank	Yes ( ) No ( )	
		The tank shall have a minimum useable capacity of 50 gallons of fuel with a sufficient additional volume to allow for thermal expansion of the fuel without overflowing the vent.	Yes ( ) No ( )	
		A mechanical fuel pump shall be provided and sized by the engine manufacturer as part of the engine.	Yes ( ) No ( )	
		All fuel lines shall be rubber	Yes ( ) No ( )	
14	<b>Alternator</b>	There shall be a 320 amp Leece Neville (or equal) alternator installed. The alternator shall be a Leece Neville 4890JB series (or equal) brushless type with integral rectifier and adjustable voltage regulator with an output of 275 AMPS per NFPA 1901 rating (320 AMPS per SAE J56)	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
Any variations to the specifications are to be clearly noted.				
15	<b>Batteries</b>	The manufacturer shall supply four (4) heavy duty Group 31 12-volt maintenance-free batteries. Each battery shall be installed and positioned so as to allow easy replacement of any single battery. Each battery shall be equipped with carrying handles to facilitate ease of removal and replacement. There shall be two (2) steel frame mounted battery boxes, one (1) on the left frame rail and one (1) on the right frame rail. Each battery box shall be secured to the frame rail with Grade 8 hardware. Each battery box shall hold (2) batteries. The batteries shall have a minimum combined rating of 4,000 (4 x 1000) cold cranking amps (CCA) @ 0 degrees Fahrenheit and 820 (4 x 205) minutes of reserve capacity for extended operation. The batteries shall have 3/8-16 threaded stud terminals to ensure tight cable connections. The battery stud terminals shall each be treated with concentrated industrial soft-seal after cable installation to promote corrosion prevention. The positive and negative battery stud terminals and the respective cables shall be clearly marked to ensure quick and mistake-proof identification	Yes ( ) No ( )	
		Batteries shall be placed on non-corrosive rubber matting and secured with hold-down brackets to prevent movement, vibration, and road shock. The hold-down bracket J-hooks shall be cut to fit and shall have all sharp edges removed. The batteries shall be placed in plastic trays to provide preliminary containment should there be leakage of hazardous battery fluids. There shall be two (2) plastic trays, each containing (2) batteries. Each battery tray shall be equipped with a rubber vent hose to facilitate drainage. The rubber vent hose shall be routed to drain beneath the battery box. The batteries shall be positioned in well-ventilated areas	Yes ( ) No ( )	
		One (1) positive and one (1) negative jumper stud shall be provided	Yes ( ) No ( )	
		Batteries shall have a warranty of twelve (12) months that shall commence upon the date of delivery of the apparatus	Yes ( ) No ( )	
16	<b>Chassis Options</b>	The engine shall be equipped with a thermostatically controlled engine cooling fan. The fan shall be belt driven and utilize a clutch to engage when the engine reaches a specified temperature and / or the water pump is engaged	Yes ( ) No ( )	
		When disengaged the fan clutch shall allow for improved performance from optional floor heaters, reduced cab interior noise, increased acceleration and improved fuel economy	Yes ( ) No ( )	
		The fan shall be equipped with a fail-safe engagement so that if the clutch fails the fan shall engage to prevent engine overheating	Yes ( ) No ( )	
		Drivelines shall have a heavy duty metal tube and shall be equipped with Spicer 1710HD (or equal) universal joints to allow full-transmitted torque to the axle(s). Drive shafts shall be axially straight, concentric with axis and dynamically balanced	Yes ( ) No ( )	
		Two (2) 3/4" thick heavy duty steel tow eyes shall be securely attached to the chassis frame rails at the front of the apparatus. They shall be mounted down below the bumper / cab	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
16b	<b>Chassis Options (cont.)</b>	Two (2) heavy duty tow eyes made of 3/4" (0.75") thick steel having 2-1/2" diameter holes shall be mounted below the body at the rear of the vehicle to allow towing (not lifting) of the apparatus without damage. The tow eyes will be welded to the lower end of a 5" steel channel that is bolted at the end of the chassis frame rails. The tow eyes shall be painted chassis black	Yes ( ) No ( )	
		A diesel exhaust fluid (DEF) tank with a five (5) gallon capacity shall be provided	Yes ( ) No ( )	
		The DEF tank shall include a heater fed by hot water directly from the engine block to prevent the DEF from becoming too cool to operate correctly per EPA requirements. The tank shall include a temperature sensor to control the heater control valve that controls the feed of hot water from the engine to the DEF tank heater	Yes ( ) No ( )	
		A sender shall be provided in the DEF tank connected to a level gauge on the cab dash	Yes ( ) No ( )	
		The DEF tank shall be located left side below rear of cab	Yes ( ) No ( )	
		A heat exchanger (cooler) shall be installed to maintain desired power steering fluid temperature. The cooler shall be a model DH-073-1-1 with air / oil design rated at 6300 BTU/HR @10 GPM. The cooler shall be mounted in front of the radiator and plumbed with #10 lines	Yes ( ) No ( )	
17	<b>Cab Model</b>	The vehicle shall be an all-welded aluminum and fully enclosed tilt cab. The cab shall be designed exclusively for fire/rescue service and shall be pre-engineered to ensure long life. It shall incorporate an integral welded substructure of high-strength aluminum alloy extrusions that creates an occupant compartment that is essentially a protective perimeter	Yes ( ) No ( )	
		The cab shall be constructed from 3/16" (0.188") 3003 H14 aluminum alloy plate roof, floor, and outer skins welded to a high-strength 6063-T6 aluminum alloy extruded subframe. Wall supports and roof bows are 6061 T6 aluminum alloy	Yes ( ) No ( )	
		The inner structure shall be designed to create an interlocking internal "roll-cage" effect by welding two (2) 3" x 3" x 0.188" wall-thickness 6063-T5 aluminum upright extrusions between the 3" x 3" x 0.375" wall-thickness 6061-T6 roof crossbeam and the 2.25" x 3" x 0.375" wall-thickness 6063-T6 subframe structure in the front. An additional two (2) aluminum upright extrusions within the back-of-cab structure shall be welded between the rear roof perimeter extrusion and the subframe structure in the rear to complete the interlocking framework. The four (4) upright extrusions -- two (2) in the front and two (2) in the rear -- shall be designed to effectively transmit roof loads downward into the subframe structure to help protect the occupant compartment from crushing in a serious accident. All joints shall be electrically seam welded internally using aluminum alloy welding wire	Yes ( ) No ( )	
		The subframe structure shall be constructed from high-strength 6061-T6 aluminum extrusions welded together to provide a structural base for the cab. It shall include a side-to-side C-channel extrusion across the front, with 3/4" x 2-3/4" (.75" x 2.75") full-width crossmember tubes spaced at critical points between the front and rear of the cab	Yes ( ) No ( )	
		The cab floor shall be constructed from 3/16" (0.188") 3003 H14 smooth aluminum plate welded to the subframe structure	Yes ( ) No ( )	

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
		The cab roof shall be constructed from 3/16" (0.188") 3003 H14 aluminum treadplate supported by a grid of fore-aft and side-to-side aluminum extrusions	Yes ( ) No ( )	
		The cab roof perimeter shall be constructed from 4" x 6-5/8" (4" x 6.625") 6063-T5 aluminum extrusions with integral drip rails. Cast aluminum corner joints shall be welded to the aluminum roof perimeter extrusions to ensure structural integrity. The roof perimeter shall be continuously welded to the cab roof plate to ensure a leak-free roof structure	Yes ( ) No ( )	
		The cab rear skin shall be constructed from 3/16" (0.188") 3003 H14 aluminum plate. Structural extrusions shall be used to reinforce the rear wall	Yes ( ) No ( )	
		The left-hand and right-hand cab side skins shall be constructed from 3/16" (0.188") 3003 H14 smooth aluminum plate. The skins shall be welded to structural aluminum extrusions at the top, bottom, and sides for additional reinforcement	Yes ( ) No ( )	
		The cab front skins shall be constructed from 3/16" (0.188") 3003 H14 smooth aluminum plate. The upper portion shall form the windshield mask, and the lower portion shall form the cab front. Each front corner shall have a full 9" outer radius for strength and appearance. The left-hand and right-hand sides of the windshield mask shall be welded to the left hand and right-hand front door frames, and the upper edge of the windshield mask shall be welded to the cab roof perimeter extrusion for reinforcement. The cab front shall be welded to the subframe C-channel extrusion below the line of the headlights	Yes ( ) No ( )	
17b	<b>Cab Model (cont.)</b>	The exterior of the cab shall be 94" wide x 130" long to allow sufficient room in the occupant compartment for up to eight (8) fire fighters. The cab roof shall be approximately 101" above the ground with the flat roof option. The back-of-cab to front axle length shall be a minimum of 58"	Yes ( ) No ( )	
		Front axle fenderette trim shall be brushed aluminum for appearance and corrosion resistance. Bolt-in front wheel well liners shall be constructed of 3/16" (0.188") composite material	Yes ( ) No ( )	
		The cab windshield shall be of a two-piece replaceable design for lowered cost of repair. The windshield shall be made from 1/4" (0.25") thick curved, laminated safety glass with a 75% light transmittance automotive tint. A combined minimum viewing area of 2,700-sq. in. shall be provided. Forward visibility to the ground for the average (50th percentile) male sitting in the driver's seat shall be no more than 11 feet 7 inches from the front of the cab to ensure good visibility in congested areas	Yes ( ) No ( )	
		The cab shall be independently mounted from the body and chassis to isolate the cab structure from stresses caused by chassis twisting and body movements. Mounting points shall consist of two (2) forward-pivoting points, one (1) on each side; two (2) intermediate rubber load-bearing cushions located midway along the length of the cab, one on each side; and two (2) combination rubber shock mounts and cab latches located at the rear of the cab, one (1) on each side	Yes ( ) No ( )	

Any variations to the specifications are to be clearly noted.

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
17c	Cab Model (cont.)	An electric-over-hydraulic cab tilt system shall be provided to provide easy access to the engine. It shall consist of two (2) large-diameter, telescoping, hydraulic lift cylinders, one (1) on each side of the cab with a frame-mounted electric-over-hydraulic pump for cylinder actuation	Yes ( ) No ( )	
		Safety flow fuses (velocity fuses) shall be provided in the hydraulic lift cylinders to prevent the raised cab from suddenly dropping in case of a burst hydraulic hose or other hydraulic failure. The safety flow fuses shall operate when the cab is in any position, not just the fully raised position	Yes ( ) No ( )	
		The hydraulic pump shall have a manual override system as a backup in the event of an electrical failure. Lift controls shall be located in a compartment to the rear of the cab on the right side of the apparatus. A parking brake interlock shall be provided as a safety feature to prevent the cab from being tilted unless the parking break is set	Yes ( ) No ( )	
		The entire cab shall be tilted through a 42-45 degree arc to allow for easy maintenance of the engine, transmission and engine components. A positive-engagement safety latch shall be provided to lock the cab in the full tilt position to provide additional safety for personnel working under the raised cab	Yes ( ) No ( )	
		In the lowered position, the cab shall be locked down by two (2) automatic, spring-loaded cab latches at the rear of the cab. A "cab ajar" indicator light shall be provided on the instrument panel to warn the driver when the cab is not completely locked into the lowered position	Yes ( ) No ( )	
		The interior of the cab shall be of the open design with an ergonomically-designed driver area that provides ready access to all controls as well as a clear view of critical instrumentation	Yes ( ) No ( )	
		The engine cover between the driver and the officer shall be a low-rise contoured design to provide sufficient seating and elbow room for the driver and the officer. The engine cover shall blend in smoothly with the interior dash and flooring of the cab. An all-aluminum subframe shall be provided for the engine cover for strength. The overall height of the engine enclosure shall not exceed 23" from the floor at each side and 27" in the center section. The engine cover shall not exceed 41" in width at its widest point	Yes ( ) No ( )	
		The rear portion of the engine cover shall be provided with a lift-up section to provide easy access for checking transmission fluid, power steering fluid, and engine oil without raising the cab. The engine cover insulation shall consist of 3/4" dual density fiberglass composite panels with foil backing manufactured to specifically fit the engine cover without modification to eliminate "sagging" as found with foam insulation. The insulation shall meet or exceed DOT standard MVSS 302-1 and V-0 (UI subject 94 Test)	Yes ( ) No ( )	
		All cab floors shall be covered with a black rubber floor mat that provides an aggressive slip-resistant surface in accordance with current NFPA 1901	Yes ( ) No ( )	
A minimum of 57.25" of floor-to-ceiling height shall be provided in the front seating area of the cab and a minimum of 55.25" floor-to-ceiling height shall be provided in the rear seating area. A minimum of 36" of seated headroom at the "H" point shall be provided over each fender well	Yes ( ) No ( )			

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
17d	<b>Cab Model (cont.)</b>	The floor area in front of the front seat pedestals shall be no less than 20.5" side to side by 25.0" front to rear for the driver and no less than 20.5" side to side by 26.0" front to rear	Yes ( ) No ( )	
		Battery jumper studs shall be provided to allow jump-starting of the apparatus without having to tilt the cab	Yes ( ) No ( )	
		All exposed interior metal surfaces shall be pretreated using a corrosion prevention system	Yes ( ) No ( )	
		The interior of the cab shall be insulated to ensure the sound (dbA) level for the cab interior is within the limits stated in the current edition of NFPA 1901. The insulation shall consist of 2 oz. wadding and 1/4" (0.25") foam padding. The padding board shall be backed with 1/4" (0.25") thick reflective insulation. The backing shall be spun-woven polyester. Interior cab padding shall consist of a rear cab headliner, a rear wall panel, and side panels between the front and rear cab doors	Yes ( ) No ( )	
		The overhead console and heater cover shall be covered with thermoformed, non-metallic, non-fiber trim pieces to provide excellent scuff and abrasion resistance, as well as chemical stain resistance. The thermoformed material shall comply with Federal Motor Vehicle Safety Standard (FMVSS) 302 for flammability of interior materials	Yes ( ) No ( )	
		The vehicle shall use a seven-position tilt and telescopic steering column to accommodate various size operators. An 18" padded steering wheel with a center horn button shall be provided	Yes ( ) No ( )	
		A full-width overhead console shall be mounted to the cab ceiling for placement of siren and radio heads, and for warning light switches. The console shall be made from a thermoformed, non-metallic material and shall have easily removable mounting plates	Yes ( ) No ( )	
		Storage areas, with hinged access doors, shall be provided below the driver and officer seats. The driver side compartment shall be approximately 19.25" x 17.75" x 5.75" high and the officer side compartment shall be approximately 18.25" x 22.5" x 11" high (19.25" x 17.75" x 5.75" w/ air ride)	Yes ( ) No ( )	
		The front cab steps shall be a minimum of 8" deep x 24" wide. The first step shall be no more than 24.0" above the ground with standard tires in the unloaded condition per NFPA 1901 standards. The rear cab steps shall be a minimum 12" deep x 21" wide. The first step shall be no more than 24.0" above the ground with standard tires in the unloaded condition per NFPA 1901 standards. The rear steps shall incorporate intermediate steps for easy access to the cab. The steps are to be located inside the doorsill, where they are protected against mud, snow, ice, and weather. The step surfaces shall be aluminum diamond plate with a multi-directional, aggressive gripping surface incorporated into the aluminum diamond plate in accordance with current NFPA 1901	Yes ( ) No ( )	
		A black rubber grip handle shall be provided on the interior of each front door below the door window to ensure proper hand holds while entering and exiting the cab. An additional black rubber grip handle shall be provided on the left and right side windshield post for additional handholds	Yes ( ) No ( )	
There shall be reflective signs on each cab door in compliance with all NFPA requirements	Yes ( ) No ( )			

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	#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted.	SPEC DEVIATIONS
17e	Cab Model (cont.)		Four (4) side-opening cab doors shall be provided. Doors shall be constructed of a 3/16" (0.188") aluminum plate outer material with an aluminum extruded inner framework to provide a structure that is as strong as the side skins	Yes ( ) No ( )		
			Front cab door openings shall be approximately 36" wide x 71.5" high, and the rear cab door openings shall be approximately 33.75" wide x 73" high. The front doors shall open approximately 75 degrees, and the rear doors shall open approximately 80 degrees	Yes ( ) No ( )		
			The doors shall be securely fastened to the doorframes with full-length, stainless steel piano hinges, with 3/8" (0.375") diameter pins for proper door alignment, long life, and corrosion resistance. Mounting hardware shall be treated with corrosion-resistant material prior to installation. For effective sealing, an extruded rubber gasket shall be provided around the entire perimeter of all doors	Yes ( ) No ( )		
			Stainless steel paddle-style door latches shall be provided on the interiors of the doors. The latches shall be designed and installed to protect against accidental or inadvertent opening as required by NFPA 1901	Yes ( ) No ( )		
			The front door windows shall provide a minimum viewing area of 530 sq. in. each. The rear door windows shall provide a minimum viewing area of 500 sq. in. each. All windows shall have 75% light transmittance automotive safety tint. Full roll-down windows shall be provided for the front cab doors with worm gear drive cable operation for positive operation and long life	Yes ( ) No ( )		
			Two (2) pantograph-style windshield wipers with two (2) separate electric motors shall be provided for positive operation. Air-operated windshield wipers are not acceptable because of their tendency to accumulate moisture, which can lead to corrosion or to freezing in cold weather. The wipers shall be a wet-arm type with a one (1) gallon washer fluid reservoir, an intermittent-wipe function, and an integral wash circuit. Wiper arm length shall be approximately 28", and the blade length approximately 20". Each arm shall have a 70 degree sweep for full coverage of the windshield	Yes ( ) No ( )		
			An overhead mounted heater and defroster with a minimum capacity of 60,000 BTU/HR and all necessary controls shall be mounted in the cab. The airflow system shall consist of two (2) levels, defrost and cab, and shall have fresh air and defogging capabilities	Yes ( ) No ( )		
			Cab controls shall be located on the cab instrument panel in the dashboard on the driver's side where they are clearly visible and easily reachable. Emergency warning light switches shall be installed in removable panels for ease of service	Yes ( ) No ( )		
			<b>The following gauges or controls shall be provided:</b>			
			• Master battery switch/ignition switch (rocker with integral indicator)	Yes ( ) No ( )		
			• Starter switch/engine stop switch (rocker)	Yes ( ) No ( )		
			• Heater and defroster controls with illumination	Yes ( ) No ( )		
			• Marker light/headlight control switch with dimmer switch	Yes ( ) No ( )		
			• Self-canceling turn signal control with indicators	Yes ( ) No ( )		
	• Windshield wiper switch with intermittent control and washer control	Yes ( ) No ( )				
	• Master warning light switch	Yes ( ) No ( )				
	• Transmission oil temperature gauge	Yes ( ) No ( )				

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
17f	<b>Cab Model (cont.)</b>	• Air filter restriction indicator	Yes ( ) No ( )	
		• Pump shift control with green "pump in gear" and "o.k. to pump" indicator lights	Yes ( ) No ( )	
		• Parking brake controls with red indicator light on dash	Yes ( ) No ( )	
		• Automatic transmission shift console	Yes ( ) No ( )	
		• Electric horn button at center of steering wheel	Yes ( ) No ( )	
		• Cab ajar warning light on the message center enunciator	Yes ( ) No ( )	
		Controls and switches shall be identified as to their function by backlit wording adjacent to each switch, or indirect panel lighting adjacent to the controls	Yes ( ) No ( )	
		A fast idle system shall be provided and controlled by the cab-mounted switch. The system shall increase engine idle speed to a preset RPM for increased alternator output	Yes ( ) No ( )	
		The cab and chassis system shall have a centrally located electrical distribution area. All electrical components shall be located such that standard operations shall not interfere with or disrupt vehicle operation. An automatic thermal-reset master circuit breaker compatible with the alternator size shall be provided. Automatic-reset circuit breakers shall be used for directional lights, cab heater, battery power, ignition, and other circuits. An access cover shall be provided for maintenance access to the electrical distribution area	Yes ( ) No ( )	
		A six (6) place, constantly hot, and six (6) place ignition switched fuse panel and ground for customer-installed radios and chargers shall be provided at the electrical distribution area. Radio suppression shall be sufficient to allow radio equipment operation without interference	Yes ( ) No ( )	
17g	<b>Cab Model (cont.)</b>	All wiring shall be mounted in the chassis frame and protected from impact, abrasion, water, ice, and heat sources. The wiring shall be color-coded and functionally-labeled every 3" on the outer surface of the insulation for ease of identification and maintenance. The wiring harness shall conform to SAE 1127 with GXL temperature properties. Any wiring connections exposed to the outside environment shall be weather-resistant. All harnesses shall be covered in a loom that is rated at 280 degrees F to protect the wiring against heat and abrasion	Yes ( ) No ( )	
		A Vehicle Data Computer (VDC) shall be supplied within the electrical system to process and distribute engine and transmission Electronic Control Module (ECM) information to chassis system gauges, the message center, and related pump panel gauges. Communication between the VDC and chassis system gauges shall be through a four (4) wire multiplexed communication system to ensure accurate engine and transmission data is provided at the cab dash and pump. The VDC shall be protected against corrosion, excessive heat, vibration, and physical damage	Yes ( ) No ( )	
		Two (2) dual rectangular sealed beam halogen headlights shall be installed on the front of the cab, one (1) on each side, mounted in a polished chrome-plated bezel. The low beam headlights shall activate with the release of the parking brake to provide daytime running lights (DRL) for additional safety. The headlight switch shall automatically override the DRL for normal low beam/high beam operation	Yes ( ) No ( )	
		The apparatus cab shall meet and/or exceed relevant NFPA 1901 load and impact tests required for compliance certification with the following:		

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
18	<b>Cab Testing and ISO Requirements</b>	<b>Side Impact Dynamic Pre-Load per SAE J2422 (Section 5)</b>	Yes ( ) No ( )	
		Testing shall meet and/or exceed defined test using 13,000 ft lbs of force as a requirement. The cab shall be subject to a side impact representing the force seen in a roll-over. The cab shall exhibit minimal to no intrusion into the cab's occupant survival space, doors shall remain closed and cab shall remain attached to frame	Yes ( ) No ( )	
		Cab testing shall be completed using 13,776 ft-lbs of force exceeding testing requirements	Yes ( ) No ( )	
		<b>Quasi-static Roof Strength (proof loads) per SAE J2422 (Section 6) / ECE R29, Annex 3, paragraph 5</b>	Yes ( ) No ( )	
		Testing shall meet and/or exceed defined test using 22,046 lbs. of mass as a requirement. Testing shall be completed using platen(s) distributed uniformly over all bearing members of the cab roof structure	Yes ( ) No ( )	
		Cab testing shall be completed using 23,561 lbs. of mass exceeding testing requirements. The cab shall exhibit minimal to no intrusion into the cab's occupant survival space and doors shall remain closed	Yes ( ) No ( )	
		Additional cab testing shall be conducted using 117,336 lbs. of mass exceeding testing requirements by over five (5) times. The cab shall exhibit minimal to no intrusion into the cab's occupant survival space and the doors shall remain closed	Yes ( ) No ( )	
		<b>Frontal Impact per SAE J2420</b>	Yes ( ) No ( )	
		Testing shall meet and/or exceed defined test using 32,549 ft lbs of force as a requirement. The cab shall be subject to a frontal impact as defined by the standard. The cab shall exhibit minimal to no intrusion into the cab's occupant survival space, doors shall remain closed and cab shall remain attached to frame	Yes ( ) No ( )	
		Cab testing shall be completed using 34,844 ft-lbs of force exceeding testing requirements	Yes ( ) No ( )	
		Additional cab testing shall be conducted using 65,891 ft-lbs of force exceeding testing requirements by over two (2) times	Yes ( ) No ( )	
		A copy of a certificate or letter verifying compliance to the above performance by an independent, licensed, professional engineer shall be provided upon request	Yes ( ) No ( )	
		The manufacturer shall ensure that the construction of the apparatus cab shall be in conformance with the established ISO-compliant quality system. All written quality procedures and other procedures referenced within the pages of the manufacturer's Quality Manual, as well as all Work Instructions, Workmanship Standards, and Calibration Administration that directly or indirectly impacts this process shall be strictly adhered to	Yes ( ) No ( )	
		19	<b>Cab Roof Type</b>	The rear portion of the cab roof shall be raised 12". This will provide at least 5` 7" standing room. The front of the vista hood shall be sloped at 45 degrees from the vertical. The slope shall begin slightly in front of the centerline of the front axle to leave room for warning lights and air conditioning in front of the vista. The main roof extrusion shall extend up into the vista to strengthen the roof perimeter. Windows shall be provided on front, side, and rear unless otherwise specified
<b>Cab Roof (cont.)</b>	The rear door shall have an 85" vertical dimension for improved ingress/egress characteristics. The door shall be equipped with a dual striker bolt system		Yes ( ) No ( )	

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. <b>SPEC DEVIATIONS</b>
20	<b>Cab Badge Package</b>	The apparatus shall have manufacturer logos provided on the cab and body as applicable.	Yes ( ) No ( )	
21	<b>Grille</b>	The front cooling air intake grille shall be constructed of stainless steel mesh and supported by an impact-resistant chrome plated ABS frame providing no less than 81% open area	Yes ( ) No ( )	
22	<b>Cab Door Options</b>	The cab rear doors shall be moved to the rear of the wheel opening. This door placement facilitates easier entry and egress by reducing the rear facing seat protrusion into the door opening	Yes ( ) No ( )	
		Rear door position to the 58" or (medium cab).	Yes ( ) No ( )	
		Driver and officer door windows shall have the support pillar located toward the front of the window. There shall be a vent that can be opened and closed within the window itself, located towards the front	Yes ( ) No ( )	
		The rear cab door windows shall be manually operated to raise and lower	Yes ( ) No ( )	
		The front windows of the cab shall have manual actuation.	Yes ( ) No ( )	
		Each cab door shall have a manual operated door lock actuated from the interior of each respective door. Exterior of each cab door shall be provided with a barrel style keyed lock below the cab door handle	Yes ( ) No ( )	
		The cab shall have 1250 keyed door locks provided on exterior doors to secure the apparatus	Yes ( ) No ( )	
		All cab doors shall have "L" style exterior door latches.	Yes ( ) No ( )	
		Cab door handle scuff plates shall be a stainless steel scuff plate and installed at all cab door "L" handles	Yes ( ) No ( )	
		The inner door panels shall be made from 1/8" (.125") aluminum plate painted Zolatone (or equal) gray for increased durability. The cab door panels shall incorporate an easily removable panel for access to the latching mechanism for maintenance or service	Yes ( ) No ( )	
		Reflective yellow stripping per NFPA specifications material stripping shall be supplied on each of the cab doors. The stripes shall be angled from the lower outer corner to the upper inside corner, forming an "A" shape when viewed from the rear. The reflective material shall be at least 96 square inches to meet NFPA 1901 requirements	Yes ( ) No ( )	
		There shall be four (4) clear TecNiq model T440 4" circular LED lights (or equal) provided to illuminate the cab step well area. Each light shall be mounted in a resilient shock absorbent grommet and be located on each cab door in the inboard position. Each light shall be activated by the cab door ajar circuit	Yes ( ) No ( )	
23	<b>Mirrors</b>	Two (2) Velvac model 2010 (or equal) heated, remote controlled, stainless steel mirrors shall be installed. The west coast style mirrors shall consist of a large 7" x 16" flat and 4" x 6" wide angle convex with stainless steel break-away mounts. The adjustment of the main sections of the mirror and the heater control shall be through switches accessible to the driver	Yes ( ) No ( )	
		There shall be a fixed window provided between the front and rear doors on the driver's side of the cab	Yes ( ) No ( )	
		<b>Window dimensions shall be as follows:</b>		
		44" C/A cab (short cab): 16"W x 24.5"H	Yes ( ) No ( )	
		58" - 80" C/A cab (medium - extended): 26.69"W x 24.5"H	Yes ( ) No ( )	
		There shall be a fixed window provided between the front and rear doors on the officer's side of the cab.	Yes ( ) No ( )	

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
24	<b>Misc. Exterior Cab Options</b>	<b>Window dimensions shall be as follows:</b>		
		44" C/A cab (short cab): 16"W x 24.5"H	Yes ( ) No ( )	
		58" - 80" C/A cab (medium - extended): 26.69"W x 24.5"H	Yes ( ) No ( )	
		Black linear low density polyethylene mud flaps shall be installed on the rear of the cab front wheel wells. The design of the mud flaps shall have corrugated ridges to distribute water evenly	Yes ( ) No ( )	
		Cab door assist handrails shall consist of two (2) 1.25" diameter x 18" long 6063-T5 anodized aluminum tubes mounted directly behind the driver and officer door openings, one each side of the cab. The handrails shall be machine extruded with integral ribbed surfaces to assure a good grip. Handrails shall be installed between chrome end stanchions and shall be positioned at least 2" from the mounting surface to allow a positive grip with a gloved hand	Yes ( ) No ( )	
		Cab door assist handrails shall consist of two (2) 1.25" diameter x 36" long 6063-T5 anodized aluminum tubes mounted directly behind the driver and officer rear door openings, one each side of the cab. The handrails shall be machine extruded with integral ribbed surfaces to assure a good grip. Handrails shall be installed between chrome end stanchions and shall be positioned at least 2" from the mounting surface to allow a positive grip with a gloved hand	Yes ( ) No ( )	
		The rear cab wall shall be constructed with the use of 3/16" aluminum diamond plate interlocking in aluminum extrusions	Yes ( ) No ( )	
		A mounting plate shall be provided for the battery charger receptacle, battery charger indicator, and if applicable, the air inlet. The plate shall be constructed of 14 gauge brushed finish stainless steel and be removable for service access to the receptacle(s) and indicator	Yes ( ) No ( )	
25	<b>HVAC</b>	An overhead air-conditioner / heater system with a single radiator mounted condenser shall be supplied	Yes ( ) No ( )	
		The unit shall be mounted to the cab interior headliner in a mid cab position away from all seating positions. The unit shall provide ten (10) comfort discharge louvers, four (4) to the back area of the cab and six (6) to the front. These louvers will be used for AC and heat air delivery. Two (2) additional large front louvers shall be damper controlled to provide defogging and defrosting capabilities to the front windshield as necessary	Yes ( ) No ( )	
		The unit shall consist of a high output evaporator coil and heater core with one (1) high output dual blower for front air delivery, and two (2) high performance single wheel blowers for rear air delivery	Yes ( ) No ( )	
		The control panel shall actuate the air-distribution system with air cylinders, which are to be separated from the brake system by an 85-90 PSI pressure protection valve. A three-speed blower switch shall control air speed	Yes ( ) No ( )	
		The condenser shall be radiator mounted and have a minimum capacity of 65,000 BTU's and shall include a receiver drier	Yes ( ) No ( )	
		<b>Performance Data: (Unit only, no ducting or louvers)</b>		
		AC BTU: 55,000	Yes ( ) No ( )	
		Heat BTU: 65,000	Yes ( ) No ( )	
		CFM: 1300 @ 13.8V (All blowers)	Yes ( ) No ( )	
		The compressor shall be a ten-cylinder swash plate type Seltec model TM-31HD (or equal) with a capacity of 19.1 cu. in. per revolution	Yes ( ) No ( )	

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
25b	HVAC (cont.)	The system shall be capable of cooling the interior of the cab from 100 degrees ambient to 75 degrees or less with 50% relative humidity in 30 minutes or less	Yes ( ) No ( )	
		A single 40,000 BTU water heater shall be supplied in the front area of the cab. The unit shall heat the lower section of the driver's and officer's footwell	Yes ( ) No ( )	
		Dual 23,000 BTU water heaters with diamond plate covers shall be supplied in the rear of the cab to heat the rear cab lower section	Yes ( ) No ( )	
		Dual climate control will be achieved via dual switches installed on a front instrument panel. On units with optional multiplex display climate control, the floor heaters shall be controlled through the HVAC screen in the display	Yes ( ) No ( )	
		Heating and air conditioning controls shall be located in the center dash area	Yes ( ) No ( )	
26	Seats	All seats shall be Seats, Inc. 911 brand (or equal). All seat positions shall have a bright red retractable 3-point lap and shoulder harness. Extensions shall be provided with the seat belts so the male end can be easily grasped and the female end easily located while sitting in a normal position	Yes ( ) No ( )	
		All seats shall be gray in color.	Yes ( ) No ( )	
		All seats shall have Turnout Tuff seat cover material or equal material	Yes ( ) No ( )	
		A tag that is in view of the driver stating seating capacity of six (6) personnel shall be provided	Yes ( ) No ( )	
		One (1) air suspension seat shall be supplied for the driver's	Yes ( ) No ( )	
		<b>Driver seat shall include the following:</b>		
		• High back seat back	Yes ( ) No ( )	
		• Low profile air suspension assembly with rubber accordion cover	Yes ( ) No ( )	
		• Weight, height and ride adjustment	Yes ( ) No ( )	
		• Built-in back and lumbar adjustment	Yes ( ) No ( )	
		• 4" fore and aft adjustment	Yes ( ) No ( )	
		One (1) Officer seat shall be supplied for the officer's position in front of the cab to the right of the driver's position	Yes ( ) No ( )	
		<b>Officer seat shall include the following:</b>		
		• High back seat back	Yes ( ) No ( )	
		• Built-in back and lumbar adjustment	Yes ( ) No ( )	
		• Easy exit, flip up, and split headrest for improved exit with a self contained breathing apparatus (SCBA)	Yes ( ) No ( )	
		One (1) Universal SCBA seat shall be provided in the rear facing position over the driver side wheel well, and one (1) Universal SCBA seat shall be provided in rear facing position over the officer side wheel well	Yes ( ) No ( )	
<b>Universal SCBA seat shall include the following:</b>				
• High back seat back	Yes ( ) No ( )			
• Easy exit, flip up, and split headrest for improved exit with SCBA	Yes ( ) No ( )			
Two (2) Universal SCBA seat backs and a two (2) person bench style seat bottom with a single cushion shall be mounted on the rear wall of the cab. Each side of the seat riser shall be angled, providing sufficient leg room while entering and exiting the cab	Yes ( ) No ( )			
<b>Universal SCBA seats shall include the following:</b>	Yes ( ) No ( )			
• Easy exit, flip-up, and split head rest for improved exit with SCBA	Yes ( ) No ( )			
• Bench cushion shall be constructed of high-density foam with a heavy duty wear resistant material	Yes ( ) No ( )			
26b	Seats (cont.)			

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. <b>SPEC DEVIATIONS</b>
		A quantity of five (5) universal brackets for air pack bottles shall be supplied. The brackets shall fit all U. S. made 30-60 minute rated SCBA units. The brackets shall be located at the officer's seat, rear facing driver's side, inboard driver's side rear wall, inboard officer's side rear wall, and rear facing officer's side	Yes ( ) No ( )	
27	<b>Misc. Interior Cab Options</b>	Cab instrument panel, overhead console, trim panels, headliner, and door panels shall be gray	Yes ( ) No ( )	
		Padded sun visors shall be provided for the driver and officer matching the interior trim of the cab and shall be flush mounted into the underside of the overhead console	Yes ( ) No ( )	
		All surfaces subject to repeated contact and wear -- the center and officer side dash, windshield "A" post covers and lower front kick panels -- shall be covered with thermoformed, non-metallic, non-fiber trim pieces to provide excellent scuff and abrasion resistance, as well as chemical stain resistance. The thermoformed material shall comply with Federal Motor Vehicle Safety Standard (FMVSS) 302 for flammability of interior materials	Yes ( ) No ( )	
		The engine cover shall blend in smoothly with the interior dash and flooring of the cab. The upper left and right sides shall have a sloped transition surface running front to rear providing increased space for the driver and officer	Yes ( ) No ( )	
		The engine cover and engine service access door cover shall be molded 18 lb./cu. ft. (+/-0.5) flexible integral skinned polyurethane foam at a Durometer of 60 (+/- 5.0) per ASTM F1957-99. The cover shall be approximately .5" thick with a minimum skin thickness of 0.0625 inches. The cover shall be provided to reduce the transmission of noise and heat from the engine. The cover shall be black and feature a pebble grain finish for slip resistance	Yes ( ) No ( )	
28	<b>Cab Electrical Options</b>	A Weldon LED dome light (or equal) assembly with one (1) white lens and one (1) red lens and plastic housing shall be installed. The white light activates with appropriate cab door and light assembly switch, the red light activates with light assembly mounted switch only	Yes ( ) No ( )	
		There shall be two (2) mounted in the front of the cab, one (1) in the driver and one (1) in the officer ceiling	Yes ( ) No ( )	
		There shall be two (2) mounted in the rear of the cab, one (1) in the driver side and one (1) in the officer side ceiling	Yes ( ) No ( )	
		The battery charger receptacle shall be a Kussmaul 20 AMP NEMA 5-20 Super Auto-Eject #091-55-20-120 (or equal) with a cover. The receptacle shall be completely sealed and have an automatic power line disconnect	Yes ( ) No ( )	
		The receptacle shall be located outside driver's door next to handrail and the cover color shall be Yellow	Yes ( ) No ( )	
		An override switch shall be provided for the Diesel Particulate Filter (DPF) regeneration. The switch will inhibit the regeneration process until the switch is reset or the engine is shut down and restarted. The switch shall be located within reach of the driver	Yes ( ) No ( )	
		The cab operational instruments shall be located in the dashboard on the driver side of the cab and shall be clearly visible. The gauges in this panel shall be in English and shall be the following:		
		• Speedometer/Odometer	Yes ( ) No ( )	
		• Tachometer with integral hour meter	Yes ( ) No ( )	
		• Engine oil pressure gauge with warning light and buzzer	Yes ( ) No ( )	
• Engine water temperature gauge with warning light and buzzer	Yes ( ) No ( )			

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
28b	<b>Cab Electrical Options (cont.)</b>	• Two (2) air pressure gauges with a warning light and buzzer (front air and rear air)	Yes ( ) No ( )	
		• Fuel gauge	Yes ( ) No ( )	
		• Voltmeter	Yes ( ) No ( )	
		• Transmission oil temperature gauge	Yes ( ) No ( )	
		This panel shall be backlit for increased visibility during day and night time operations	Yes ( ) No ( )	
		There shall be a pair of Whelen (or equal) 600 LED turn signal light heads with populated arrow pattern and amber lens mounted upper headlight bezel and wired with weatherproof connectors	Yes ( ) No ( )	
		The front of the cab shall have four (4) headlights. The headlights shall be mounted on the front of the cab in the lower position. The headlights shall be day time operational	Yes ( ) No ( )	
		A plug-in type receptacle for hand held spotlights, cell phones, chargers, etc. shall be installed officer side dash. The receptacle shall be wired battery hot	Yes ( ) No ( )	
		<b>Battery Charger shall be include:</b>		
		A battery charger with remote mounted LED display shall be installed behind the driver's seat	Yes ( ) No ( )	
		A fully automatic charging system shall be installed on the apparatus. The system shall have a 120 volt, 60 hertz, 7 amp AC input with an output of 20 amps 12 volts DC. The battery charging system shall be connected directly to the shoreline to ensure the batteries remain fully charged while the vehicle is in the fire station or firehouse	Yes ( ) No ( )	
		The system shall include a remote charging status indicator panel. The panel shall consist of two (2) LED lights to provide a visual signal if battery voltage is good or drops below 11.5 volts. The microprocessor shall be continuously powered from the battery to provide the charge status	Yes ( ) No ( )	
The quad cab headlight bezels shall contain rectangular sealed beam halogen lights	Yes ( ) No ( )			
29	<b>Body</b>	The compartment floors, front panels, vertical side sheets, rear walls, door openings, wheel wells, compartment panels, dividing walls, and reinforcements shall be constructed of 12 gauge 304L stainless steel material. The exterior of the body shall be prepared for job color paint finish	Yes ( ) No ( )	
		To eliminate unnecessary seams and overlapping areas, the construction of all component panels shall feature break-formed fabrication. Angle iron framing is not acceptable. Component panels shall be in single metal sections wherever possible	Yes ( ) No ( )	
	<b>Body (cont.)</b>	The assembly of body component panels shall be with inert gas, continuous feed welders.	Yes ( ) No ( )	
		Structural supports shall be incorporated into the overall design to provide the necessary support for component panels and body modules	Yes ( ) No ( )	
29b	<b>Body (cont.)</b>	The body shall be a free standing module supported only by the top of the frame rails using a transverse 3/16" thick 304L <b>stainless steel structure assembly</b> . This structure shall be secured in a minimum of four (4) locations using a double flex mount system and angle brackets bolted to both the body structural assembly, and the sides of the chassis frame rails using Grade 8 fasteners. Mylar shall be used to isolate the structural assembly from the frame rails.	Yes ( ) No ( )	
		Each compartment door opening shall have a triple break-formed door jamb.	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
		The compartment floor construction shall permit easy cleaning with a true sweep-out design. The outer floor area, making up the compartment door jamb, shall also incorporate a triple break-formed construction for recessed door seal inboard of the exterior of the body. This shall be required to eliminate road splash and debris from entering the compartments at floor level. There shall be a minimum of two (2) 3/8" drain holes in the compartment floors	Yes ( ) No ( )	
		Each interior compartment seam shall be sealed with a silver silicone caulk. The rear walls of each compartment shall be provided with a bright stainless steel louvered vent.	Yes ( ) No ( )	
30	<b>Body Compartments - Left Side (Driver Side)</b>	Compartment L1, ahead of the rear wheels, shall be 48.0" wide x 90.0" high x 27.0" deep	Yes ( ) No ( )	
		Compartment L2, above the rear wheels, shall be 60.0" wide x 58.8" high x 27.0" deep	Yes ( ) No ( )	
		Compartment L3, behind the rear wheels, shall be 54.0" wide x 90.0" high x 27.0" deep	Yes ( ) No ( )	
31	<b>Body Compartment - Right Side (Officer Side)</b>	Compartment R1, ahead of the rear wheels, shall be 48.0" wide x 90.0" high x 27.0" deep in lower section and 14.0" deep in the upper section	Yes ( ) No ( )	
		Compartment R2, above the rear wheels, shall be 60.0" wide x 58.8" high x 14.0" deep	Yes ( ) No ( )	
		Compartment R3, behind the rear wheels, shall be 54.0" wide x 90.0" high x 27.0" deep in lower section and 14.0" deep in the upper section	Yes ( ) No ( )	
32	<b>Body Compartment - Rear</b>	The entire rear panel of the body shall be covered using smooth FRP panels for application of the Chevron graphics. The rear panel area shall be of the flat back body design	Yes ( ) No ( )	
		A 12" deep rear tailboard of 3/16" aluminum treadplate shall be provided full width of the body. The standing surface of the tailboard shall be provided with non-skid Bustin Tread (or equal) welded inserts	Yes ( ) No ( )	
		Grab rails shall be provided one each side on the rear of the body, and a horizontal grab rail shall be provided below the hose bed	Yes ( ) No ( )	
		<b>Rear Panel Compartment</b>		
		Compartment B1, located centered ahead of the rear tailboard, shall be 46" wide x approximately 50" high x 32" deep. Solid walls shall be provided on both sides of the rear compartment. This compartment shall be of 12 gauge 304L stainless steel.	Yes ( ) No ( )	
33	<b>Compartment Doors</b>	A roll up door with satin finish shall be provided on a compartment up to 45" tall. The door(s) shall be installed in the following location(s): L2, R2	Yes ( ) No ( )	
		The door slats shall be double wall box frame and manufactured from anodized aluminum. The slats shall have interlocking end shoes on each slat. The slats shall have interlocking joints with a PVC/vinyl inner seal to prevent any metal to metal contact and inhibit moisture and dust penetration	Yes ( ) No ( )	
		The track shall be anodized aluminum with a finishing flange incorporated to provide a finished look around the perimeter of the door without additional trim or caulking. The track shall have a replaceable side seal to prevent water and dust from entering the compartment	Yes ( ) No ( )	
		The doors shall be counterbalanced for ease in operation. A full width latch bar shall be operable with one hand, even with heavy gloves. Securing method shall be a positive latch device	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

	#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
34	<b>Compartment Doors (cont.)</b>		A magnetic type switch integral to the door shall be supplied for door ajar indication and compartment light activation	Yes ( ) No ( )	
			The door opening shall be reduced by 2" in width and approximately 8-9" in height depending on door height	Yes ( ) No ( )	
			A roll up door with satin finish shall be provided on a compartment greater than 45" tall. The door(s) shall be installed in the following location(s): L1, L3, R1, R3, and B1	Yes ( ) No ( )	
			The door slats shall be double wall box frame and manufactured from anodized aluminum. The slats shall have interlocking end shoes on each slat. The slats shall have interlocking joints with a PVC/vinyl inner seal to prevent any metal to metal contact and inhibit moisture and dust penetration	Yes ( ) No ( )	
			The track shall be anodized aluminum with a finishing flange incorporated to provide a finished look around the perimeter of the door without additional trim or caulking. The track shall have a replaceable side seal to prevent water and dust from entering the compartment	Yes ( ) No ( )	
			The doors shall be counterbalanced for ease in operation. A full width latch bar shall be operable with one hand, even with heavy gloves. Securing method shall be a positive latch device	Yes ( ) No ( )	
			A magnetic type switch integral to the door shall be supplied for door ajar indication and compartment light activation	Yes ( ) No ( )	
			The door opening shall be reduced by 2" in width and approximately 8-9" in height depending on door height	Yes ( ) No ( )	
			A drip pan shall be supplied for each roll-up door. The drip pan shall be made from a high strength aluminum alloy. The splashguard and end caps shall be made from extruded and injection molded high-impact plastic. Drip pan location(s): L1, L2, L3, R1, R2, R3, B1	Yes ( ) No ( )	
35	<b>Shelves</b>		There shall be an aluminum adjustable shelf provided for compartment L2, L3 upper	Yes ( ) No ( )	
			The shelf shall be constructed of 3/16" (.187") smooth aluminum plate. The shelf shall have a minimum 2" front and rear lips to accommodate optional plastic interlocking compartment tile systems. For additional strength and reinforcement of the shelf a return break shall be provided on the outward lip. The adjustable shelf shall be capable of holding 250 lbs.	Yes ( ) No ( )	
			The shelf shall be sized, width and depth, to match the size and location in the compartment	Yes ( ) No ( )	
			Tracks shall be provided in L2, L3 upper for use with adjustable shelves and/or trays in deep non-transverse compartments. The tracks shall be vertically mounted and attached to the side and/or rear walls of the compartments	Yes ( ) No ( )	
			There shall be a permanent mounted stainless steel shelf provided for compartment R1, R3. The shelf shall be at the offset within the compartment	Yes ( ) No ( )	
35b	<b>Shelves (cont.)</b>		The shelf shall be constructed of 12 gauge stainless steel. The shelf shall have a minimum 2" front lip for added strength and reinforcement and to accommodate optional plastic interlocking compartment tile systems. The shelf shall be able to hold 250 lbs.	Yes ( ) No ( )	

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
Any variations to the specifications are to be clearly noted.				
36	<b>Covers</b>	A cover constructed of [#COL] 18 oz. PVC vinyl coated polyester shall be installed over the apparatus hose bed. The base fabric shall be 1000 x 1300 Denier (or equal) polyester with a fabric count of 20 x 20 square inch	Yes ( ) No ( )	
		The front edge of the cover shall be mechanically attached to the body. The sides of the cover shall be held in place with heavy duty Velcro strips running the length of the hose bed. The rear of the cover shall have an integral flap that extends down to cover the rear of the hose bed. This flap shall be secured in place with heavy duty nylon straps to comply with the latest edition of NFPA 1901	Yes ( ) No ( )	
		A cover constructed of [#COL] 18 oz. PVC vinyl coated polyester shall be installed on the crosslay. The base fabric shall be 1000 x 1300 Denier (or equal) polyester with a fabric count of 20 x 20 per square inch	Yes ( ) No ( )	
		The cover shall be held in place across the top of the body by chrome snaps. The sides of the cover shall have integral flaps that extend down to cover the sides of the crosslay. The side flaps shall be secured in place to comply with the latest edition of NFPA 1901	Yes ( ) No ( )	
37	<b>Pump Module</b>	Pump module shall be 76" wide.	Yes ( ) No ( )	
		A lower pump enclosure module shall be installed. The substructure shall be constructed entirely of 12 gauge 304L stainless steel using a break-formed design for the components. Transverse 3/16" thick 304L stainless steel break-formed cross members shall support the 12 gauge substructure and the exterior panels independently from the cab and rear body of the apparatus. The cross members shall be isolated from the frame rails using mylar	Yes ( ) No ( )	
		The pump module shall be 50" wide front to back, plus flex joints	Yes ( ) No ( )	
		The pump enclosure shall be 76" wide side to side, plus running boards	Yes ( ) No ( )	
		The pump enclosure shall be a free standing module supported only by the top of the frame rails in a minimum of four places, and secured with angle brackets bolted to both the pump enclosure support cross rails, and the side of the chassis frame rails	Yes ( ) No ( )	
		Maximum size brushed stainless steel fully removable bolt-on access panels shall be installed on each side of the pump enclosure	Yes ( ) No ( )	
		All side panels, instrument panels, and bezels shall be cut and de-burred to eliminate sharp edges. For best uniform appearance, all brushed finish on the stainless steel trim pieces shall run in the same horizontal direction	Yes ( ) No ( )	
		Two (2) 3/16" non-skid aluminum treadplate running boards shall be bolted to the pump enclosure substructure. Running boards shall be a minimum of 12" deep. For increased slip resistance, the standing surface of the running boards shall be provided with Bustin Tread (or equal) non-skid inserts	Yes ( ) No ( )	
37b	<b>Pump Module (cont.)</b>	The upper pump enclosure area shall be built of 304L stainless steel with brushed stainless steel outer trim to blend with the lower module trim pieces	Yes ( ) No ( )	
		Two (2) preconnected crosslay compartments shall be provided at the rear of the upper pump module. The crosslay divider shall be 1/4" thick smooth aluminum with DA finish	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
		There shall be a stainless steel floor which shall include holes for ventilation and cut-outs for the swivel elbows to allow preconnected hose to be deployed from both sides of the truck	Yes ( ) No ( )	
		Each of the crosslays shall accommodate up to 400' of double jacket preconnected hose for the selected discharges in a triple wide stack	Yes ( ) No ( )	
		The remaining area above the enclosure shall be used for top open miscellaneous equipment storage. The floor in this area shall be non-skid aluminum treadplate	Yes ( ) No ( )	
38	Pump Panels	The driver and officer side pump panels shall be constructed of 14 gauge stainless steel. Each panel shall have the ability to be removed from the module for easier access and for maintenance in the pump area	Yes ( ) No ( )	
		The gauge panel shall swing downward/forward for access to electrical connections on panel. Includes two (2) cable hold opens, and push button latches	Yes ( ) No ( )	
39	Misc. Pump Panel Options	Color coded pump panel labels shall be supplied to be in accordance with NFPA 1901 compliance	Yes ( ) No ( )	
40	Pump Module Options	Logos with the OEM brand name shall be provided and shall be mounted one (1) each side on pump module/pre-connect panels. Logos shall be sized as applicable to available space on panel(s)	Yes ( ) No ( )	
41	Water Tank	A 1030 gallon (U.S.) "L" booster tank shall be supplied	Yes ( ) No ( )	
		The booster tank shall be constructed of polypropylene material. The booster tank shall be completely removable without disturbing or dismounting the apparatus body structure. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal	Yes ( ) No ( )	
		The booster tank top, sides, and bottom shall be constructed of a minimum 1/2" (0.50") thick black UV-stabilized copolymer polypropylene. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The tank cover shall be constructed of 1/2" thick polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank cover(s) shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart. These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions	Yes ( ) No ( )	
41b	Water Tank (cont.)	The tank shall have a combination vent and manual fill tower with a hinged lid. The fill tower shall be constructed of 1/2" polypropylene and shall be a typical dimension of 8" x 8" outer perimeter (subject to change for specific design applications). The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower shall have a 1/4" thick removable polypropylene screen and a polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
		The booster tank shall have two (2) tank plumbing openings. One (1) for a tank-to-pump suction line with an anti-swirl plate, and one (1) for a tank fill line. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates per the tank fill inlet size	Yes ( ) No ( )	
		The sump shall be constructed of a minimum of 1/2" polypropylene. The sump shall have a minimum 3" N.P.T. threaded outlet for a drain plug per NFPA. This shall be used as a combination clean-out and drain. All tanks shall have an anti-swirl plate located approximately 3" above the inside floor	Yes ( ) No ( )	
		The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength	Yes ( ) No ( )	
41c	<b>Water Tank (cont.)</b>	Inside the fill tower there shall be a combination vent/overflow pipe. The vent overflow shall be a minimum of schedule 40 polypropylene pipe with an I.D. of 3" or larger that is designed to run through the tank. This outlet shall direct the draining of overflow water past the rear axle, thus reducing the possibility of freeze-up of these components in cold environments. This drain configuration shall also assure that rear axle tire traction shall not be affected when moving forward	Yes ( ) No ( )	
		The booster tank shall undergo extensive testing prior to installation in the truck. All water tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale	Yes ( ) No ( )	
		Each tank shall be weighed empty and full to provide precise fluid capacity. Each tank shall be delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight. Engineering estimates for capacity calculations shall not be permitted for capacity certification. The tank must be designed and fabricated by a tank manufacturer that is ISO certified. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank	Yes ( ) No ( )	
		A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foam (s), the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the tank manufacturer, and contact information. The QR code will allow the user to connect with the tank manufacturer for additional information and assistance	Yes ( ) No ( )	
		The tank shall have a limited Lifetime warranty that provides warranty service for the life of the fire apparatus in which the tank is installed. Warranties are transferable if the apparatus ownership changes by requesting the transfer from the tank manufacturer	Yes ( ) No ( )	

Any variations to the specifications are to be clearly noted.

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
		Tank capacity is 1030 US gallons	Yes ( ) No ( )	
42	Tank Plumbing	One (1) 2" pump-to-tank fill line having a 2" manually operated full flow valve. The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times. The fill line shall be controlled using a chrome handle with an integral tag	Yes ( ) No ( )	
		The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it	Yes ( ) No ( )	
		The valve shall be swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing	Yes ( ) No ( )	
		All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss	Yes ( ) No ( )	
42b	Tank Plumbing (cont.)	One (1) manually operated 3" Akron (or equal) valve shall be installed between the pump suction and the booster tank. Includes flex hose with stainless steel hose clamps for connection to the 4" tank sump outlet. The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times	Yes ( ) No ( )	
		The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position and water is flowing through it.	Yes ( ) No ( )	
		The valve shall be a swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.	Yes ( ) No ( )	
		All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.	Yes ( ) No ( )	
		A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank. The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times.	Yes ( ) No ( )	
		A 30 gallon (U.S.) foam cell for Class A foam shall be supplied. The foam cell shall be integral to the water tank	Yes ( ) No ( )	
		The integral tank top, sides, and bottom shall be constructed of black polypropylene material. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The copolymer polypropylene material shall be used for its high strength and corrosion resistance for a prolonged tank life	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
43	Foam Tank	The foam tank shall have a manual fill tower. The fill tower shall be constructed of 1/2" polypropylene and shall be a typical dimension of 8" x 8" outer perimeter (subject to change for specific design applications). Foam fill tower shall be constructed of a green colored material indicating type of foam utilized. The capacity of the tank shall be engraved on the top of the fill tower lid. The fill tower shall be located in the forward area of the tank. The tower shall have a 1/4" thick removable polypropylene screen. Inside the fill tower, approximately 1.5" down from the top, there shall be an anti-foam fill tube that extends down to the bottom of the tank. A pressure vacuum vent shall be provided in the lid of the fill tower. The foam fill tower shall be removable to facilitate the cleaning of the foam tank	Yes ( ) No ( )	
		The foam tank shall undergo extensive testing prior to installation in the truck. All foam tanks shall be tested and certified as to capacity. The tank must be designed and fabricated by a tank manufacturer that is ISO 9001:2008 certified in each of its locations. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank.	Yes ( ) No ( )	
43b	Foam Tank (cont)	The tank shall have a limited Lifetime warranty that provides warranty service for the life of the fire apparatus in which the tank is installed. Warranties are transferable if the apparatus ownership changes by requesting the transfer from the tank manufacturer.	Yes ( ) No ( )	
44	Ladder Storage / Racks	Ladders on the unit should be Alco-Lite or comparable		
		The length of ladders capable of being stored shall be the following: 24' 2-section, 14' roof ladder and 10' attic ladder w/shoes	Yes ( ) No ( )	
		A storage tunnel shall be provided, constructed of break formed .125" aluminum sheet, located behind the officer upper compartments. Includes a hinged rear access door (wired to door ajar) with a 2-point bent D-ring latch	Yes ( ) No ( )	
		Tunnel shall be capable of holding: (1) 2-section ladder, (1) roof ladder, (1) attic ladder, (2) pike poles, and (2) 6" x 10' hard suction hoses individually vertically stacked with stops	Yes ( ) No ( )	
45	Handrails / Steps	Dual lighted LED folding steps shall be positioned to the driver side rear of the body. The steps shall be NFPA compliant for access to the hose bed storage area and in step height and surface area. The steps shall be staggered stepped as applicable with tailboard depth, not applicable with recessed step mounting	Yes ( ) No ( )	
		Dual lighted LED folding step with LED lights integral to the step on the top to provide NFPA requirements of 2 FC on the stepping surface. Each step shall also have a LED light integral to the bottom of the step to meet NFPA requirements of a stepping surface up to 18" below the step	Yes ( ) No ( )	
		The folding step shall sustain a minimum static load of 500 lbs. The folding step shall also meet NFPA slip resistance qualifications	Yes ( ) No ( )	
		One (1) hand rail shall be installed (as applicable) in compliance with current NFPA. The hand rail shall be constructed of 6063T5 1.25" OD anodized aluminum tube, with an integral ribbed surface to assure a good grip for personnel safety, mounted between chrome stanchions	Yes ( ) No ( )	
		The rear tires shall have a set of black mud flaps mounted behind the rear chassis wheels	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS		
46	<b>Misc. Body Options</b>	Hosebed hose load allowance on the apparatus shall be 1200 lbs.	Yes ( ) No ( )			
		There shall be a hose bed divider provided the full fore-aft length of the hose bed	Yes ( ) No ( )			
		The hose bed divider shall be constructed of 1/4" (0.25") smooth aluminum plate with an extruded aluminum base welded to the bottom. The rear end of the divider shall have a 3" radius corner to protect personnel. The divider shall be natural finish aluminum and shall be sanded and de-burred to prevent damage to the hose	Yes ( ) No ( )			
		The divider shall be adjustable from side to side in the hose bed to accommodate varying hose loads	Yes ( ) No ( )			
		There shall be a hand hole cut-out(s) on the trailing edge of each hose bed divider. The cut-out(s) is specifically sized for use in adjusting of the hose bed divider	Yes ( ) No ( )			
		The apparatus shall have no overall height restrictions	Yes ( ) No ( )			
		The unit has no overall length restrictions	Yes ( ) No ( )			
		A recessed fuel fill shall be provided at the driver side rear wheel well area	Yes ( ) No ( )			
		The construction of the wheel well assemblies shall be an integral part of the overall body design. Rear fender panels shall be formed of 12 gauge 304L stainless steel	Yes ( ) No ( )			
		Mirror polished stainless steel fenderettes shall be installed at the outer panels and protrude a maximum of 3/4". Black closed cell foam rubber shall be installed between the flare and outer wheel well panel. Mounting hardware shall not be visible on the exterior of the body	Yes ( ) No ( )			
46b	<b>Misc. Body Options (cont.)</b>	Bolt-on 16 gauge 304L stainless steel wheel well liners shall be installed, unpainted. A minimum of 1/4" spacing shall be provided at the lower leading and trailing mounting areas for proper drainage and ventilation	Yes ( ) No ( )			
		The overall body height shall be 94" from the bottom of the body to the top of the upper hose bed side sheets	Yes ( ) No ( )			
		The upper hose body shall be 59" wide, constructed of the same 304L stainless steel material as the compartments and shall use welded construction	Yes ( ) No ( )			
		Hose bed flooring shall be Duradek T3500 (or equal) white fiberglass grating installed full length and full width of the hose bed for superior drainage and hose ventilation	Yes ( ) No ( )			
		The main body of the apparatus shall have an extruded aluminum rub rail package installed below the lower side compartments and full width of the rear tailboard. Each rub rail shall include a white reflective surface	Yes ( ) No ( )			
		47	<b>SCBA Bottle Storage</b>	The body wheel well area shall store up to seven (7) SCBA bottles- four (4) on the officer side and three (3) on the driver side. The bottles shall be secured in each storage area by a vertical hinged door which shall be secured in the closed position by a push button latch. The doors shall have a brushed stainless steel finish	Yes ( ) No ( )	
				Each storage area shall provide individual storage of a bottle and shall not allow forward or rearward movement of the bottle. The bottle(s) shall be removable from the storage area without the bottle(s) coming into contact with any surface area of the wheel well	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
		Straps shall be provided in each exterior storage compartment to provide secondary means to hold each SCBA bottle in the compartment. The straps shall be constructed from 1" nylon webbing formed in a loop. The strap(s) shall be mounted to the storage compartment ceiling directly inside the door opening at each bottle location	Yes ( ) No ( )	
48	Pump	The pump shall be a midship-mounted Hale QMAX single stage centrifugal pump (or equivalent). The pump shall be mounted on the chassis frame rails of commercial or custom truck chassis and have the capacity of 1,250 to 2,250 gallons per minute (U.S. GPM) NFPA 1901 rated performance, and shall be split-shaft driven from the truck transmission	Yes ( ) No ( )	
		The entire pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 psi (207 MPa). All metal moving parts in contact with water shall be of high quality bronze or stainless steel. Pump body shall be horizontally split in two sections, for easy removal of impeller assembly including wear rings and bearings from beneath the pump without disturbing pump mounting or piping	Yes ( ) No ( )	
		The pump impeller shall be hard, fine grain bronze of the mixed flow design and shall be individually ground and hand balanced. Impeller clearance rings shall be bronze, easily renewable without replacing impeller or pump volute body, and of wrap-around double labyrinth design for maximum efficiency	Yes ( ) No ( )	
		The pump shaft shall be heat-treated, corrosion-resistant stainless steel and shall be rigidly supported by three (3) bearings for minimum deflection. The sleeve bearing is to be lubricated by a force fed, automatic oil lubricated design, pressure-balanced to exclude foreign material. The remaining bearings shall be heavy-duty, deep groove ball bearings in the gearbox and shall be splash-lubricated. Pump shaft must be sealed with double-lip oil seal to keep road dirt and water out of the gearbox	Yes ( ) No ( )	
		Two (2) 6" diameter suction ports with 6" NST male threads and removable screens shall be provided, one each side. The ports shall be mounted one (1) on each side of the midship pump and shall extend through the side pump panels. Inlets shall come equipped with long handle chrome caps	Yes ( ) No ( )	
		The pump system shall utilize a stainless steel discharge manifold system that allows a direct flow of water to discharge valves. The manifold and fabricated piping systems shall be constructed of a minimum of Schedule 10 stainless steel to reduce corrosion	Yes ( ) No ( )	
		The apparatus manufacturer shall provide a full 10 year stainless steel plumbing components warranty. This warranty shall cover defects in materials or workmanship of apparatus manufacturer designed foam/water plumbing system stainless steel components for 10 years. A copy of the warranty document shall be provided with the proposal	Yes ( ) No ( )	

Any variations to the specifications are to be clearly noted.

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
48b	<b>Pump (cont.)</b>	The electrically-driven priming pump shall be a positive displacement vane type. One (1) priming control, located at the pump operator's position, shall open the priming valve and start the priming motor. The primer shall be oil-less type. The priming valve shall be electronically interlocked to the "Park Brake" circuit to allow priming of the pump before the pump is placed in gear	Yes ( ) No ( )	
		The pump shift shall be pneumatically-controlled using a power shifting cylinder	Yes ( ) No ( )	
		The power shift control valve shall be mounted in the cab and be labeled "PUMP SHIFT". The apparatus transmission shift control shall be furnished with a positive lever, preventing accidental shifting of the chassis transmission	Yes ( ) No ( )	
		A green indicator light shall be located in the cab and be labeled "PUMP ENGAGED". The light shall not activate until the pump shift has completed its full travel into pump engagement position	Yes ( ) No ( )	
		A second green indicator light shall be located in the cab and be labeled "OK TO PUMP". This light shall be energized when both the pump shift has been completed and the chassis automatic transmission has obtained converter lock-up (4th gear lock-up)	Yes ( ) No ( )	
		Two (2) test plugs shall be pump panel mounted for third party testing of vacuum and pressures of the pump	Yes ( ) No ( )	
		A master drain valve shall be installed and operated from the pump operator's panel. The master pump drain assembly shall consist of a Class 1 bronze master drain with a rubber disc seal and turning handle	Yes ( ) No ( )	
		The manual master drain valve shall have six (6) individually-sealed ports that allow quick and simultaneous draining of multiple intake and discharge lines. It shall be constructed of corrosion-resistant material and be capable of operating at a pressure of up to 600 PSI	Yes ( ) No ( )	
		The master drain shall provide independent ports for low point drainage of the fire pump and auxiliary devices	Yes ( ) No ( )	
		A gearbox cooler shall be provided to maintain safe operating temperatures during prolonged pumping operations for pump rating 1500 GPM and over	Yes ( ) No ( )	
An engine cooler used to lower engine water temperature during prolonged pumping operations and controlled at the pump operator's panel shall be provided	Yes ( ) No ( )			
48c	<b>Pump (cont.)</b>	The engine cooler shall be installed in the engine coolant system in such a manner as to allow cool pump water to circulate around engine water, thus forming a true heat exchanger action. Cooler inlet and outlet shall be continuous, preventing intermixing of engine coolant and pump water	Yes ( ) No ( )	
		The fire pump shall be rated at 1500 GPM	Yes ( ) No ( )	
		The pump, when dry, shall be capable of taking suction and discharging water in accordance with current NFPA 1901. The pump shall be tested at the manufacturer's facility by an independent, third-party testing service. The conditions of the pump test shall be as outlined in current NFPA 1901.	Yes ( ) No ( )	
		The tests shall include, at a minimum, the pump test, the pumping engine overload test, the pressure control system test, the priming device tests, the vacuum test, and the water tank to pump flow test as outlined in current NFPA 1901	Yes ( ) No ( )	

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS		
Any variations to the specifications are to be clearly noted.						
49	<b>Pump Certification</b>	A piping hydrostatic test shall be performed as outlined in current NFPA 1901	Yes ( ) No ( )			
		<b>The pump shall deliver the percentage of rated capacities at pressures indicated below:</b>				
		100% of rated capacity at 150 PSI net pump pressure	Yes ( ) No ( )			
		100% of rated capacity at 165 PSI net pump pressure	Yes ( ) No ( )			
		70% of rated capacity at 200 PSI net pump pressure	Yes ( ) No ( )			
		50% of rated capacity at 250 PSI net pump pressure	Yes ( ) No ( )			
		A test plate, installed at the pump panel, shall provide the rated discharges and pressures together with the speed of the engine as determined by the certification test, and the no load governed speed of the engine	Yes ( ) No ( )			
50	<b>Pump Options</b>	The test connection shall be installed on the pump panel to manually verify the vehicle engine speed displayed on the electronic tachometer	Yes ( ) No ( )			
		The pump 6" steamer intake(s) shall be mounted approximately 1" from the pump panel to back of cap when installed. The "Flush+1" dimension can vary + or - 1-1/4" or as practicable depending on the pump module width and options selected ( <i>Example: 72" or 76" modules</i> ) Location will be driver's side and officer's side	Yes ( ) No ( )			
		The pump shaft shall have only one (1) packing gland located on the inlet side of the pump. It shall be of split design for ease of repacking. The packing gland shall be of a design to exert uniform pressure on packing and to prevent cocking and uneven packing load when tightened. The packing rings shall be permanently lubricated, graphite composition and have sacrificial zinc foil separators to protect the pump shaft from galvanic corrosion	Yes ( ) No ( )			
		The packing shall be easily adjusted by hand with rod or screw driver with no special tools or wrenches required	Yes ( ) No ( )			
		50b	<b>Pump Options (cont.)</b>	A manual master drain valve shall be installed on the pump panel. The master pump drain assembly shall consist of a Class 1 bronze master drain with a rubber disc seal. The master drain shall have a rubber seal to prevent water from running out on the running board	Yes ( ) No ( )	
				The manual master drain valve shall have twelve (12) individual-sealed ports that allow quick and simultaneous draining of multiple intake and discharge lines. It shall be constructed of corrosion-resistant material and be capable of operating at a pressure of up to 600 PSI	Yes ( ) No ( )	
				The master drain shall provide independent ports for low point drainage of the fire pump and auxiliary devices	Yes ( ) No ( )	
The pump shall have a 3/8" line installed from the pump discharge to the booster tank to allow a small amount of water to circulate through the pump casing in order to cool the pump during sustained periods of pump operation when water is not being discharged. The pump cooler line shall be controlled from the pump operator's panel by a 1/4 turn valve with "T" handle. Each 1/4 turn handle grip shall feature built-in color-coding labels and a verbiage tag	Yes ( ) No ( )					

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
Any variations to the specifications are to be clearly noted.				
51	<b>Intakes</b>	One (1) 2-1/2" suction inlet with a manually operated 2-1/2" valve shall be provided on the left side pump panel	Yes ( ) No ( )	
		The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position and water is flowing through it	Yes ( ) No ( )	
		The valve shall be a swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing	Yes ( ) No ( )	
		The outlet of the valve shall be connected to the suction side of the pump with the valve body located behind the pump panel. The valve shall come equipped with a brass inlet strainer, 2-1/2" NST female chrome inlet swivel, and shall be equipped with a chrome plated rockerlug plug with a retainer device.	Yes ( ) No ( )	
		The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times	Yes ( ) No ( )	
		All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance, and decreased friction loss	Yes ( ) No ( )	
		A 3/4" bleeder valve assembly will be installed on the left side pump panel	Yes ( ) No ( )	
52	<b>Intake Options</b>	Pressure Relief Valve - pressure relief valve is adjustable from 50 to 250 psi (3 to 14 bar) with easy to see 25 psi (2 bar) increments. The aluminum casting is plastic impregnated, hardcoat anodized, and TFT powder coat finished inside and out for maximum corrosion protection. Works with Darley, Waterous, or Hale bolt hole patterns for direct use on pump flanges	Yes ( ) No ( )	
53	<b>Discharges and Preconnects</b>	One (1) 1-1/2" preconnect outlet with a manually operated valve shall be supplied to the extended front bumper. The preconnect shall consist of a 2" heavy duty hose coming from the pump discharge manifold to a 2" FNPT x 1-1/2" MNST mechanical swivel hose connection to permit the use of the hose from either side of the apparatus	Yes ( ) No ( )	
		The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it	Yes ( ) No ( )	
		The valve shall be a swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing	Yes ( ) No ( )	
		An air blow-out valve shall be installed between the chassis air reservoir and the front jump line. The control shall be installed on the pump operator's panel	Yes ( ) No ( )	
		The discharge shall be supplied with a Class 1 automatic 3/4" drain valve assembly. The automatic drain shall have an all-brass body with stainless steel check assembly. The drain shall normally be open and automatically close when the pressure is greater than 6 PSI	Yes ( ) No ( )	
		The valve control shall be located at the pump operator panel and shall visually indicate the position of the valve at all times	Yes ( ) No ( )	

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
53b	<b>Discharges and Preconnects (cont.)</b>	All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss	Yes ( ) No ( )	
		One (1) 3" deck gun discharge outlet with a manually operated valve and 3" stainless steel pipe shall be provided above the pump compartment	Yes ( ) No ( )	
		The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it	Yes ( ) No ( )	
		The valve shall be a swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing	Yes ( ) No ( )	
		The valve shall be equipped with a device that limits the opening and closing speeds to comply with the current edition of NFPA 1901	Yes ( ) No ( )	
		The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times	Yes ( ) No ( )	
		All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss	Yes ( ) No ( )	
		There shall be a brass swivel provided for the front bumper discharge located in hose tray center front bumper on lower back wall. This shall be a quantity of two (2) 1.5 Single Crosslay Akron valves or equivalent	Yes ( ) No ( )	
		One (1) single crosslay discharge shall be provided at the front area of the body. The crosslay shall include one (1) 2" brass swivel with a 1-1/2" hose connection to permit the use of hose from either side of the apparatus	Yes ( ) No ( )	
		The crosslay hose bed shall consist of a 2" heavy-duty hose coming from the pump discharge manifold to the 2" swivel. The hose shall be connected to a manually operated 2" Akron valve. The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it	Yes ( ) No ( )	
		The valve shall be a swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing	Yes ( ) No ( )	
		The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times.	Yes ( ) No ( )	
		All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss. Location: crosslay 1 & 2	Yes ( ) No ( )	
		One (1) 2-1/2" discharge outlet with a manually operated valve shall be provided at the left hand side pump panel	Yes ( ) No ( )	
The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position and water is flowing through it	Yes ( ) No ( )			

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
Any variations to the specifications are to be clearly noted.				
53c	<b>Discharges and Preconnects (cont.)</b>	The valve shall be a swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing	Yes ( ) No ( )	
		The valve control shall be located at the pump operator panel and shall visually indicate the position of the valve at all times	Yes ( ) No ( )	
		The discharge shall extend out beyond the pump panel with a 30 degree downward angle with 2-1/2" NST threads to help prevent kinking of the discharge hose. The 30 degree chrome droop shall be an integral part of the discharge valve and shall be equipped with a chrome plated rockerlug cap with a retainer chain	Yes ( ) No ( )	
		The discharge shall be supplied with a 3/4" bleeder valve assembly. The bleeder valve shall be installed to drain water from the gauge pressure line to prevent freezing of the line. The drain shall be controlled with a quarter-turn valve on the pump panel	Yes ( ) No ( )	
		All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss. Location: Left side discharge 1, left side discharge 2	Yes ( ) No ( )	
		One (1) 2-1/2" discharge outlet with a manually operated valve shall be provided at the right side pump panel	Yes ( ) No ( )	
		The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it	Yes ( ) No ( )	
		The valve shall be a swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing	Yes ( ) No ( )	
		The valve control shall be located at the pump operator panel and shall visually indicate the position of the valve at all times	Yes ( ) No ( )	
		The discharge shall extend out beyond the pump panel with a 30 degree downward angle with chrome plated 2-1/2" NST threads to help prevent kinking of the discharge hose. The 30 degree chrome droop shall be an integral part of the discharge valve and shall be equipped with a chrome plated rockerlug cap with a retainer chain	Yes ( ) No ( )	
		All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss. Location: right side discharge 2	Yes ( ) No ( )	
		One (1) 2-1/2" discharge outlet with a manually operated Akron valve shall be supplied to the right rear of the apparatus by a 2-1/2" stainless steel pipe.	Yes ( ) No ( )	
		The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it	Yes ( ) No ( )	
		The valve shall be a swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing	Yes ( ) No ( )	
The valve control shall be located at the pump operator panel and shall visually indicate the position of the valve at all times	Yes ( ) No ( )			

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
53d	<b>Discharges and Preconnects (cont.)</b>	All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss. Location: right rear discharge	Yes ( ) No ( )	
		One (1) 3" discharge outlet with a manually operated Akron valve shall be provided at the right side pump panel	Yes ( ) No ( )	
		The discharge shall be equipped with a device that shall not allow the valve to open or close in less than three (3) seconds	Yes ( ) No ( )	
		The valve shall be an Akron 8800HD series (or equal) with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it	Yes ( ) No ( )	
		The valve shall be a swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing	Yes ( ) No ( )	
		The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times	Yes ( ) No ( )	
		The discharge shall extend out beyond the pump panel with a 30 degree downward angle with chrome plated 3" NST threads to help prevent kinking of the discharge hose. The 30 degree chrome droop shall be an integral part of the discharge valve and shall be equipped with a chrome plated rockerlug cap with a retainer chain	Yes ( ) No ( )	
		All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss. Location: right side discharge 1	Yes ( ) No ( )	
		Deck gun piping shall be positioned centered in deck gun channel or centered and offset forward in dunnage area (as applicable to upper module area design). This location shall allow for optimal operation of a deck gun monitor once installed.	Yes ( ) No ( )	
		53e	<b>Discharges and Preconnects (cont.)</b>	The specified discharge shall be supplied with a Class 1 automatic 3/4" drain valve assembly
The automatic drain shall have an all-brass body with stainless steel check assembly. The drain shall normally be open and automatically close when the pressure is greater than 6 PSI	Yes ( ) No ( )			
The apparatus pump panel shall be equipped with side mount valve controls. The ergonomically designed ¼ turn push-pull T-handle shall be chrome-plated zinc with recessed labels for color-coding and verbiage. An anodized aluminum control rod and housing shall, together with a stainless spring steel locking mechanism, eliminate valve drift. Teflon impregnated bronze bushings in both ends of the rod housing shall minimize rod deflection, never need lubrication, and ensure consistent long-term operation. The control assembly shall include a decorative chrome-plated zinc panel-mounting bezel with areas for color-coding and/or FOAM and CAFS identification labels	Yes ( ) No ( )			
The bleeder/drain valves shall be ¾" ball brass drain valves with chrome-plated lift lever handles and ergonomic grips. Each lift handle grip shall feature built-in color-coding labels and a verbiage tag identifying each valve, also supplied by Innovative Controls. The color labels shall also include valve open and close verbiage. Qty. 9	Yes ( ) No ( )			

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
54		Intake and/or discharge swing handle bezels shall be installed to the apparatus with mounting bolts. These bezel assemblies will be used to identify intake and/or discharge ports with color and verbiage. These bezel are designed and manufactured to withstand the specified apparatus service environment and shall be backed by a warranty equal to that of the exterior paint and finish. The specified assemblies feature a chrome-plated panel-mount bezel with durable UV resistant polycarbonate inserts. These UV resistant polycarbonate graphic inserts shall be sub-surface screen printed to eliminate the possibility of wear and protect the inks from fading. All insert labels shall be backed with 3M permanent adhesive (200MP), which meets UL969 and NFPA standards	Yes ( ) No ( )	
	<b>Pressure Governor</b>	The apparatus shall be equipped with a Class 1 "Total Pressure Governor" (TPG) Integrated pump control system. The TPG shall have a weatherproof color display. The TPG will operate as an engine/pump pressure governor/throttle system that is connected directly to the Electronic Control Module (ECM) mounted on the engine. The TPG is to operate as a pressure sensor (regulating) governor (PSG)	Yes ( ) No ( )	
		The TPG shall display engine RPM, oil pressure, engine temperature and voltage along with providing critical warnings. The warning levels for oil pressure, high engine temperature, low voltage and high voltage shall be independently programmable	Yes ( ) No ( )	
		The valve discharge gauges shall be 2 ½" diameter pressure gauges. Each gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauges shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F. Each gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy	Yes ( ) No ( )	
		A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauges shall be installed into decorative chrome-plated mounting bezels that incorporate valve-identifying verbiage and/or color labels. The gauges shall display a range from 0 to 400 psi with black graphics on a white background	Yes ( ) No ( )	

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
55	Gauges	The master intake and master discharge gauges shall be 4" diameter pressure gauges. Each gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauges shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F. Each gauge shall meet ANSI B40.1 Grade 1A requirements with an accuracy of +/- 1% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy	Yes ( ) No ( )	
		The two master gauges shall be installed into decorative chrome-plated zinc mounting bezel that also incorporates a test port manifold and a graphic overlay that identifies the master intake and discharge gauges, the vacuum test port, and the pressure test port. The test port manifold is solid cast brass with chrome plated plugs. The master gauges shall be installed on the pump panel no more than 6 inches apart. The gauge on the left shall be the master pump intake gauge and display a range from 30" VAC to 400 PSI with black graphics on a white background. The gauge on the right shall be the master pump discharge gauge and display a range from 0 to 400 PSI with black graphics on a white background	Yes ( ) No ( )	
		A Tank Level Monitor System shall be installed. The system shall include [1] electronic display module(s), a stainless steel pressure transducer sender unit, and the necessary wiring with water-tight plug terminations that do not require sealing grease	Yes ( ) No ( )	
		The master display module shall show the tank level using 16 super-bright easy-to-see LEDs. Tank level indication shall be achieved by the appropriate illumination of 4 horizontal rows of LEDs, with 4 LEDs per row. Full and near-full levels shall be indicated with the illumination of all 4 rows of LEDs, including the illumination of the top row of 4 green LEDs. Tank levels between 1/2 and 3/4 full shall be indicated with the illumination of the bottom 3 rows of LEDs, including the illumination of the top row of 4 blue LEDs. Tank levels between 1/4 and 1/2 full shall be indicated with the illumination of the bottom 2 rows of LEDs, including the illumination of the top row of 4 amber LEDs. Tank levels between 1/4 full and near empty shall be indicated with the illumination of the bottom row of 4 red LEDs only. Tank levels between near empty and empty shall be indicated by flashing the bottom row of 4 red LEDs	Yes ( ) No ( )	
		The master display shall have a backlit area above at the top with illuminated [water icon / foam icon / foam A icon / foam B icon / WATER LEVEL text / FOAM LEVEL text / FOAM A text / FOAM B text] and a backlit area at the bottom with illuminated tank capacity	Yes ( ) No ( )	

# FIRE PUMPER

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
55b	<b>Gauges (cont.)</b>	A wide-angle polycarbonate diffusion lens in front of the LEDs shall produce a 180° viewing angle. The electronic display module shall be waterproof and shock resistant being encapsulated in a urethane-based potting compound. The potted display electronics shall be integral to a chrome-plated panel-mount reflector that is secured to the apparatus panel with 4 screws installed from the inside of the panel or optional decorative bezel, through the reflector, and into 4 threaded inserts in the outer diffusion lens	Yes ( ) No ( )	
		A Tank Level Monitor System shall be installed. The system shall include [1] electronic display module(s), a stainless steel pressure transducer sender unit, and the necessary wiring with water-tight plug terminations that do not require sealing grease	Yes ( ) No ( )	
		The master display module shall show the tank level using 16 super-bright easy-to-see LEDs. Tank level indication shall be achieved by the appropriate illumination of 4 horizontal rows of LEDs, with 4 LEDs per row. Full and near-full levels shall be indicated with the illumination of all 4 rows of LEDs, including the illumination of the top row of 4 green LEDs. Tank levels between ½ and ¾ full shall be indicated with the illumination of the bottom 3 rows of LEDs, including the illumination of the top row of 4 blue LEDs. Tank levels between ¼ and ½ full shall be indicated with the illumination of the bottom 2 rows of LEDs, including the illumination of the top row of 4 amber LEDs. Tank levels between ¼ full and near empty shall be indicated with the illumination of the bottom row of 4 red LEDs only. Tank levels between near empty and empty shall be indicated by flashing the bottom row of 4 red LEDs	Yes ( ) No ( )	
		The master display shall have a backlit area above at the top with illuminated [foam A icon / FOAM A text] and a backlit area at the bottom with illuminated tank capacity	Yes ( ) No ( )	
		A wide-angle polycarbonate diffusion lens in front of the LEDs shall produce a 180° viewing angle. The electronic display module shall be waterproof and shock resistant being encapsulated in a urethane-based potting compound. The potted display electronics shall be integral to a chrome-plated panel-mount reflector that is secured to the apparatus panel with 4 screws installed from the inside of the panel or optional decorative bezel, through the reflector, and into 4 threaded inserts in the outer diffusion lens	Yes ( ) No ( )	
55c	<b>Gauges (cont.)</b>	The apparatus shall incorporate a Weldon V-MUX multiplex 12 volt electrical system (or equal). The system shall have the capability of delivering multiple signals via a CAN bus. The electrical system installed by the apparatus manufacturer shall conform to current SAE standards, the latest FMVSS standards, and the requirements of the applicable NFPA 1901 standards	Yes ( ) No ( )	
		The electrical system shall be pre-wired for optional computer modem accessibility to allow service personnel to easily plug in a modem to allow remote diagnostics	Yes ( ) No ( )	

Any variations to the specifications are to be clearly noted.

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
56	Electrical System	The electrical circuits shall be provided with low voltage over-current protective devices. Such devices shall be accessible and located in required terminal connection locations or weather-resistant enclosures. The over-current protection shall be suitable for electrical equipment and shall be automatic reset type and meet SAE standards. All electrical equipment, switches, relays, terminals, and connectors shall have a direct current rating of 125 percent of maximum current for which the circuit is protected. The system shall have electro-magnetic interference suppression provided as required in applicable SAE standards	Yes ( ) No ( )	
		Any electrical junction or terminal boxes shall be weather-resistant and located away from water spray conditions	Yes ( ) No ( )	
		<b>For superior system integrity, the networked multiplex system shall meet the following minimum component requirements:</b>		
		• The network system must be Peer to Peer technology based on RS485 protocol. No one module shall hold the programming for other modules. One or two modules on a network referred to as Peer to Peer, while the rest of the network consists of a one master and several slaves is not considered Peer to Peer for this application	Yes ( ) No ( )	
		• Modules shall be IP67 rated to handle the extreme operating environment found in the fire service industry	Yes ( ) No ( )	
		• All modules shall be solid state circuitry utilizing MOS-FET technology and utilize Deutsch series input/output connectors	Yes ( ) No ( )	
		• Each module that controls a device shall hold its own configuration program	Yes ( ) No ( )	
		• Each module should be able to function as a standalone module. No "add-on" module will be acceptable to achieve this form of operation	Yes ( ) No ( )	
		• Load shedding power management (8 levels)	Yes ( ) No ( )	
		• Switch input capability for chassis functions	Yes ( ) No ( )	
		• Responsible for lighting device activation	Yes ( ) No ( )	
		• Self-contained diagnostic indicators	Yes ( ) No ( )	
		• Wire harness needed to interface electrical devices with multiplex modules	Yes ( ) No ( )	
		• The grounds from each device should return to main ground trunk in each sub harness by the use of ultrasonic splices	Yes ( ) No ( )	
			All harnessing, wiring and connectors shall be manufactured to the following standards/guidelines	Yes ( ) No ( )
	• NFPA 1901-Standard for Automotive Fire Apparatus	Yes ( ) No ( )		
	• SAE J1127 and J1127	Yes ( ) No ( )		
	• IPC/WHMA-A-620 – Requirements and Acceptance for Cable and Wire Harness Assemblies. (Class 3 – High Performance Electronic Products)	Yes ( ) No ( )		
	All wiring shall be copper or copper alloys of a gauge rated to carry 125 of the maximum current for which the circuit is protected. Insulated wire and cable 8 gauge and smaller shall be SXL, GXL, or TXL per SAE J1128. Conductors 6 gauge and larger shall be SXL or SGT per SAE J1127	Yes ( ) No ( )		

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
56b	<b>Electrical System (cont.)</b>	All wiring shall be colored coded and imprinted with the circuits function. Minimum height of imprinted characters shall not be less than .082" plus or minus .01". The imprinted characters shall repeat at a distance not greater than 3"	Yes ( ) No ( )	
		A coil of wire shall be provided behind electrical appliances to allow them to be pulled away from mounting area for inspection and service work	Yes ( ) No ( )	
		The overall covering of the conductors shall be loom or braid	Yes ( ) No ( )	
		Braid style wiring covers shall be constructed using a woven PVC-coated nylon multifilament braiding yarn. The yarn shall have a diameter of no less than .04" and a tensile strength of 22 lbs. The yarn shall have a service temperature rating of -65 F to 194 F. The braid shall consist of 24 strands of yarn with 21 black and 3 yellow. The yellow shall be oriented the same and be next to each other	Yes ( ) No ( )	
		Wiring loom shall be flame retardant black nylon. The loom shall have a service temperature of -40 F to 300 F and be secured to the wire bundle with adhesive-backed vinyl tape	Yes ( ) No ( )	
		All connectors shall be Deutsch series (or equal) unless a different series of connector is needed to mate to a supplier's component. The connectors and terminals shall be assembled per the connector/terminal manufacturer's specification. Crimble/Solderless terminals shall be acceptable. Heat shrink style shall be utilized unless used within the confines of the cab	Yes ( ) No ( )	
		The apparatus shall be electrical tested upon completion of the vehicle and prior to delivery. The electrical testing, certifications, and test results shall be submitted with delivery documentation per requirements of NFPA 1901. The following minimum testing shall be completed by the apparatus manufacturer:	Yes ( ) No ( )	
		<b>1. Reserve capacity test:</b>		
		The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load shall be activated for ten (10) minutes. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a test fail.	Yes ( ) No ( )	
		<b>2. Alternator performance test at idle:</b>		
The minimum continuous electrical load shall be activated with the engine running at idle speed. The engine temperature shall be stabilized at normal operating temperature. The battery system shall be tested to detect the presence of battery discharge current. The detection of battery discharge current shall be considered a test failure.	Yes ( ) No ( )			
<b>3. Alternator performance test at full load:</b>				

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
		The total continuous electrical load shall be activated with the engine running up to the engine manufacturer's governed speed. The test duration shall be a minimum of two (2) hours. Activation of the load management system shall be permitted during this test. However, an alarm sounded by excessive battery discharge, as detected by the system required in NFPA 1901 Standard, or a system voltage of less than 11.7 volts DC for a 12 volt nominal system, for more than 120 seconds, shall be considered a test failure.	Yes ( ) No ( )	
		<b>4. Low voltage alarm test:</b>		
		Following the completion of the above tests, the engine shall be shut off. The total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm activates. The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts DC for a 12 volt nominal system shall be considered a test failure. The battery system shall then be able to restart the engine. Failure to restart the engine shall be considered a test failure.	Yes ( ) No ( )	
		<b>The following documentation shall be provided on delivery of the apparatus:</b>		
		A. Documentation of the electrical system performance tests required above.	Yes ( ) No ( )	
		B. A written load analysis, including	Yes ( ) No ( )	
		a. The nameplate rating of the alternator	Yes ( ) No ( )	
		b. The alternator rating under the conditions	Yes ( ) No ( )	
		c. Each specified component load	Yes ( ) No ( )	
		d. Individual intermittent loads	Yes ( ) No ( )	
		<b>A vehicle data recorder system shall be provided to comply with NFPA 1901, 2009 edition. The following data shall be monitored:</b>	Yes ( ) No ( )	
		Vehicle speed MPH	Yes ( ) No ( )	
		Acceleration (from speedometer) MPH/Sec.	Yes ( ) No ( )	
		Deceleration (from speedometer) MPH/Sec.	Yes ( ) No ( )	
		Engine speed RPM	Yes ( ) No ( )	
		Engine throttle position % of full throttle	Yes ( ) No ( )	
		ABS Event On/Off	Yes ( ) No ( )	
		Seat occupied status Occupied Yes/No by position	Yes ( ) No ( )	
		Seat belt status Buckled Yes/No by position	Yes ( ) No ( )	
		Master Optical Warning Device Switch On/Off	Yes ( ) No ( )	
		Time: 24 hour time	Yes ( ) No ( )	
		Date: Year/Month/Day	Yes ( ) No ( )	
		There shall be a visual and audible warning system installed in the cab that indicates the occupant buckle status of all cab seating positions that are designed to be occupied during vehicle movement	Yes ( ) No ( )	
		The audible warning shall activate when the vehicle's park brake is released and a seat position is not in a valid state. A valid state is defined as a seat that is unoccupied and the seat belt is unbuckled, or one that has the seat belt buckled after the seat has been occupied	Yes ( ) No ( )	
		The visual warning shall consist of a graphical representation of each cab seat in the multiplex display screen that will continuously indicate the validity of each seat position.	Yes ( ) No ( )	
		The system shall include a seat sensor and safety belt latch switch for each cab seating position, audible alarm and braided wiring harness	Yes ( ) No ( )	

56c

**Electrical System (cont.)**

Any variations to the specifications are to be clearly noted.

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. <b>SPEC DEVIATIONS</b>
56d	<b>Electrical System (cont.)</b>	The V-MUX multiplex electrical system shall include a Vista IV color display	Yes ( ) No ( )	
		The display shall have the following features:	Yes ( ) No ( )	
		• Aspect ratio of 16:9 (Wide Screen)	Yes ( ) No ( )	
		• Diagonal measurement of no less than 7"	Yes ( ) No ( )	
		• Master warning switch	Yes ( ) No ( )	
		• Engine high idle switch	Yes ( ) No ( )	
		• Five (5) tactile switches to access secondary menus	Yes ( ) No ( )	
		• Eight (8) multi-function programmable tactile switches	Yes ( ) No ( )	
		• Specific door ajar indication	Yes ( ) No ( )	
		• Real time clock	Yes ( ) No ( )	
		• Provides access to the multiplex system diagnostics	Yes ( ) No ( )	
		• Video capability for optional back-up camera(s) and GPS display	Yes ( ) No ( )	
		The display shall be located driver's side engine cover.	Yes ( ) No ( )	
57	<b>Light Bar</b>	A Whelen Freedom series 72" all LED light bar model FN72QLED (or equal) shall be provided. The light bar shall consist of two white, six red LED modules and MKEZ7 mounts.	Yes ( ) No ( )	
		No rear facing LEDs	Yes ( ) No ( )	
		Lens color: Clear	Yes ( ) No ( )	
		The white LEDs shall be switched off in blocking right of way mode	Yes ( ) No ( )	
		The light bar shall be installed in the following location: Centered on the front cab roof	Yes ( ) No ( )	
58	<b>Warning Light Package</b>	Two (2) Whelen 900 series Super LED model 90RR5FRR (or equal) light heads with red lens shall be provided. The rectangular lights shall include chrome flanges where applicable	Yes ( ) No ( )	
		<b>The light heads shall be mounted as close to the corner points of the apparatus (as practical) as follows:</b>	Yes ( ) No ( )	
		One (1) Whelen 900 series (or equal) Super LED light head each side of the apparatus. Locate one (1) each side at the highest most rearward point (as practical)	Yes ( ) No ( )	
		All warning devices shall be mounted in compliance with NFPA standards	Yes ( ) No ( )	
		Two (2) Whelen 900 series Super LED model 90RR5FRR light heads (or equal) with red lenses shall be provided. The rectangular lights shall include chrome flanges where applicable.	Yes ( ) No ( )	
		The light heads shall be mounted as close to the corner points of the apparatus (as practical) as follows:	Yes ( ) No ( )	
		One (1) light each side on the rear panel of the body, (1) on driver side and (1) on officer side upper corners (as practical).	Yes ( ) No ( )	
		All warning devices shall be mounted in compliance with NFPA standards.	Yes ( ) No ( )	
		Body Lower Level Warning Lighting	Yes ( ) No ( )	
			Six (6) Whelen LIN3 (or equal) Super LED light heads with red LEDs and clear lenses shall be provided	Yes ( ) No ( )
	<b>The light heads shall be located as follows:</b>			
	Two (2) Whelen LIN3 (or equal) Super LED light heads shall be mounted below the forward body compartments and offset forward as practical.	Yes ( ) No ( )		
	Two (2) Whelen LIN3 (or equal) Super LED light heads shall be mounted below the rearward body compartments and offset rearward as practical.	Yes ( ) No ( )		

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. <b>SPEC DEVIATIONS</b>
58b	<b>Warning Light Package (cont.)</b>	Two (2) Whelen LIN3 (or equal) Super LED light heads shall be mounted below the rear taillights and offset outboard as practical.	Yes ( ) No ( )	
		All warning devices shall be mounted in compliance with NFPA standards.	Yes ( ) No ( )	
		<b>Lower Level Warning</b>	Yes ( ) No ( )	
		Four (4) Whelen 600 series (or equal) Super LED light heads shall be provided. All lights shall have red LEDs with clear lenses and chrome bezels.	Yes ( ) No ( )	
		<b>The light heads shall be mounted as close to the corner points of the apparatus (as is practical) as follows:</b>		
		Two (2) 600 light heads on the front of the apparatus facing forward	Yes ( ) No ( )	
		Two (2) 600 light heads one (1) each side at the forward most point	Yes ( ) No ( )	
		All warning devices shall be surface mounted in compliance with NFPA standards	Yes ( ) No ( )	
59	<b>Warning Light</b>	Hazard (Door Ajar) Light: There shall be a 2" red LED hazard light located center overhead	Yes ( ) No ( )	
60	<b>Siren</b>	A Federal PA300 siren model 690010 (or equal) solid state electronic siren with attached noise-canceling microphone shall be installed. The unit shall be capable of driving a single high power speaker up to 200 watts to achieve a sound output level that meets Class "A" requirements	Yes ( ) No ( )	
		Operating modes shall include Hi-Lo, yelp, wail, P.A., air horn and radio re-broadcast	Yes ( ) No ( )	
		The siren shall be recessed mounted in the cab	Yes ( ) No ( )	
		The electronic siren control shall be located in the center overhead.	Yes ( ) No ( )	
61	<b>Siren Speaker</b>	One (1) Federal Signal model ES100 Dynamax 100 watt speaker (or equal) shall be flush mounted as far forward and as low as possible on the front of the vehicle. A polished grille shall be provided on the outside of the speaker to prevent road debris from entering the speaker	Yes ( ) No ( )	
		Speaker dimensions shall be: 5.5 in. high x 5.9 in. wide x 2.5 in. deep. Weight = 5.5 lbs.	Yes ( ) No ( )	
		The speaker shall produce a minimum sound output of 120 dB at 10 feet to meet current NFPA 1901 requirements. The speaker shall be located driver side front bumper	Yes ( ) No ( )	
62	<b>DOT Lighting</b>	Two (2) Whelen model 600 series (or equal) LED lights with one (1) Whelen 600 series (or equal) halogen light shall be installed in a cast 3 housing in a vertical position each side at rear and wired with weatherproof connectors	Yes ( ) No ( )	
		<b>Light functions shall be as follows:</b>		
		• LED red running light with red brake light in upper position	Yes ( ) No ( )	
		• LED amber populated arrow pattern turn signal in middle position	Yes ( ) No ( )	
		• Halogen 27 watt clear back-up light in lower position	Yes ( ) No ( )	
		A one-piece polished aluminum trim casting shall be mounted around the three (3) individual lights in a vertical position	Yes ( ) No ( )	
		One (1) Truck-Lite model 15905 (or equal) white LED license plate light mounted in a Truck-Lite model 15732 (or equal) chrome plated plastic license plate housing shall be mounted at the rear of the body	Yes ( ) No ( )	

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. <b>SPEC DEVIATIONS</b>	
62b	<b>DOT Lighting (cont.)</b>	There shall be bracket fabricated from aluminum diamond plate, secured to rear of the body to accommodate a license plate	Yes ( ) No ( )		
		LED clearance/marker lights shall be installed as specified	Yes ( ) No ( )		
		<b>Upper Cab:</b>			
		• Five (5) amber LED clearance lights on the cab roof	Yes ( ) No ( )		
		<b>Lower Cab:</b>	Yes ( ) No ( )		
		• One (1) amber LED side turn/marker each side of cab ahead of the front door hinge	Yes ( ) No ( )		
		<b>Upper Body:</b>	Yes ( ) No ( )		
		• One (1) red LED clearance light each side, rear of body to the side	Yes ( ) No ( )		
		<b>Lower Body:</b>	Yes ( ) No ( )		
		• Three (3) red LED clearance lights centered at rear, recessed in the rub rail	Yes ( ) No ( )		
		• One (1) red LED clearance light each side, lower rear of body, recessed in the rub rail	Yes ( ) No ( )		
		• One (1) amber LED clearance/auxiliary turn light each side front of body, recessed in the rub rail	Yes ( ) No ( )		
		• A rectangular shaped reflector with a red colored lens shall be installed at the trailing edge on each side/rear of the apparatus body	Yes ( ) No ( )		
		• A rectangular shaped reflector with an amber colored lens shall be installed at the leading edge on each side of the apparatus body	Yes ( ) No ( )		
63	<b>Lights - Compartment, Step and Ground</b>	There shall be a minimum of one (1) TecNiq model T440 4" circular (or equal) LED light mounted in each body compartment greater than 4 cu. ft. Compartments over 36" in height shall have a minimum of two (2) lights, one (1) high and one (1) low. Transverse compartments shall have a minimum of two (2) lights, located one (1) each side	Yes ( ) No ( )		
		Compartment lights shall be wired to a master on/off switch on the cab switch panel. Each light shall be in a resilient shock-absorbent mount for improved bulb life	Yes ( ) No ( )		
		The wiring connection for the compartment lights shall be made with a weather-resistant plug in style connector. A single water and corrosion-resistant switch with a polycarbonate actuator and sealed contacts shall control each compartment light. The switch shall allow the light to illuminate if the compartment door is open	Yes ( ) No ( )		
		The apparatus shall be equipped with a sufficient quantity of lights to properly illuminate the ground areas around the apparatus in accordance with current NFPA requirements. The lights shall be TecNiq model T440 (or equal) 4" circular LED with clear lenses mounted in a resilient shock absorbent mount for improved bulb life. The wiring connections shall be made with a weather resistant plug in style connector	Yes ( ) No ( )		
		Ground area lights shall be switched from the cab dash with the work light switch	Yes ( ) No ( )		
63b	<b>Lights - Compartment, Step and Ground (cont.)</b>	One (1) ground light shall be supplied under each side of the front bumper extension if equipped	Yes ( ) No ( )		
		Lights in areas under the driver and crew area exits shall be activated automatically when the exit doors are opened	Yes ( ) No ( )		

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. <b>SPEC DEVIATIONS</b>
64	<b>Lights - Deck and Scene</b>	A Truck-Lite round LED light model 81380 (or equal) shall be installed at the front area of the hose bed to provide hose bed lighting per current NFPA 1901. The hose bed light shall be switched with the work light switch in the cab	Yes ( ) No ( )	
		Two (2) Whelen 900 series Gradient Opti-Scenelights (or equal) shall be provided	Yes ( ) No ( )	
		Each light head shall contain a 12 volt, 50 watt halogen bulb. The lights heads shall be equipped with lenses that have gradient optics to enhance light output	Yes ( ) No ( )	
		Lights shall be located (1) each side rear compartment face up high and switched in cab (side facing lights switched separately)	Yes ( ) No ( )	
		A Truck-Lite round LED light model 81380 (or equal) shall be installed at the rear area of the crosslay to provide crosslay lighting per current NFPA 1901. The crosslay light shall be switched with the work light switch in the cab	Yes ( ) No ( )	
65	<b>Lights - Non Warning</b>	There shall be LED lighting provided in compliance with NFPA to illuminate the engine compartment area	Yes ( ) No ( )	
		An LED light shall be provided in the pump compartment area for NFPA compliance. The light shall be wired to operate with the work light switch in the cab	Yes ( ) No ( )	
		Pump panel lighting shall be provided for a side mount pump module in accordance with NFPA	Yes ( ) No ( )	
		The driver side pump control panel shall have two (2) LED lights mounted under a protective cover that is above the driver side pump panel. The officer side shall have one (1) LED light mounted under a protective cover that is above the officer side pump panel	Yes ( ) No ( )	
		The lights shall be activated by the work light switch in the cab when the park brake is set	Yes ( ) No ( )	
66	<b>Switches</b>	A heavy duty metal floor mounted foot switch shall be installed to operate the air horns. It shall be located driver's side, officer's side. QTY. 2	Yes ( ) No ( )	
67	<b>Camera</b>	There shall be a Federal Signal (Sony) camera model number CAMCCD-REARNTSC provided (or equal) and mounted on the rear of the apparatus. The camera shall feature a wide angle lens, IR LED assisted illumination for enhanced low-light performance, non-corrosive mounting bracket, and stainless steel hardware. The camera shall be wired through multiplex display, interlocked with the chassis transmission. When the apparatus is placed in reverse the camera shall automatically be activated and when the transmission is placed in any other gear the screen shall return to the previously displayed screen	Yes ( ) No ( )	
68	<b>Misc. Electrical</b>	An electronic back-up alarm shall be supplied. The 97 dB alarm shall be wired into the chassis back-up lights to signal when the vehicle is in reverse gear	Yes ( ) No ( )	
		Three (3) triangular warning reflectors with carrying case shall be supplied to satisfy the DOT requirement	Yes ( ) No ( )	
		<b>The following list of equipment shall be supplied with the apparatus:</b>		
		<b>Hose:</b>		
		Eleven (11) 1 3/4" x 50' Rubber Covered Hose w/1 1/2" NST Couplings (Yellow)	Yes ( ) No ( )	
		Six (6) 2 1/2" x 50' Rubber Covered Hose w/NST Couplings (Red)	Yes ( ) No ( )	
		Seven (7) 5" x 100' Rubber Covered Hose w/5" Storz Couplings (Yellow)	Yes ( ) No ( )	
		One (1) 5" x 25' Hose w/Storz Couplings (Yellow)	Yes ( ) No ( )	

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#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. <b>SPEC DEVIATIONS</b>
69	Misc. Loose Equipment	<b>Monitor:</b>	Yes ( ) No ( )	
		One (1) TFT-XFT-NJ Crossfire Monitor Top	Yes ( ) No ( )	
		One (1) TFT-XFF-APL Crossfire Truck Mount Adapter 3" NPT Female	Yes ( ) No ( )	
		One (1) TFT-MST-4NJ Stacked Tip Set	Yes ( ) No ( )	
		One (1) TFT-M-R1250S-NJ Master Stream Nozzle w/Halo 150-1250gpm	Yes ( ) No ( )	
		<b>Nozzles:</b>	Yes ( ) No ( )	
		Three (3) TFT-HM-VPGI 1 1/2" Mid-Matic w/Grip	Yes ( ) No ( )	
		One (1) TFT-H-2VPGI Handline Series 50-350 GPM Nozzle	Yes ( ) No ( )	
		<b>Salvage Covers:</b>	Yes ( ) No ( )	
		Two (2) 12' x 14' 12 oz. Canvas Salvage Covers	Yes ( ) No ( )	
		<b>Hand Lanterns:</b>	Yes ( ) No ( )	
		Three (3) Fire Vulcan Lights w/12vdc Direct Wire Chargers	Yes ( ) No ( )	
		<b>Suction Hose:</b>	Yes ( ) No ( )	
		Two (2) 6" NH Female x NH RL Male Suction Hose	Yes ( ) No ( )	
		One (1) 6" NST Low Level Strainer w/Jet Siphon	Yes ( ) No ( )	
		<b>Wrenches:</b>	Yes ( ) No ( )	
		One (1) Triple Set Holder and Wrenches	Yes ( ) No ( )	
		One (1) Set of 4 Spanners w/Holder	Yes ( ) No ( )	
		<b>Adapters:</b>	Yes ( ) No ( )	
		One (1) 5" Full Time Swivel Storz with Lock x 3" NH Swivel Rocker Lug Female Thread	Yes ( ) No ( )	
		One (1) 5" Storz Cap w/Chain	Yes ( ) No ( )	
		<b>Hand Tools:</b>	Yes ( ) No ( )	
		One (1) 6 lb. Pickhead Axe w/36" Fiberglass Handle	Yes ( ) No ( )	
		One (1) 6 lb. Flathead Axe w/36" Fiberglass Handle	Yes ( ) No ( )	
		One (1) 36" Tri-Bar Halligan Tool	Yes ( ) No ( )	
		One (1) 8' Ultra-Lite Pike Pole w/Std. USA Hook	Yes ( ) No ( )	
		One (1) 10' Ultra-Lite Pike Pole w/Std. USA Hook	Yes ( ) No ( )	
		<b>Ladders:</b>	Yes ( ) No ( )	
		One (1) 14' Aluminum Roof Ladder	Yes ( ) No ( )	
		One (1) 24' Aluminum Two Section Ladder	Yes ( ) No ( )	
		One (1) 10' Folding Attic Ladder	Yes ( ) No ( )	
		<b>Wheel Chocks:</b>	Yes ( ) No ( )	
		Two (2) Folding Wheel Chock	Yes ( ) No ( )	
		Two (2) Holder for Folding Wheel Chock	Yes ( ) No ( )	
<b>Mounting Brackets:</b>	Yes ( ) No ( )			
All Mounting Brackets Shall be provided and installed	Yes ( ) No ( )			
<b>Q2B Mechanical Siren:</b>	Yes ( ) No ( )			
Customer supplied Q2B siren shall be installed	Yes ( ) No ( )			
<b>Radio and Computers:</b>	Yes ( ) No ( )			
New, City of Bloomington approved, radios and computer equipment shall be installed in new apparatus - Vendor shall include a \$2,500 allowance.	Yes ( ) No ( )			
<b>Air Auto Eject:</b>	Yes ( ) No ( )			
An Air Auto Eject shall be installed	Yes ( ) No ( )			
<b>LED Scene Lights:</b>	Yes ( ) No ( )			
Two (2) FRC SPECTRA telescopic LED scene lights shall be installed	Yes ( ) No ( )			
<b>Lettering and Striping:</b>	Yes ( ) No ( )			
Customers lettering and striping shall be installed.	Yes ( ) No ( )			
\$1,500 Allowance shall be provided by Vendor	Yes ( ) No ( )			
All applicable pump application modules shall have a sanded finish (not painted job color). Includes upper and lower pump modules, crosswalk module and/or speedlay/pre-connect module (as applicable). Rear mounted body/pump module shall be painted job color	Yes ( ) No ( )			

69b

Misc. Loose Equipment (cont.)

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
70	Exterior Paint	The apparatus cab shall be painted two tone, white over red (SLNA-3225). The paint process shall meet or exceed current state regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water, and soil. Contractor shall, upon demand, provide evidence that the manufacturing facility is in compliance with State EPA rules and regulations	Yes ( ) No ( )	
		The aluminum cab exterior shall have no mounted components prior to painting to assure full coverage of metal treatments and paint to the exterior surfaces. Cab doors and any hinged smooth-plate compartment doors shall be painted separately to assure proper paint coverage on cab, door jambs and door edges	Yes ( ) No ( )	
		Corrosion Prevention - all aluminum surfaces shall be pre-treated with the Alodine 5700 (or equal) conversion coating	Yes ( ) No ( )	
		Sikkens Sealer/Primer LV (or equal) - acrylic urethane sealer/primer shall be applied to guarantee excellent gloss hold-out, chip resistance and a uniform base color	Yes ( ) No ( )	
		Sikkens High Solid LVBT650 (Base coat) (or equal) - a lead-free, chromate-free high solid acrylic urethane base coat shall be applied, providing excellent coverage and durability. A minimum of two (2) coats shall be applied	Yes ( ) No ( )	
		Sikkens High Solid LVBT650 (Clear coat) (or equal) - high solid LV clear coat shall be applied as the final step in order to ensure full gloss and color retention and durability. A minimum of two (2) coats shall be applied	Yes ( ) No ( )	
		Any location where aluminum is penetrated after painting, for the purpose of mounting steps, hand rails, doors, lights, or other specified components shall be treated at the point of penetration with a corrosion inhibiting pre-treatment. The pre-treatment shall be applied to the aluminum sheet metal or aluminum extrusions in all locations where the aluminum has been penetrated. All hardware used in mounting steps, hand rails, doors, lights, or other specified components shall be individually treated with the corrosion inhibiting pre-treatment	Yes ( ) No ( )	
		After the paint process is complete, the gloss rating of the unit shall be tested with a 20 degree gloss meter. Coating thickness shall be measured with a digital MIL gauge and the orange peel with a digital wave scan device	Yes ( ) No ( )	
		The exterior outer chassis wheels shall be painted job color. The paint shall be of the highest quality finish for low maintenance, long life, and attractive appearance. The finish shall consist of a corrosion-resistant primer, urethane high build primer, and high performance durable color coat	Yes ( ) No ( )	
			The paint process shall meet or exceed current State regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water and soil. Manufacturer shall, upon demand, provide evidence that the manufacturing facility is in compliance with State EPA rules and regulations	Yes ( ) No ( )
	Corrosion Prevention - all raw material shall be pre-treated with the Weather Jacket Corrosion Prevention system to provide superior corrosion resistance and excellent adhesion of the top coat	Yes ( ) No ( )		
	Akzo-Nobel Sealer/Primer LV (or equal) - acrylic urethane sealer/primer shall be applied to guarantee excellent gloss hold-out, chip resistance and a uniform base color	Yes ( ) No ( )		

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
Any variations to the specifications are to be clearly noted.				
70b	<b>Exterior Paint (cont.)</b>	Akzo-Nobel High Solid LV (Top coat) (or equal) - a lead-free, chromate-free high solid acrylic urethane top coat shall be applied, providing excellent coverage and durability. A minimum of two (2) coats shall be applied	Yes ( ) No ( )	
		Akzo-Nobel High Solid LV (Clear coat) (or equal) - high solid LV clear coat shall be applied as the final step in order to ensure full gloss and color retention and durability. A minimum of two (2) coats shall be applied	Yes ( ) No ( )	
		FRP (fiber reinforced) panels shall be provided to overlay the stainless steel outer side of body panels that are not covered with aluminum treadplate. The FRP panels shall be painted as detailed under "Painting Information" and then installed on the body exterior	Yes ( ) No ( )	
		The vertical stainless steel unistrut channels located on the exterior of the hose body side panels shall have a hand polished appearance	Yes ( ) No ( )	
		The reinforcing edges of the hose body side panels and trailing edges of the beavertails (if equipped) shall have a machine sanded DA finish	Yes ( ) No ( )	
		Polished stainless steel vertical corner trim scuff guards shall be installed on the outer front and rear body corners	Yes ( ) No ( )	
		The final finishing of the vehicle shall be performed to the highest standards of the fire apparatus industry	Yes ( ) No ( )	
		All removable components and accessories shall be fitted to the body and then removed prior to final finishing, ensuring paint has been applied under all components and accessories	Yes ( ) No ( )	
		Care shall be taken during paint preparation to properly fill all surface imperfections. Welded seam areas shall be ground flush and metal finished. Bare metal surfaces shall be etched chemically to ensure proper adhesion. The primer shall be sanded to assure a smooth surface for painting	Yes ( ) No ( )	
		The interior of all compartments shall have a machine sanded DA finish that shall not be painted. Compartment seams shall be sealed with a silver silicone caulk	Yes ( ) No ( )	
		The interior of the hose bed shall be provided with a machine sanded DA finish that shall not be painted	Yes ( ) No ( )	
		The body exterior shall be painted color: Red (SLNA-3255). Furnish one pint of touch-up paint, including hardener to match each of the exterior colors.	Yes ( ) No ( )	
71	<b>Interior Paint</b>	The interior of the cab shall be painted Zolatone gray #20-64 (or equal). Prior to painting, all exposed interior metal surfaces shall be pretreated using a corrosion prevention system	Yes ( ) No ( )	
72	<b>Striping</b>	A 1" stripe shall be applied above the existing stripe. The stripe shall be spaced 1" away from the main stripe. The stripe shall be white	Yes ( ) No ( )	
		A straight reflective stripe, 4" minimum in width, shall be applied horizontally around the cab and body to comply with NFPA 1901. The color and location of the stripe to be specified by the purchaser.	Yes ( ) No ( )	
73	<b>Striping (cont.)</b>	A printed pattern chevron striping shall be provided on the rear of the apparatus in compliance with NFPA. The printed pattern shall consist of 6" reflective red and yellow per NFPA, alternating stripes in an "A" pattern	Yes ( ) No ( )	
		The striping shall be located on the rear compartment facing, rear panels and/or doors outboard of and above the rear compartment opening	Yes ( ) No ( )	
		The vertical and horizontal rear body extrusions shall remain visible with a sanded finish	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
74	Warranty	<b>Standard 1 Year Warranty</b>	Yes ( ) No ( )	
		The apparatus manufacturer shall provide a full 1-year standard warranty. All components manufactured by the apparatus manufacturer shall be covered against defects in materials or workmanship for a 1-year period. All components covered by separate suppliers such as engines, transmissions, tires, and batteries shall maintain the warranty as provided by the component supplier. A copy of the warranty document shall be provided with the proposal	Yes ( ) No ( )	
		<b>Warranty 15 Year Structural</b>	Yes ( ) No ( )	
		The apparatus manufacturer shall provide a comprehensive 15 year/100,000 mile structural warranty. This warranty shall cover all structural components of the stainless steel body manufactured by the apparatus manufacturer against defects in materials or workmanship for 15 years or 100,000 miles, whichever occurs first. Excluded from this warranty are all hardware, mechanical items, electrical items, or paint finishes. A copy of the warranty document shall be provided with the proposal	Yes ( ) No ( )	
		<b>Lifetime Frame Warranty</b>	Yes ( ) No ( )	
		The apparatus manufacturer shall provide a full lifetime frame warranty. This warranty shall cover all apparatus manufacturer designed frame, frame members, and cross-members against defects in materials or workmanship for the lifetime of the covered apparatus. A copy of the warranty document shall be provided with the proposal. Frame warranties that do not cover cross-members for the life of the vehicle shall not be acceptable	Yes ( ) No ( )	
		<b>10 Year 100,000 Mile Structural Warranty</b>	Yes ( ) No ( )	
		The apparatus manufacturer shall provide a comprehensive 10 year/100,000 mile structural warranty. This warranty shall cover all structural components of the cab and/or body manufactured by the apparatus manufacturer against defects in materials or workmanship for 10 years or 100,000 miles, whichever occurs first. Excluded from this warranty are all hardware, mechanical items, electrical items, or paint finishes. A copy of the warranty document shall be provided with the proposal	Yes ( ) No ( )	
		<b>10 Year Stainless Steel Plumbing Warranty</b>	Yes ( ) No ( )	
		The apparatus manufacturer shall provide a full 10-year stainless steel plumbing components warranty. This warranty shall cover defects in materials or workmanship of apparatus manufacturer designed foam/water plumbing system stainless steel components for 10 years. A copy of the warranty document shall be provided with the bid	Yes ( ) No ( )	
<b>10 Year Paint and Corrosion Warranty</b>	Yes ( ) No ( )			
The apparatus manufacturer shall provide a 10-year limited paint and corrosion perforation warranty. This warranty shall cover paint peeling, cracking, blistering, and corrosion provided the vehicle is used in a normal and reasonable manner	Yes ( ) No ( )			
<b>The paint shall be prorated for 10 years as follows:</b>	Yes ( ) No ( )			
Topcoat & Appearance:				
Gloss, Color Retention, Cracking				
0 to 72 months                      100%				
73 to 120 months                      50%				
<b>Coating System, Adhesion &amp; Corrosion:</b>				

74b      **Warranty (cont.)**

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	Any variations to the specifications are to be clearly noted. SPEC DEVIATIONS
		Includes Dissimilar metal corrosion, Flaking, Blistering, Bubbling		
		0 to 36 months            100%		
		37 to 84 months        50%		
		85 to 120 months      25%		
		Corrosion perforation shall be covered 100% for 10 years. Corrosion perforation is defined as complete penetration through the exterior metal of the apparatus.	Yes ( ) No ( )	
		The warranty period shall begin upon delivery of the apparatus to the original user-purchaser. A copy of the warranty document shall be provided with the proposal	Yes ( ) No ( )	
		UV paint fade shall be covered for a minimum of 10 years	Yes ( ) No ( )	
75	<b>Support, Delivery, Inspections and Manuals</b>	Two (2) copies of all operator, service, and parts manuals MUST be supplied at the time of delivery in electronic format (CD-ROMs) -NO EXCEPTIONS! The electronic manuals shall include the following information	Yes ( ) No ( )	
		Operating Instructions, descriptions, specifications, and ratings of the cab, chassis, body, aerial (if applicable), installed components, and auxiliary systems	Yes ( ) No ( )	
		Warnings and cautions pertaining to the operation and maintenance of the fire apparatus and firefighting systems	Yes ( ) No ( )	
		Charts, tables, checklists, and illustrations relating to lubrication, cleaning, troubleshooting, diagnostics, and inspections	Yes ( ) No ( )	
		Instructions regarding the frequency and procedure for recommended maintenance.	Yes ( ) No ( )	
		Maintenance instructions for the repair and replacement of installed components.	Yes ( ) No ( )	
		Parts listing with descriptions and illustrations for identification.	Yes ( ) No ( )	
		Warranty descriptions and coverage.	Yes ( ) No ( )	
		The CD-ROM shall incorporate a navigation page with electronic links to the operator's manual, service manual, parts manual, and warranty information, as well as instructions on how to use the manual. Each copy shall include a table of contents with links to the specified documents or illustrations.	Yes ( ) No ( )	
		The CD must be formatted in such a manner as to allow not only the printing of the entire manual, but to also the cutting, pasting, or copying of individual documents to other electronic media, such as electronic mail, memos, and the like.	Yes ( ) No ( )	
		A find feature shall be included to allow for searches by text or by part number.	Yes ( ) No ( )	
75b	<b>Support, Delivery, Inspections and Manuals (cont.)</b>	These electronic manuals shall be accessible from any computer operating system capable of supporting portable document format (PDF). Permanent copies of all pertinent data shall be kept on file at both the local dealership and at the manufacturer's location.	Yes ( ) No ( )	
		Fire Apparatus Safety Guide published by FAMA, latest edition. This safety manual is intended to point out some of the basic safety situations that may be encountered during the normal operation and maintenance of a fire apparatus and to suggest possible ways of dealing with these situations. This manual is NOT a substitute for the fire apparatus operator and maintenance manuals or commercial chassis manufacturer's operator and maintenance manuals.	Yes ( ) No ( )	

# FIRE PUMPER

New Purchase

#	AREAS	SUGGESTED SPECIFICATIONS	MEET SPEC?	SPEC DEVIATIONS
		Unit bid must be available for delivery within <b>90 days ARO</b> to the City of Bloomington Fleet Maintenance Department		<div style="color: red; font-size: small;">Any variations to the specifications are to be clearly noted.</div> State Delivery Time:
Cost of Truck as specified: \$				

\*\*\* UNIT SHALL BE DELIVERED TO CITY OF BLOOMINGTON FLEET DEPT. FULLY SERVICED

**Two (2) copies of all operator, service, and parts manuals MUST be supplied at the time of delivery in electronic format**

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There shall be a daily charge of \$50.00 that will be assessed for each day that the delivery is delayed (late).  
*Signature is required below to acknowledge acceptance of all quote requirements*

Sign Here: \_\_\_\_\_

Print Name Here: \_\_\_\_\_

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