

TOWNSHIP OF MULLICA

BID NR. 2009-07

Triple Combination Rescue Pumper

Advertisement:	November 20 & 21, 2009
Bid Acceptance:	December 17, 2009
Bid Award Date:	December 22, 2009
Delivery Date:	By September 30, 2010

NOTICE TO BIDDERS

NOTICE IS HEREBY GIVEN that sealed bids will be received by the Purchasing Agent, for the Township of Mullica, County of Atlantic, State of New Jersey on Thursday, December 17, 2009 at 10:00 am prevailing time at the Mullica Township Municipal Building, 4528 White Horse Pike, Elwood, NJ at which time and place bids will be opened and read in public for:

Triple Combination Rescue Pumper

Specifications and other bid information may be obtained at the Mullica Township Municipal Building during regular business hours, 9:00 am to 4:30pm. Specifications are also available on the Township's website: www.mullicatownship.org.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27 et seq.

Dawn Stollenwerk, CFO/QPA

Publication date: The Press of Atlantic City 11/20 & 11/21
Township Website

Instructions To Bidders And Statutory Requirements

I. SUBMISSION OF BIDS

- A. Sealed bids shall be received by the contracting unit, hereinafter referred to as "owner," in accordance with public advertisement as required by law, with a copy of said notice being attached hereto and made a part of these specifications.
- B. Sealed bids will be received by the designated representative Thursday, December 17, 2009 at 10:00 am at the Township Municipal Building, 4528 White Horse Pike, Elwood as stated in the Notice to Bidders, and at such time and place will be publicly opened and read aloud.
- C. The bid shall be submitted in a sealed envelope: (1) addressed to the owner, (2) bearing the name and address of the bidder written on the face of the envelope, and (3) clearly marked "BID" with the contract title and/or bid # being bid.
- D. It is the bidder's responsibility that bids are presented to the owner at the time and at the place designated. Bids may be hand delivered or mailed; however, the owner disclaims any responsibility for bids forwarded by regular or overnight mail. If the bid is sent by express mail service, the designation in sub-section C, above, must also appear on the outside of the express mail envelope. Bids received after the designated time and date will be returned unopened.
- E. Sealed bids forwarded to the owner before the time of opening of bids may be withdrawn upon written application of the bidder who shall be required to produce evidence showing that the individual is or represents the principal or principals involved in the bid. Once bids have been opened, they shall remain firm for a period of sixty (60) calendar days.
- F. All prices and amounts must be written in ink or preferably machine-printed. Bids containing any conditions, omissions, unexplained erasures or alterations, items not called for in the bid proposal form, attachment of additive information not required by the specifications, or irregularities of any kind, may be rejected by the owner. Any changes, whiteouts, strikeouts, etc. in the bid must be initialed in ink by the person signing the bid.
- G. Each bid proposal form must give the full business address, business phone, fax, e-mail if available, the contact person of the bidder, and be signed by an authorized representative as follows:
- Bids by partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and designation of the person signing.
 - Bids by corporations must be signed in the legal name of the corporation, followed by the name of the State in which incorporated and must contain the signature and designation of the president, secretary or other person authorized to bind the corporation in the matter.
 - Bids by sole-proprietorship shall be signed by the proprietor.
 - When requested, satisfactory evidence of the authority of the officer signing shall be furnished.
- H. Bidder should be aware of the following statutes that represent "Truth in Contracting" laws:
- N.J.S.A. 2C:21-34, et seq. governs false claims and representations by bidders. It is a serious crime for the bidder to knowingly submit a false claim and/or knowingly make material misrepresentation.
 - N.J.S.A. 2C:27-10 provides that a person commits a crime if said person offers a benefit to a public servant for an official act performed or to be performed by a public servant, which is a violation of official duty.
 - N.J.S.A. 2C:27-11 provides that a bidder commits a crime if said person, directly or indirectly, confers or agrees to confer any benefit not allowed by law to a public servant.

- Bidder should consult the statutes or legal counsel for further information.

II. BID SECURITY AND BONDING REQUIREMENTS

The following provisions if indicated by an (X), shall be applicable to this bid and be made a part of the bid documents:

A. BID GUARANTEE

Bidder shall submit with the bid a certified check, cashier's check or bid bond in the amount of ten percent (10%) of the total price bid, but not in excess of \$20,000, payable unconditionally to the owner. When submitting a Bid Bond, it shall contain Power of Attorney for full amount of Bid Bond from a surety company authorized to do business in the State of New Jersey and acceptable to the owner. The check or bond of the unsuccessful bidder(s) shall be returned pursuant to N.J.S.A. 40A:11-24a. The check or bond of the bidder to whom the contract is awarded shall be retained until a contract is executed and the required performance bond or other security is submitted. The check or bond of the successful bidder shall be forfeited if the bidder fails to enter into a contract pursuant to N.J.S.A. 40A:11-21.

Failure to submit a bid guarantee shall result in rejection of the bid.

B. CONSENT OF SURETY

Bidder shall submit with the bid a Certificate (Consent of Surety) with Power of Attorney for full amount of bid price from a Surety Company authorized to do business in the State of New Jersey and acceptable to the owner stating that it will provide said bidder with a Performance Bond in the full amount of the bid. This certificate shall be obtained in order to confirm that the bidder to whom the contract is awarded will furnish Performance and Payment Bonds from an acceptable surety company on behalf of said bidder, any or all subcontractors or by each respective subcontractor or by any combination thereof which results in performance security equal to the total amount of the contract, pursuant to N.J.S.A. 40A:11-22.

Failure to submit a consent of surety form shall result in rejection of the bid.

C. PERFORMANCE BOND

Bidder shall simultaneously with the delivery of the executed contract, submit an executed bond in the amount of one hundred percent (100%) of the acceptable bid as security for the faithful performance of this contract.

Failure to submit this with the executed contract shall be cause for declaring the contract null and void pursuant to N.J.S.A. 40A:11-22.

D. LABOR AND MATERIAL (PAYMENT) BOND

Bidder shall with the delivery of the performance bond submit an executed payment bond to guarantee payment to laborers and suppliers for the labor and material used in the work performed under the contract.

Failure to submit a labor and material bond with the performance bond shall be cause for declaring the contract null and void.

E. MAINTENANCE BOND

Upon acceptance of the work by the owner, the contractor shall submit a maintenance bond (N.J.S.A. 40A:11-16.3) in an amount not to exceed 100% of the project costs guaranteeing against defective quality of work or materials for the period of:

1 year
 2 years

The performance bond provided shall not be released until final acceptance of the whole work and then only if any liens or claims have been satisfied. The surety on such bond or bonds shall be a duly authorized surety company authorized to do business in the State of New Jersey pursuant to N.J.S.A. 17:31-5.

III. INTERPRETATION AND ADDENDA

- A. The bidder understands and agrees that its bid is submitted on the basis of the specifications prepared by the owner. The bidder accepts the obligation to become familiar with these specifications.
- B. Bidders are expected to examine the specifications and related bid documents with care and observe all their requirements. Ambiguities, errors or omissions noted by bidders should be promptly reported in writing to the appropriate official. Any prospective bidder who wishes to challenge a bid specification shall file such challenges in writing with the contracting agent no less than three business days prior to the opening of the bids. Challenges filed after that time shall be considered void and having no impact on the contracting unit or the award of a contract pursuant to N.J.S.A. 40A:11-13. In the event the bidder fails to notify the owner of such ambiguities, errors or omissions, the bidder shall be bound by the requirements of the specifications and the bidder's submitted bid.
- C. No oral interpretation and or clarification of the meaning of the specifications for any goods and services will be made to any bidder. Such request shall be in writing, addressed to the owner's representative stipulated in the specification. In order to be given consideration, a written request must be received at least seven (7) business days prior to the date fixed for the opening of the bid for goods and services.

All interpretations, clarifications and any supplemental instructions will be in the form of written addenda to the specifications, and will be distributed to all prospective bidders. All addenda so issued shall become part of the specification and bid documents, and shall be acknowledged by the bidder in the bid. The owner's interpretations or corrections thereof shall be final.

When issuing addenda, the owner shall provide required notice prior to the official receipt of bids to any person who has submitted a bid or who has received a bid package pursuant to N.J.S.A. 40A:11-23c.1.

D. Discrepancies in Bids

1. If the amount shown in words and its equivalent in figures do not agree, the written words shall be binding. Ditto marks are not considered writing or printing and shall not be used.
2. In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In the event there is an error of the summation of the extended totals, the computation by the owner of the extended totals shall govern.

E. Pre-Bid Conference

If stated in the Notice to Bidders:



A Pre-Bid Conference is not required for this bid.

A pre-bid conference for this proposal will be held on _____.

Attendance is not mandatory, but is strongly recommended. Failure to attend does not relieve the bidder of any obligations or requirements.

IV. BRAND NAMES, STANDARDS OF QUALITY AND PERFORMANCE

- A. Brand names and/or descriptions used in these specifications are to acquaint bidders with the types of goods and services desired and will be used as a standard by which goods and services offered as equivalent will be evaluated.
- B. Variations between the goods and services described and the goods and services offered are to be fully identified and described by the bidder on a separate sheet and submitted with the bid proposal form. Vendor literature WILL NOT suffice in explaining exceptions to these specifications. In the absence of any exceptions by the bidder, it will be presumed and required that the goods and services as described in the bid specification be provided or performed.
- C. It is the responsibility of the bidder to document and/or demonstrate the equivalency of the goods and services offered. The owner reserves the right to evaluate the equivalency of the goods and services.
- D. In submitting its bid, the bidder certifies that the goods and services to be furnished will not infringe upon any valid patent or trademark and that the successful bidder shall, at its own expense, defend any and all actions or suits charging such infringement, and will save the owner harmless from any damages resulting from such infringement.
- E. Only manufactured and farm products of the United States, wherever available, shall be used pursuant to N.J.S.A. 40A:11-18.
- F. The contractor shall guarantee any or all goods and services supplied under these specifications. Defective or inferior goods shall be replaced at the expense of the contractor. The contractor will be responsible for return freight or restocking charges.

V. INSURANCE AND INDEMNIFICATION

Notwithstanding the indemnification and defense obligations of the Contractor, Contractor shall purchase and maintain such insurance described in the attached schedule and as is appropriate for the work being performed and furnished and as will provide protection from any and all claims which may arise out of or caused or alleged to have been caused in any manner from Contractor's performance and furnishing of the work and Contractor's other obligations under the Contract Documents, whether it is to be performed or furnished by Contractor, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable.

Contractor shall be required to name the Municipality as an "Additional Insured" on the Contractor's policy of commercial general liability insurance, and simultaneously with the delivery of the executed Contract Documents, Contractor shall provide the Municipality with a Certificate of Insurance indicating that the

insurance coverage as described in the attached schedule, as is appropriate for the work being performed and furnished, has been obtained and that the Municipality has been designated as an "Additional Insured" where required. On or before the renewal date of said policy, Contractor shall be required to provide the Municipality with a Certificate of Insurance indicating the proper insurance coverage and so designating the Municipality as an "Additional Insured". In the event such required insurance coverage is cancelled, the contractor shall be required to notify the Municipality immediately.

The schedule of insurance and limits of liability for the insurance shall provide coverage for not less than the amounts contained in "A. INSURANCE SCHEDULE" or greater where required by law.

(The insurance documents indicated by an (X) shall include but are not limited to the following coverages:)

A. INSURANCE SCHEDULE

The "Contractor" shall provide at its own cost and expense proof of the following insurance to the "Municipality":

1. Worker's Compensation Insurance

Statutory coverage and limits in compliance with the Workers' Compensation Law of the State of New Jersey.

2. General Liability Insurance

General liability insurance shall be provided with a minimum combined single limit of liability per occurrence for bodily injury and property damage of one million (\$1,000,000) dollars with a minimum annual aggregate of two million (\$2,000,000) dollars. The General Liability policy shall include liability for Products and Completed Operations. The Township of Mullica shall be named as "Additional Insured".

3. Automotive Liability Insurance

With a minimum combined single limit of liability per accident of one million (\$1,000,000) dollars for bodily injury and property damage. This insurance must include coverage for owned, hired, and non-owned automobiles.

4. Errors and Omissions

A minimum limit of liability of one million (\$1,000,000) dollars per incident and in the annual aggregate.

Failure by the "Contractor" to supply such written evidence of required insurance and to maintain same for the duration of this contract shall result in default under the contract.

The insurance companies for the above coverages must be licensed by the State of New Jersey and acceptable to the "Municipality". The "Contractor" shall take no action to cancel or materially change any of the insurance required under this Contract without the "Municipality's" prior approval. The maintenance of insurance under this section shall not relieve the "Contractor" of any liability greater than the limits of the applicable insurance coverage.

B. CERTIFICATES OF THE REQUIRED INSURANCE

Certificates of Insurance for those policies required above shall be submitted with the contract. Failure by the "Contractor" to supply such written evidence of required insurance and to maintain same for the duration of this contract shall result in default under the contract.

The insurance companies for the above coverages must be licensed by the State of New Jersey and acceptable to the "Municipality". The "Contractor" shall take no action to cancel or materially change any of the insurance required under this Contract without the "Municipality's" prior approval. The maintenance of insurance under this section shall not relieve the "Contractor" of any liability greater than the limits of the applicable insurance coverage.

Self-insured contractors shall submit an affidavit attesting to their self-insured coverage and shall name the owner as an additional insured.

C. INDEMNIFICATION

Contractor shall indemnify, save harmless and defend the Municipality, its elected and appointed officials, its employees, agents, volunteers and others working on behalf of the Municipality, from and against any and all claims, losses, costs, attorney's fees, damages or injury including death and/or property loss, expense claims or demands arising out of or caused or alleged to have been caused in any manner by a defect in any equipment or materials supplied under this Contract or by the performance of any work under this Contract, including all suits or actions of every kind or description brought against the Municipality, either individually or jointly with Contractor for or on account of any damage or injury to any person or persons or property, caused or occasioned or alleged to have been caused by, or on account of, the performance of any work pursuant to or in connection with this Contract, or through any negligence or alleged negligence in guarding the work or through any act, omission or fault or alleged act, omission or fault or alleged act, omission or fault of the Contractor, its employees, Subcontractors or agents or others under the Contractor's Contract.

VI. PRICING INFORMATION FOR PREPARATION OF BIDS

- A. The owner is exempt from any local, state or federal sales, use or excise tax.
- B. Estimated Quantities (Open-End Contracts): The owner has attempted to identify the item(s) and the estimated amounts of each item bid to cover its requirements; however, past experience shows that the amount ordered may be different than that submitted for bidding. The right is reserved to decrease or increase the quantities specified in the specifications pursuant to N.J.A.C. 5:30-11.2 and 11.10. **NO MINIMUM PURCHASE IS IMPLIED OR GUARANTEED.**
- C. Contractor shall be responsible for obtaining any applicable permits or licenses from any government entity that has jurisdiction to require the same. All bids submitted shall have included this cost.
- D. Bidders shall insert prices for furnishing goods and services required by these specifications. Prices shall be net, including any charges for packing, crating, containers, etc. All transportation charges shall be fully prepaid by the contractor, F.O.B. destination and placement at locations specified by the owner. As specified, placement may require inside deliveries. No additional charges will be allowed for any transportation costs resulting from partial shipments made for the contractor's convenience.

VII. STATUTORY AND OTHER REQUIREMENTS

The following are mandatory requirements of this bid and contract.

A. MANDATORY AFFIRMATIVE ACTION CERTIFICATION

No firm may be issued a contract unless it complies with the affirmative action provisions of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27-1 et seq. The following information summarizes the full, required regulatory text, which is included as Appendix A of this bid specification.

1. Goods And Services (including professional services) Contracts

Each contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

- i. A photocopy of a valid letter that the contractor is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter); or
- ii. A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4; or
- iii. A photocopy of an Employee Information Report (Form AA 302) provided by the Division and distributed to the public agency to be completed by the contractor in accordance with N.J.A.C. 17:27-4.

2. Maintenance/Construction Contracts

After notification of award, but prior to signing the contract, the contractor shall submit to the public agency compliance officer and the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division) an initial project workforce report (Form AA201) provided to the public agency by the Division for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7.

The contractor shall also submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of the contract to the Division and to the public agency compliance officer. The contractor shall also cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the job and/or off-the-job programs for outreach and training of minorities and women.

B. AMERICANS WITH DISABILITIES ACT OF 1990

Discrimination on the basis of disability in contracting for the purchase of goods and services is prohibited. Bidders are required to read Americans With Disabilities language that is included as Appendix B of this specification and agree that the provisions of Title II of the Act are made a part of the contract. The contractor is obligated to comply with the Act and to hold the owner harmless.

C. STOCKHOLDER DISCLOSURE

N.J.S.A. 52:25-24.2 provides that no corporation or partnership shall be awarded any contract for the performance of any work or the furnishing of any goods and services, unless, prior to the receipt of the bid or accompanying the bid of said corporation or partnership. Bidders shall submit a statement setting forth the names and addresses of all stockholders in the corporation or partnership who own ten percent or more of its stock of any class, or of all individual partners in the partnership who own a ten percent or greater interest therein. The included Statement of Ownership shall be completed and attached to the bid proposal. This requirement applies to all forms of corporations and partnerships, including, but not limited to, limited

partnerships, limited liability corporations, limited liability partnerships and Subchapter S corporations. Failure to submit a stockholder disclosure document shall result in rejection of the bid.

D. PROOF OF BUSINESS REGISTRATION

N.J.S.A. 52:32-44 requires that each bidder (contractor) submit proof of business registration with the bid proposal. Proof of registration shall be a copy of the bidder's Business Registration Certificate (BRC). A BRC is obtained from the New Jersey Division of Revenue. Information on obtaining a BRC is available on the internet at www.nj.gov/njbgs or by phone at (609) 292-1730. N.J.S.A. 52:32-44 imposes the following requirements on contractors and all subcontractors that **knowingly** provide goods or perform services for a contractor fulfilling this contract:

- 1) The contractor shall provide written notice to its subcontractors and suppliers to submit proof of business registration to the contractor;
- 2) Prior to receipt of final payment from a contracting agency, a contractor must submit to the contracting agency an accurate list of all subcontractors or attest that none was used;
- 3) During the term of this contract, the contractor and its affiliates shall collect and remit, and shall notify all subcontractors and their affiliates that they must collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into this State.

A contractor, subcontractor or supplier who fails to provide proof of business registration or provides false business registration information shall be liable to a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration not properly provided or maintained under a contract with a contracting agency. Information on the law and its requirements is available by calling (609) 292-9292.

If boxes of the following items are checked, they are mandatory requirements of the bid proposal and contract.



E. NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW ACT

The manufacturer or supplier of chemical substances or mixtures shall label them in accordance with the N.J. Worker and Community Right to Know Law (N.J.S.A. 34:51 et seq., and N.J.A.C 5:89-5 et seq.). Containers that the law and rules require to be labeled shall show the Chemical Abstracts Service number of all the components and the chemical name. Further, all applicable Material Safety Data Sheets (MSDS) - hazardous substance fact sheet - must be furnished.

F. PREVAILING WAGE ACT

Pursuant to N.J.S.A. 34:11-56.25 et seq., contractors on projects for public work shall adhere to all requirements of the New Jersey Prevailing Wage Act. The contractor shall be required to submit a certified payroll record to the owner within ten (10) days of the payment of the wages. The contractor is also responsible for obtaining and submitting all subcontractors' certified payroll records within the aforementioned time period. The contractor shall submit said certified payrolls in the form set forth in N.J.A.C. 12:60-6.1(c). It is the contractor's responsibility to obtain any additional copies of the certified payroll form to be submitted by contacting the New Jersey Department of Labor and Workforce Development, Division of Workplace Standards. [Additional information is available at www.state.nj.us/labor/lssse/lspubcon.html](http://www.state.nj.us/labor/lssse/lspubcon.html).

G. THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT

N.J.S.A. 34:11-56.48 et seq. requires that a general or prime contractor and any listed subcontractors named in the contractor's bid proposal shall possess a certificate *at the time the bid proposal is submitted*. After bid proposals are received and prior to award of contract, the successful contractor shall submit a copy of the contractor's certification along with those of all listed subcontractors. All non-listed subcontractors and lower tier sub-subcontractors shall be registered prior to starting work on the project. It is the general contractor's responsibility that all non-listed sub-contractors at any tier have their certificate prior to starting work on the job.

Under the law a "contractor" is "a person, partnership, association, joint stock company, trust, corporation or other legal business entity or successor thereof who enters into a contract" which is subject to the provisions of the New Jersey Prevailing Wage Act [N.J.S.A. 34:11-56.25, et seq.] It applies to contractors based in New Jersey or in another state.

The law defines "public works projects" as contracts for "public work" as defined in the Prevailing Wage statute [N.J.S.A. 34:11-56.26(5)]. The term means:

- "Construction, reconstruction, demolition, alteration, or repair work, or maintenance work, including painting and decorating, done under contract and paid for in whole or in part out of the funds of a public body, except work performed under a rehabilitation program.
- "Public work" shall also mean construction, reconstruction, demolition, alteration, or repair work, done on any property or premises, whether or not the work is paid for from public funds..."
- "Maintenance work" means the repair of existing facilities when the size, type or extent of such facilities is not thereby changed or increased. While "maintenance" includes painting and decorating and is covered under the law, it does not include work such as routine landscape maintenance or janitorial services.

To register, a contractor must provide the State Department of Labor with a full and accurately completed application form. The form is available online at www.state.nj.us/labor/lse/lspubcon.html.

N.J.S.A. 34:11-56.55 specifically prohibits accepting applications for registration as a substitute for a certificate of registration.

H. NON-COLLUSION AFFIDAVIT

The Affidavit shall be properly executed and submitted with the bid proposal.

I. DISCLOSURE OF CONTRIBUTIONS TO ELEC

Vendor is advised of the responsibility to file an annual disclosure statement on political contributions with the New Jersey Election Law Enforcement Commission pursuant to N.J.S.A. 19:44A-20.13 (P.L. 2005, c.271, s3) if the vendor receives contracts in excess of \$50,000 from public entities in a calendar year. It is the contractor's responsibility to determine if filing is necessary. Additional information on this requirement is available from ELEC at 888-313-3532 or at www.elec.state.nj.us.

VIII. METHOD OF CONTRACT AWARD

- A. The length of the contract shall be stated in the technical specifications. Pursuant to requirements of N.J.A.C. 5:30-5.1 et seq., any contract resulting from this bid shall be subject to the availability and appropriation of sufficient funds annually. Please see Section X, Termination of Contract, Sub-section E, for additional information.
- B. If the award is to be made on the basis of a base bid only, it shall be made to that responsible bidder submitting the lowest base bid.
- C. If the award is to be made on the basis of a combination of a base bid with selected options, it shall be made to that responsible bidder submitting the lowest net bid.
- D. The owner may also elect to award the contract on the basis of unit prices.
- E. The form of contract shall be submitted by the owner to the successful bidder. Terms of the specifications/bid package prevail. Bidder exceptions must be formally accepted by the owner.

IX. CAUSES FOR REJECTING BIDS

Bids may be rejected for any of the following reasons:

- A. All bids pursuant to N.J.S.A. 40A:11-13.2;
- B. If more than one bid is received from an individual, firm or partnership, corporation or association under the same name;
- C. Multiple bids from an agent representing competing bidders;
- D. The bid is inappropriately unbalanced;
- E. The bidder is determined to possess, pursuant to N.J.S.A. 40A:11-4b, Prior Negative Experience; or,
- F. If the successful bidder fails to enter into a contract within 21 days, Sundays and holidays excepted, or as otherwise agreed upon by the parties to the contract. In this case at its option, the owner may accept the bid of the next lowest responsible bidder. (N.J.S.A. 40A:11-24b)

X. TERMINATION OF CONTRACT

- A. If, through any cause, the contractor shall fail to fulfill in a timely and proper manner obligations under the contract or if the contractor shall violate any of the requirements of the contract, the owner shall there upon have the right to terminate the contract by giving written notice to the contractor of such termination and specifying the effective date of termination. Such termination shall relieve the owner of any obligation for balances to the contractor of any sum or sums set forth in the contract. Owner will pay only for goods and services accepted prior to termination.
- B. Notwithstanding the above, the contractor shall not be relieved of liability to the owner for damages sustained by the owner by virtue of any breach of the contract by the contractor and the owner may withhold any payments to the contractor for the purpose of compensation until such time as the exact amount of the damage due the owner from the contractor is determined.

- C. The contractor agrees to indemnify and hold the owner harmless from any liability to subcontractors/suppliers concerning payment for work performed or goods supplied arising out of the lawful termination of the contract by the owner under this provision.
- D. In case of default by the contractor, the owner may procure the goods or services from other sources and hold the contractor responsible for any excess cost.
- E. Continuation of the terms of the contract beyond the fiscal year is contingent on availability of funds in the following year's budget. In the event of unavailability of such funds, the owner reserves the right to cancel the contract.

F. ACQUISITION, MERGER, SALE AND/OR TRANSFER OF BUSINESS, ETC.

It is understood by all parties that if, during the life of the contract, the contractor disposes of his/her business concern by acquisition, merger, sale and or/transfer or by any means convey his/her interest(s) to another party, all obligations are transferred to that new party. In this event, the new owner(s) will be required to submit all documentation/legal instruments that were required in the original bid/contract. Any change shall be approved by the Owner.

- G. The contractor will not assign any interest in the contract and shall not transfer any interest in the same without the prior written consent of the owner.
- H. The owner may terminate the contract for convenience by providing 60 calendar days advanced notice to the contractor.

XI. PAYMENT

- A. No payment will be made unless duly authorized by the Owner's authorized representative and accompanied by proper documentation.
- B. As per N.J.S.A. 2A:30A-2a, the Township of Mullica operates under the "alternative procedure", therefore the following provisions apply:

The 20th calendar day deadline of the default procedure to approve and certify, or decide to withhold full or partial payment is deferred until the public meeting following 20 calendar days of the billing date, at which time the bill must be approved for payment or notice provided as to why the bill or any portion of it will not be approved.

If the billing is approved, the 30-day payment requirement of the default is replaced by the requirement that the bill be paid in the payment cycle following the meeting.

- C. The Township of Mullica defines the billing date for payment, final and retainage payments as "the date the bill is received by the local unit".

XII. DISPUTE RESOLUTION

Any dispute arising under this Contract shall be subjected to mediation before a mediator mutually selected by the Township of Mullica and the complaining contractor. Nothing in this paragraph shall prevent the Township from seeking injunctive or declaratory relief in any court at any time. The mediation requirement contained in this paragraph shall not apply to disputes concerning the bid solicitation or award process, or the formation of contracts or sub-contracts to be entered into pursuant to N.J.S.A. 40A:11-1 et seq. Whenever a dispute concerns more than one contract, such as when management, upon the demand of the contracting

party, other interested parties to the dispute shall be joined unless the mediator determines that such joinder is inappropriate. This shall be true notwithstanding industry rules or any other provisions of law to the contrary. Whenever more than one dispute of a similar nature arises under a construction contract, or related construction contract, upon the demand of a contracting party, the dispute shall be joined unless the mediator appointed to resolve the dispute determines that the disputes are inappropriate for joinder. For purposes of this paragraph, the term *construction contract* means a contract involving construction, or a contract related thereto concerning architecture, engineering or constructions management.

FORMS

BID DOCUMENT CHECKLIST

Required by owner	Submission Requirement	Initial each required entry and if required submit the item
<input type="checkbox"/>	Stockholder Disclosure Certification	
<input type="checkbox"/>	Non-Collusion Affidavit	
<input type="checkbox"/>	Bid Proposal Form	
<input type="checkbox"/>	References/User List	
<input type="checkbox"/>	Status of Present Contracts	
<input type="checkbox"/>	Equipment Certification	
<input type="checkbox"/>	Bid Guarantee (with Power of Attorney for full amount of <i>Bid</i> Bond)	
<input type="checkbox"/>	Consent of Surety (with Power of Attorney for full amount of Bid Price)	
<input type="checkbox"/>	Proof of Business Registration	
<input type="checkbox"/>	Mandatory Affirmative Action Language	
<input type="checkbox"/>	Americans with Disabilities Act of 1990 Language	
<input type="checkbox"/>	Acknowledgement of Receipt of Addenda	
<input type="checkbox"/>	Preliminary Engineering Drawing	
<input type="checkbox"/>	Certificate of ISO 9001 Compliance	
<input type="checkbox"/>	Engine Installation Certification	
<input type="checkbox"/>	Cab Integrity Certification	
<input type="checkbox"/>	AMP Draw Report	

BID DOCUMENT CHECKLIST - Continued

Required by owner	Submission Requirement – Warranty Information	Initial each required entry and if required submit the item
<input type="checkbox"/>	Chassis & Chassis Crossmember Warranty	
<input type="checkbox"/>	Frame Rail Warranty	
<input type="checkbox"/>	Front & Rear Axle Warranty	
<input type="checkbox"/>	Antilock Brake System Warranty	
<input type="checkbox"/>	Engine Warranty	
<input type="checkbox"/>	Pump Warranty	
<input type="checkbox"/>	Pump Plumbing Warranty	
<input type="checkbox"/>	Transmission Warranty	
<input type="checkbox"/>	Cab Warranty	
<input type="checkbox"/>	Paint & Corrosion Warranty	
<input type="checkbox"/>	Lamination Warranty	
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		

BID PROPOSAL FORM

(Contract Title and Bid Number, if applicable)

(Description of goods/service being bid)

The undersigned proposes to furnish and deliver the above goods/service pursuant to the bid specification and made part hereof:

Amount in words

\$ _____
Amount in numbers

Company Name

Federal I.D. # or Social Security #

Address

Signature of Authorized Agent

Type or Print Name

Title: _____

Telephone Number

Date

Fax Number

E-mail address

APPENDIX A
N.J.S.A. 10:5-31 and N.J.A.C. 17:27
(MANDATORY AFFIRMATIVE ACTION LANGUAGE)
(MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE)
Goods, Professional Service and General Service Contracts

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex. Except with respect to affectional or sexual orientation, the contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the public agency compliance officer setting for the provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex.

The contractor or subcontractor, where applicable, will send to each labor union or representative or workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to make good faith efforts to employ minority and women workers consistent with the applicable county employment goals established in accordance with N.J.A.C. 17:27-5.2 or a binding determination of the applicable county employment goals determined by the Division, pursuant to N.J.A.C. 17:27-5.2.

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, labor unions, that it does not discriminate on the basis of age, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the applicable employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, creed, color, national origin, ancestry, marital status, affectional or sexual orientation or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor and its subcontractors shall furnish such reports or other documents to the Division of Contract Compliance and EEO as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Contract Compliance & EEO for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code at N.J.A.C. 17:27.**

APPENDIX B
AMERICANS WITH DISABILITIES ACT OF 1990
Equal Opportunity for Individuals with Disability

The contractor and the Township of Mullica, (hereafter "owner" or "Municipality") hereby agree that the provisions of Title 11 of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. *SI21 01* et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant there unto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event that the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages, of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the owner's grievance procedure, the contractor agrees to abide by any decision of the owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the owner, or if the owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

The owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the contractor along with full and complete particulars of the claim, If any action or administrative proceeding is brought against the owner or any of its agents, servants, and employees, the *owner shall* expeditiously forward or have forwarded to the contractor every demand, complaint, notice, summons, pleading, or other process received by the owner or its representatives.

It is expressly agreed and understood that any approval by the owner of the services provided by the contractor pursuant to this contract will not relieve the contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the owner pursuant to this paragraph.

It is further agreed and understood that the owner assumes no obligation to indemnify or save harmless the contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the owner from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

CONSENT OF SURETY

A performance bond will be required from the successful contractor on this project, and consequently, all bidders shall submit, with their bid, a certificate in substantially the following form:

To: The Township of Mullica

Re: _____
(Contractor)

(Project Description)

This is to certify that the _____
(Surety Company)

will provide to _____ a performance bond in
(Owner)

the full amount of awarded contract in the event that said contractor is awarded a contract for the above project.

(CONTRACTOR)

(Authorized Agent of Surety Company)

Date: _____

**CERTIFICATE OF SURETY MUST BE SIGNED BY AN AUTHORIZED AGENT
OR REPRESENTATIVE OF A SURETY COMPANY AND NOT BY THE
INDIVIDUAL OR COMPANY REPRESENTATIVE SUBMITTING THE BID.**

AFFIRMATIVE ACTION COMPLIANCE NOTICE
N.J.S.A. 10:5-31 and N.J.A.C. 17:27

GOODS AND SERVICES CONTRACTS
(INCLUDING PROFESSIONAL SERVICES)

This form is a summary of the successful bidder's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.

The successful bidder shall submit to the public agency, after notification of award but prior to execution of this contract, one of the following three documents as forms of evidence:

(a) A photocopy of a valid letter that the contractor is operating under an existing Federally approved or sanctioned affirmative action program (good for one year from the date of the letter);

OR

(b) A photocopy of a Certificate of Employee Information Report approval, issued in accordance with N.J.A.C. 17:27-4;

OR

(c) A photocopy of an Employee Information Report (Form AA302) provided by the Division and distributed to the public agency to be completed by the contractor in accordance with N.J.A.C. 17:27-4.

The successful vendor may obtain the Affirmative Action Employee Information Report (AA302) from the contracting unit during normal business hours.

The successful vendor(s) must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the vendor copy is retained by the vendor.

The undersigned vendor certifies that he/she is aware of the commitment to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27 and agrees to furnish the required forms of evidence.

The undersigned vendor further understands that his/her bid shall be rejected as non-responsive if said contractor fails to comply with the requirements of N.J.S.A. 10:5-31 and N.J.A.C. 17:27.

COMPANY: _____

SIGNATURE:

PRINT NAME: _____ TITLE: _____

DATE: _____

STOCKHOLDER DISCLOSURE CERTIFICATION

Name of Business _____

I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned.

OR

I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

Check the box that represents the type of business organization:

Partnership

Corporation

Sole Proprietorship

Limited Partnership

Limited Liability Corporation

Limited Liability Partnership

Subchapter S Corporation

Sign and notarize the form below, and, if necessary, complete the stockholder list below.

Stockholders:

Name: _____

Name: _____

Home Address: _____

Home Address: _____

Name: _____

Name: _____

Home Address: _____

Home Address: _____

Subscribed and sworn before me this ____ day of _____, 2__.

(Notary Public)

My Commission expires:

(Affiant)

(Print name & title of affiant)

(Corporate Seal)

NON-COLLUSION AFFIDAVIT

State of New Jersey
County of _____

ss:

I, _____ residing in _____
(name of affiant) (name of municipality)
in the County of _____ and State of _____ of full age,
being duly sworn according to law on my oath depose and say that:

I am _____ of the firm of _____
(title or position) (name of firm)

_____ the bidder making this Proposal for the bid

entitled _____, and that I executed the said proposal with
(title of bid proposal)

full authority to do so that said bidder has not, directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this affidavit are true and correct, and made with full knowledge that the _____

_____ relies upon the truth of the statements contained in said Proposal
(name of contracting unit)

and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by _____.

Subscribed and sworn to

before me this day

Signature

_____ 2

(Type or print name of affiant under signature)

Notary public of

My Commission expires _____

(Seal)

EQUIPMENT CERTIFICATION

The undersigned Bidder hereby certifies as follows:

The bidder owns or controls all the necessary equipment required to accomplish the work described in the specifications.

Name of Bidder: _____

By: _____
(Signature)

Name of above: _____
(Print)

Title: _____

Date: _____

Township of Mullica

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA

The undersigned Bidder hereby acknowledges receipt of the following Addenda:

<u>Addendum Number</u>	<u>Dated</u>	<u>Acknowledge Receipt</u> (initial)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

No addenda were received:

Acknowledged for: _____
(Name of Bidder)

By: _____
(Signature of Authorized Representative)

Name: _____
(Print or Type)

Title: _____

CONTRACT FORMS

CONTRACT AGREEMENT

THIS AGREEMENT, made this ____ day of _____, 2009 by and between Mullica Township, P.O. Box 317, Elwood, NJ 08217, a body corporate and politic, existing under and by virtue of the Laws of the State of New Jersey, hereinafter referred to as the TOWNSHIP, party of the first part,

A
N
D

_____, a Corporation, with its principal office at _____ hereinafter called the CONTRACTOR, party of the second part.

WITNESSETH:

That the CONTRACTOR, for and in consideration of the payments made to it by the TOWNSHIP, at the time and in the manner hereinafter set forth does hereby agree to provide furnish and deliver one (1) triple combination rescue pumper; Contract Number 2009-07, in strict accordance with the specification attached hereto and made a part hereof, and in accord with proposal of the CONTRACTOR, a copy of which is also attached hereto and made a part hereof and as submitted to the TOWNSHIP and awarded to the CONTRACTOR.

The Notice to Bidders, Instructions to Bidders, Technical Specifications, Forms and Instruction, General Conditions, if any Supplemental Conditions, if any, are all incorporated by reference and comprise the contract documents.

The Bond annexed hereto and which is executed coincident with the execution of this contract and obligations imposed upon the CONTRACTOR by this contract shall be obligations in addition to all other terms, covenants and conditions of said Bond to the same effect as though they had been incorporated in said Bond.

In consideration of the faithful performance of this contract, and its covenants and agreements entered into in the furnishing and delivering of service as herein provided, and the acceptance thereof by the TOWNSHIP, the TOWNSHIP does hereby agree to pay to the CONTRACTOR, in accordance with the payment schedule established in the specification and upon presentation of a verified voucher, the total sum not to exceed \$_____.

IN WITNESS WHEREOF the parties have caused these presents to be signed by their duly authorized officers and sealed with their seals, the day and year first above written.

OWNER/MUNICIPALITY:

The Township of Mullica

By: _____
Kimberly Johnson, Township Clerk

CONTRACTOR:

Attest : _____
Dawn M. Stollenwerk, CFO/QPA

Documents Required To Be Submitted With Signed Contract

<input type="checkbox"/>	Performance Bond	
<input type="checkbox"/>	Labor & Materials Bond	
<input type="checkbox"/>	Certificate of Insurance	
<input type="checkbox"/>	Proof of Affirmative Action Compliance	

Specifications

**Bidder
Complies**

Yes

No

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Specifications	Bidder Complies	
	Yes	No
<p style="text-align: center;">SPECIFICATIONS FOR A TRIPLE COMBINATION RESCUE PUMPER</p> <p><u>INTENT OF SPECIFICATIONS</u></p> <p>It shall be the intent of these specifications to cover the furnishing and delivery of a complete fire apparatus. These detailed specifications cover the requirements as to the type of construction and test to which the apparatus shall conform, together with certain details as to finish, equipment and appliances with which the successful bidder shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the contractor. The manufacturer shall provide loose equipment only when specified by the customer. Otherwise, in accordance with NFPA 1901, 2009 edition, the proposal shall specify whether the fire department or apparatus dealership shall provide required loose equipment.</p> <p>Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified and shall state the location of the factory where the apparatus is to be built. The bidder shall also show that the company is in position to render prompt service and to furnish replacement parts.</p> <p>Each bid shall be accompanied by a set of detailed "Contractor's Specifications" consisting of a detailed description of the apparatus and equipment proposed, and to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model and make of all component parts and equipment.</p> <p><u>QUALITY AND WORKMANSHIP</u></p> <p>The design of the apparatus shall embody the latest approved automotive engineering practices. The workmanship shall be of the highest quality in its respective field. Special consideration shall be given to the following points: Accessibility of the various units which require periodic maintenance; ease of operation (including both pumping and driving); and symmetrical proportions. Construction shall be rugged and ample safety factors shall be provided to carry the loads specified and to meet both on and off road requirements and speed conditions as set forth under "Performance Tests and Requirements". Welding shall not be employed in the assembly of the apparatus in a manner that shall prevent the ready removal of any component part for service or repair. All steel welding shall follow American Welding Society D1.1-2004 recommendations for structural steel welding.</p> <p>All aluminum welding shall follow American Welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal. Flux core arc welding to use alloy rods, type 7000, American Welding Society standards A5.20-E70T1. Employees classified as welders are tested and certified to meet American Welding Society codes upon hire and every three (3) years thereafter.</p>		
Page 18		

Specifications	Bidder Complies	
	Yes	No
<p><u>DELIVERY</u> Apparatus, to insure proper break in of all components while still under warranty, shall be delivered under its own power - rail or truck freight shall not be acceptable. A qualified delivery engineer representing the contractor shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in the proper operation, care and maintenance of the equipment delivered. Delivery is required by September 30, 2010.</p> <p><u>INFORMATION REQUIRED</u> The manufacturer shall supply at time of delivery, complete operation and maintenance manuals covering the completed apparatus as delivered. A permanent plate shall be mounted in the driver's compartment which specifies the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.</p> <p><u>SAFETY VIDEO</u> Documentation provided at the time of delivery shall also include an apparatus safety video, in DVD format. This video shall address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus. Safety procedures for the following shall be included: vehicle pre-trip inspection, chassis operation, pump operation, and maintenance.</p> <p><u>PERFORMANCE TESTS AND REQUIREMENTS</u> A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters:</p> <p style="margin-left: 40px;">A) The apparatus, when fully equipped and loaded, shall have not less than 25% nor more than 50% of the weight on the front axle, and not less than 50% nor more than 75% on the rear axle.</p> <p style="margin-left: 40px;">B) The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.</p> <p style="margin-left: 40px;">C) The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor Vehicle Safety Standards (FMVSS) 121.</p> <p style="margin-left: 40px;">D) The apparatus, fully loaded, shall be capable of obtaining a speed of 50 mph on a level concrete highway with the engine not exceeding its governed rpm (full load).</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>FAILURE TO MEET TEST</u> In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use by the purchaser during the above-specified period with the permission of the bidder shall not constitute acceptance.</p> <p><u>SPECIFICATION BID REQUIREMENTS</u> Bidders shall also indicate in the "yes/no" column if their bid complies on each item (PARAGRAPH) specified. Exceptions shall be allowed if they are equal to or superior to that specified and provided they are listed and fully explained on a separate page.</p> <p>Proposals taking total exception to specifications shall not be acceptable.</p> <p>Also, bidders shall submit a detailed proposal. A letter only, even though written on a company letterhead, shall not be sufficient. Bid proposals shall be submitted in the same sequence as specifications for ease of evaluation, comparison and checking of compliance. An exception to these requirements shall not be tolerated.</p> <p><u>EXCEPTIONS</u> All exceptions shall be stated no matter how seemingly minor. Any exceptions not taken shall be assumed by the purchaser to be included in the proposal, regardless of the cost to the bidder.</p> <p><u>GENERAL CONSTRUCTION</u> The apparatus shall be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association.</p> <p><u>ISO COMPLIANCE</u> The manufacturer shall operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the "International Organization for Standardization (ISO)" specify the quality systems that shall be established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance shall be included with the bid.</p> <p><u>SINGLE SOURCE MANUFACTURER</u> Bids shall only be accepted from a single source apparatus manufacturer. The definition of single source is a manufacturer that designs and manufactures their products using an integrated approach, including the chassis, cab and body being fabricated and assembled on</p>		

Specifications	Bidder Complies	
	Yes	No
<p>the bidder's premises. The warranties relative to the chassis and body design (excluding component warranties such as engine, transmission, axles, pump, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body and chassis). The bidder shall provide evidence that they comply with this requirement.</p> <p><u>NFPA 2009 STANDARDS</u> This unit shall comply with the NFPA standards effective January 1, 2009, except for fire department specifications that differ from NFPA specifications. These exceptions shall be set forth in the Statement of Exceptions.</p> <p>Certification of slip resistance of all stepping, standing and walking surfaces shall be supplied with delivery of the apparatus.</p> <p>A plate that is highly visible to the driver while seated shall be provided. This plate shall show the overall height, length, and gross vehicle weight rating.</p> <p>The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications.</p> <p>An official of the company shall designate, in writing, who is qualified to witness and certify test results.</p> <p><u>PUMP TEST</u> The pump shall be tested, approved, and certified by an independent third party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details shall be forwarded to the Fire Department.</p> <p><u>WARRANTY</u> Each piece of new fire or rescue apparatus shall be warranted to be free from defects in materials or workmanship under normal use and service. Each manufacturer shall supply, as a part of their bid package, a copy of the warranty or warranties that they propose to provide, and in no case shall it be less than one (1) year on the entire apparatus.</p> <p>All other warranties, as outlined in these specifications shall be provided in writing as a part of the bid package.</p> <p><u>WARRANTY 1 YEAR CUSTOM CHASSIS</u> Each piece of new fire or rescue apparatus shall be warranted to be free from defects in materials or workmanship under normal use and service. Each manufacturer shall supply, as a part of their bid package, a copy of the warranty or warranties that they propose to provide, and in no case shall it be less than one (1) year on the entire apparatus.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>All other warranties, as outlined in these specifications shall be provided in writing as a part of the bid package.</p> <p><u>CROSSMEMBERS WARRANTY</u> A one (1) year parts and labor warranty shall be provided on all chassis frame crossmembers.</p> <p><u>USER LIST</u> The bidder shall supply at the time of bid a listing of similarly equipped apparatus delivered in the State of New Jersey. The list shall include, at a minimum, the name and address of the purchaser, a contact name and phone number, the type of chassis and date of delivery.</p> <p><u>THIRD-PARTY WEEKLY PROGRESS REPORTS AND INSPECTIONS</u> The successful bidder shall also provide weekly photographic progress reports and inspection services, provided by an independent third party. These progress reports and inspection services shall begin once the apparatus starts the manufacturing and assembly process. The inspection service will NOT warranty any aspect of the apparatus' operability or design, but shall confirm that the options on the apparatus at final inspection reasonably comport to those in the specification. In addition, after the final inspection has been completed by the customer, the third party inspector shall also review all items noted in the inspection for completion prior to the apparatus leaving the manufacturing facility for delivery local service area for pre-delivery service.</p> <p><u>FABRICATION AND ASSEMBLY</u> The fire apparatus fabrication and assembly may be performed at separate facilities (i.e. Chassis at one facility, body at another, and aerial device at another). Either the bidding manufacturer or their parent company must wholly own the means and methods of operation at each facility. Partial ownership by either the bidding manufacturer or the parent company is not acceptable.</p> <p><u>ABILITY TO PROVIDE SERVICE</u> Equally necessary as a properly designed and constructed apparatus is the ability to obtain repairs and maintenance promptly in order to keep the apparatus in service.</p> <ol style="list-style-type: none"> 1. Bidder or representative must be the authorized warranty service outlet for the apparatus and pump being bid. 2. Factory Authorized Service for the chassis, apparatus and pump being provided must be available in the purchaser's fire station. 3. Bidder or representative shall through own facilities or through closely controlled sublet facilities be capable of providing all maintenance and service required on the apparatus being bid within a 65 mile radius of the fire station of the purchaser, and in no case shall it be necessary for the purchaser to return the apparatus to the manufacturing facility in order to obtain service and repairs. 		

Specifications	Bidder Complies	
	Yes	No
<p>4. Bidder or representative shall respond to all "out of service" service calls within 24 hours of notification by the purchaser.</p> <p><u>PRE-DELIVERY SERVICE</u></p> <p>Upon the completion on the unit and delivery of same to the New Jersey service center, but prior to delivery to the customer, the apparatus shall undergo a complete service with respect to changing the engine transmission oils and filter, and fuel filters. All other fluid levels shall be checked and brought to their proper levels. All chassis components shall be re-torqued as required by the manufacturer's pre-delivery inspection sheet and service bulletins. Apparatus is not to be delivered to the fire station to begin training until this service is performed.</p> <p>Proposals received from bidders who do not manufacture the chassis shall provide a warranty which shall be issued jointly and severally by, and signed by, both the bidder and the chassis manufacturer.</p> <p>If the successful bidder does not manufacture the chassis, the bidder shall supply a separate warranty bond, in addition to their performance bond, along with their signed contract. This warranty bond shall guarantee all terms and conditions of the warranty and names both the bidder and chassis manufacturer as co-principals. This warranty bond shall be issued for the contract amount and shall remain in force for a term which is consistent with the term of the warranty quoted in the bid.</p> <p><u>DELIVERY TRAINING</u></p> <p>Factory authorized delivery training will be provided by a factory trained delivery technician. This training will consist of a Power Point presentation, using images and descriptions of the customer own apparatus, as well as hands-on training in the use and proper care of the apparatus. A copy of the Power Point presentation will be provided to the purchaser, to be used in subsequent training of new and existing personnel.</p> <p><u>PRELIMINARY ENGINEERING DRAWING</u></p> <p>A preliminary engineering drawing of the unit being bid must be supplied by the bidder. <u>NO EXCEPTIONS</u> The drawing will show overall height, overall length, compartment sizes, emergency lighting, etc. Generic "similar to" drawings will not be acceptable.</p> <p><u>CHASSIS</u></p> <p>Chassis provided shall be a new, tilt-type custom fire apparatus. The chassis shall be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis shall be designed and manufactured for heavy-duty service, with adequate strength and capacity for the intended load to be sustained and the type of service required.</p> <p><u>SEATING CAPACITY</u></p> <p>The seating capacity in the cab shall be six (6).</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>WHEELBASE</u> The wheelbase of the vehicle shall be no greater than 172".</p> <p><u>GVW RATING</u> The gross vehicle weight rating shall be a minimum of 38,000 lb..</p> <p><u>FRAME</u> The chassis frame shall be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails shall be heat-treated steel measuring 10.13" x 3.06" x .31".</p> <p>Each rail shall have a section modulus of 13.48 in.³, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,617,600 inch-pounds.</p> <p><u>FRAME RAIL WARRANTY</u> The frame rails shall be guaranteed for the life of the vehicle, which is estimated to be 50 years, against defects in design, material, or workmanship, excluding accident or abuse. A copy of the fire apparatus manufacturer's warranty shall be included with the bid.</p> <p><u>FRONT AXLE</u> The front axle shall be a reverse "I" beam type with inclined king pins. It shall be a Meritor™ axle, Model FL-941, with a rated capacity of 16,000 pounds.</p> <p>A viewing window shall be provided on each side of the axle for checking the oil level.</p> <p><u>FRONT AXLE WARRANTY</u> The Meritor™ two (2) year, unlimited mileage, parts and labor warranty shall be provided with this axle.</p> <p><u>OIL SEALS</u> Oil seals with viewing window shall be provided on the front axle.</p> <p><u>SHOCK ABSORBERS</u> Heavy-duty telescoping shock absorbers shall be provided on the front axle.</p> <p><u>REAR AXLE</u> The rear axle shall be a Meritor™, Model RS-21-145, with a capacity of 22,000 pounds.</p> <p><u>REAR AXLE WARRANTY</u> The Meritor™ two (2) year, unlimited mileage, parts and labor warranty shall be provided with this axle.</p> <p><u>TOP SPEED OF VEHICLE</u> A rear axle ratio shall be furnished to allow the vehicle to reach a top speed of 60 MPH.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>OIL SEALS</u> Oil seals shall be provided on the rear axle.</p> <p><u>SUSPENSION, FRONT</u> Front springs shall be semi-elliptical, 4.00" x 54.00" seven (7)-leaf, constant rate type with a ground rating of 16,000 pounds.</p> <p>Kaiser spring pins shall be provided, with double "figure-eight" grease grooves and a layer of electroless nickel plating, 1.0 mil thick around the entire pin. The bushing that holds the spring pin in place shall also have a grease groove.</p> <p><u>REAR SUSPENSION</u> The rear springs shall be semi-elliptical, 3.00" x 55.00", 10 leaves with a ground rating of 24,000 pounds. Spring hangers shall be castings with provisions for lubrication. The grease fittings shall be 90-degree type and shall be accessible without removing the wheels or cutting any sheet metal.</p> <p>Kaiser spring pins shall be provided, with double "figure-eight" grease grooves and a layer of electroless nickel plating, 1.0 mil thick, around the entire pin. The bushing that holds the spring pin in place shall also have a grease groove.</p> <p><u>ANTI-LOCK BRAKE SYSTEM</u> The vehicle shall be equipped with a Wabco 4S4M, anti-lock braking system. The ABS shall provide a four (4) channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology shall control the anti-lock braking system. Each wheel shall be monitored by the system. When any particular wheel begins to lockup, a signal shall be sent to the control unit. This control unit then shall reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system shall eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.</p> <p><u>ANTI-LOCK BRAKE SYSTEM WARRANTY</u> The Wabco ABS system shall come with a three (3) year or 300,000 mile parts and labor warranty provided by Meritor Wabco Vehicle Control Systems.</p> <p><u>BRAKES</u> The service brake system shall be full air type by Meritor™.</p> <p>Front brakes shall be EX225 Disc Plus, disc type with automatic pad wear adjustment and 17.00" ventilated rotors for improved stopping distance.</p> <p>The rear brakes shall be Meritor™ 16.50" x 7.00" cam operated with automatic slack adjusters.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>ENGINE BRAKE</u> A Jacobs Engine Brake is to be installed with the controls located on the instrument panel within easy reach of the driver.</p> <p>The driver shall be able to turn the engine brake system on/off and have a high and low setting.</p> <p>The engine brake shall be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.</p> <p>The ABS system shall automatically disengage the auxiliary braking device, when required.</p> <p><u>AIR COMPRESSOR, BRAKE SYSTEM</u> The air compressor shall be a Cummins/Wabco with 18.7 cubic feet per minute output.</p> <p><u>BRAKE SYSTEM</u> The brake system shall include:</p> <ul style="list-style-type: none"> - Bendix-Westinghouse dual brake treadle valve with vinyl covered foot surface - A heated automatic moisture ejector on air dryer - Total air system capacity of 4,362 cubic inch - Two (2) air pressure gauges with red warning light and audible alarm, that activates when air pressure falls below 60 psi - MGM spring set parking brake system - Parking brake operated by a Bendix-Westinghouse PP-1 control valve - A parking "brake on" indicator light on instrument panel - Bendix-Westinghouse SR-1 valve, in conjunction with a double check valve system, shall be provided with an automatic spring brake application at 40 psi - Wabco System Saver 1200 air dryer <p><u>BRAKE LINES</u> Color-coded nylon brake lines shall be provided. The lines shall be wrapped in a heat protective loom where necessary in the chassis.</p> <p><u>AIR INLET/OUTLET</u> One (1) air inlet/outlet shall be installed with the male coupling located on the driver side pump panel. This system shall tie into the "wet" tank of the brake system and include a check</p>		

Specifications	Bidder Complies	
	Yes	No
<p>valve in the inlet line and an 85 psi pressure protection valve in the outlet line. The air outlet shall be controlled by a needle valve.</p> <p>A mating female fitting shall be provided with the loose equipment. The air inlet shall allow a shoreline air hose to be connected to the vehicle. This shall allow station air to be supplied to the brake system of the vehicle to insure constant air pressure.</p> <p><u>ENGINE</u></p> <p>The chassis shall be powered by a Cummins electronic engine as described below:</p> <ul style="list-style-type: none"> - Model: ISC - Number of Cylinders: Six (6) - Bore and Stroke: 4.49" x 5.31" - Displacement: 506 cubic inches - Maximum Horsepower: 360 hp at 2000 rpm - Torque: 1050 lb-ft at 1400 rpm - Compression Ratio: 16.6:1 - Governed rpm: 2200 <p>Standard equipment on the engine shall include the following:</p> <ul style="list-style-type: none"> - Air Cleaner: Farr or equal - Fuel Filters: Dual, with check valve - Coolant Filter Spin-on with shut off valves on the supply and return line - Governor: Limiting speed type - Injectors: Cam operated, unit type, clean tip - Lube Oil Cooler - Lube Oil Filter: Full flow - Starting Motor: 12-volt - Turbocharger - Charge Air Cooled <p><u>ENGINE WARRANTY</u></p> <p>The engine shall have a five (5) year or 100,000 mile warranty provided by the engine manufacturer. This warranty shall provide the same coverage for the Diesel Particulate Filter "DPF" that is an integral component of the exhaust emissions system. The engine manufacturer shall add a \$100.00 deductible during the extended basic coverage period in years 3, 4, and 5. There shall be no deductible in the first 2 years of warranty.</p>		

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	Yes	No
<p><u>CONTROLS AND INDICATOR LIGHTS</u></p> <p>The following amber indicator lights shall be located on the driver's side of the cab to denote engine information:</p> <ul style="list-style-type: none"> - Diesel Particulate Filter (DPF) - High Exhaust Temperature (HET) <p>A switch to initiate the diesel particulate filter regeneration cycle shall be located on the driver's side instrument panel.</p> <p><u>ENGINE INSTALLATION CERTIFICATION</u></p> <p>The fire apparatus manufacturer shall provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification shall be provided at the time of bid.</p> <p><u>ENGINE AIR INTAKE</u></p> <p>The air intake with ember separator shall be mounted on the passenger side of the apparatus, to the front of the engine. The ember separator is designed to prevent road dirt and recirculating hot air from entering the engine.</p> <p>The ember separator shall be easily accessible by tilting the cab.</p> <p><u>EXHAUST SYSTEM</u></p> <p>The exhaust system shall be stainless steel from the turbo to the inlet of the diesel particulate filter and shall be 4.00" in diameter. The exhaust system shall include a diesel particulate filter and a diesel oxidation catalyst to meet current EPA standards. The exhaust shall terminate horizontally ahead of the passenger side rear wheels. A tailpipe diffuser shall be provided to reduce the temperature of the exhaust as it exits. An insulation wrap shall be provided on the exhaust pipe between the turbo and DPF inlet to minimize the transfer of heat to the cab. Heat deflector shields shall be provided to isolate chassis and body components from the heat of the tailpipe diffuser.</p> <p><u>HIGH IDLE</u></p> <p>A high idle switch shall be provided, inside the cab, on the instrument panel, that shall automatically maintain a preset engine rpm. A switch shall be installed, at the cab instrument panel, for activation/deactivation.</p> <p>The high idle shall be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light shall be provided adjacent to the switch. The light shall illuminate when the above conditions are met. The light shall be labeled "OK to Engage High Idle".</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>COOLANT LINES</u> Gates, or Goodyear, rubber hose shall be used for all engine coolant lines installed by the chassis manufacturer.</p> <p>Hose clamps shall be stainless steel "constant torque type" to prevent coolant leakage. They shall react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.</p> <p><u>RADIATOR</u> The radiator and the complete cooling system shall meet or exceed NFPA and engine manufacturer cooling system standards.</p> <p>For maximum cooling performance, the radiator core shall be made of brass tubes with copper fins having a serpentine design. The tubes shall be welded to brass headers using the patented "Beta-Weld" process for increased strength, longer road life and solder-bloom corrosion protection. The radiator core shall have a minimum frontal area of 1063 square inches. Steel supply and return tanks shall be bolted to the core headers and steel side channels to complete the radiator assembly. The radiator shall be compatible with commercial antifreeze solutions.</p> <p>The radiator shall be mounted in such a manner as to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven ground. The radiator assembly shall be isolated from the chassis frame rails with rubber isolators.</p> <p>The radiator shall include an integral deaeration/expansion tank. For visual coolant level inspection, the radiator shall have a built-in sight glass. The radiator shall be equipped with a 15 psi pressure relief cap.</p> <p>A drain port shall be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.</p> <p>A heavy-duty fan shall draw in fresh, cool air through the radiator. Shields or baffles shall be provided to prevent recirculation of hot air to the inlet side of the radiator.</p> <p><u>CLUTCH FAN</u> A Kysor air actuated clutch fan shall be provided. Clutch fan shall be automatic when the pump transmission is in "Road" and engaged constantly when in "Pump" position.</p> <p><u>FUEL TANK</u> A 65-gallon fuel tank shall be provided and mounted at rear of chassis. The tank shall be constructed of 12-gauge, hot rolled steel. It shall be equipped with swash partitions and a vent. A .75" drain plug shall be provided in a low point of the tank for drainage.</p> <p>A fill inlet shall be located on the driver's side of the body and be covered with a hinged,</p>		

Specifications	Bidder Complies	
	Yes	No
<p>spring loaded, stainless steel door that is marked "Diesel Fuel Only".</p> <p>A .50" diameter vent shall be provided running from top of tank to just below fuel fill inlet.</p> <p>The tank shall meet all FHWA 393.67 requirements including a fill capacity of 95% of tank volume.</p> <p>All fuel lines shall be provided as recommended by the engine manufacturer.</p> <p><u>AUXILIARY FUEL COOLING SYSTEM</u></p> <p>A supplementary fuel cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the chassis engine fuel. The heat exchanger shall be a cylindrical type and shall be a separate unit. The cooler shall operate any time the pump is discharging water and shall be plumbed to the master drain valve.</p> <p><u>TRANSMISSION</u></p> <p>An Allison Gen IV, model EVS 3000P, electronic torque converting automatic transmission shall be provided.</p> <p>Two (2) PTO openings shall be located on left side and top of converter housing (positions 9 o'clock and 3 o'clock).</p> <p>A transmission temperature gauge with red light and audible alarm shall be installed on the cab dash.</p> <p><u>TRANSMISSION SHIFTER</u></p> <p>A six (6)-speed push button shift module shall be mounted to right of driver on console. Shift position indicator shall be indirectly lit for after dark operation.</p> <p>The transmission ratio shall be: 1st - 3.49 to 1.00, 2nd - 1.86 to 1.00, 3rd - 1.41 to 1.00, 4th - 1.00 to 1.00, 5th - 0.75 to 1.00, 6th - 0.65 to 1.00, R - 5.03 to 1.00.</p> <p><u>TRANSMISSION COOLER</u></p> <p>A transmission oil cooler shall be provided in the lower tank of the radiator.</p> <p><u>TRANSMISSION WARRANTY</u></p> <p>The transmission shall have a five (5) year/unlimited mileage warranty covering 100% parts and labor. The warranty is to be provided by Allison Transmission and not the apparatus builder.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>DRIVELINE</u> Drivelines shall be a heavy-duty metal tube and be equipped with Spicer 1710 universal joints.</p> <p>The shafts shall be dynamically balanced before installation.</p> <p>A splined slip joint shall be provided in each driveshaft, slip joint shall be coated with Glidecoat or equivalent.</p> <p><u>STEERING</u> A Ross TAS-85 steering gear, with integral heavy-duty power steering, shall be provided. For reduced system temperatures, the power steering shall incorporate a Vickers V20F three (3)-line hydraulic pump with integral pressure and flow control.</p> <p>The steering wheel shall be 18.00" in diameter, and capable of tilting and telescoping to improve fit for a broader range of driver configurations.</p> <p>A letter from the hydraulic pump manufacturer stating they approve of the hydraulic pump selection and its operating temperature and flow shall be furnished with the bidder's proposal.</p> <p><u>TIRES</u> Front tires shall be Goodyear 315/80R22.50 radials, 20 ply G291 tread. The tires shall be mounted on Alcoa 22.50" x 9.00" hub piloted, polished aluminum disc wheels, with a ten (10) stud, 11.25" bolt circle.</p> <p>Rear tires shall be four (4) Goodyear radials 11R22.50, 16 ply "all season" G164 tread. The outside tires shall be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10)-stud 11.25" bolt circle.</p> <p>The inside tires shall be mounted on 22.50" x 8.25" steel disc wheels with a ten (10)-stud 11.25" bolt circle.</p> <p>An isolator shall be provided between the steel and aluminum rims.</p> <p><u>LUG NUT COVERS</u> Chrome plated lug nut covers shall be installed on all lug nuts.</p> <p><u>WHEEL CHOCKS, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, section 5.8.3 requires two or more wheel chocks mounted in readily accessible locations, that together shall hold the apparatus, when loaded to its GVWR or GCWR, on a hard surface with a 20 percent grade with the transmission in neutral and the parking brake released.</p> <p>The wheel chocks are not on the apparatus as manufactured. The fire department shall provide and install these wheel chocks.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>WHEEL CHOCK BRACKETS, PROVIDED BY FIRE DEPARTMENT</u> The wheel chock brackets are not on the apparatus as manufactured. The fire department shall provide and install the wheel chock brackets.</p> <p><u>HUB COVERS (front)</u> Stainless steel hub covers shall be provided on the front axle. An oil level viewing window shall be provided.</p> <p><u>HUB COVERS (rear)</u> Stainless steel baby moon covers shall be provided over the rear axle hubs.</p> <p><u>MUD FLAPS</u> Mud flaps shall be installed behind the front and rear wheels of the apparatus.</p> <p><u>TIRE PRESSURE MANAGEMENT</u> There shall be a VECSAFE LED tire alert pressure management system provided that shall monitor each tire's pressure. A chrome plated brass sensor shall be provided on the valve stem of each tire for a total of six (6) tires.</p> <p>The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 20 and 120 psi. The sensor shall activate an integral battery operated LED when the pressure of that tire drops 8 psi.</p> <p>Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start blinking.</p> <p><u>CAB</u> The cab shall be designed specifically for the fire service and manufactured by the chassis builder.</p> <p>Construction of the cab shall consist of 5052-H32 .125" aluminum welded to extruded aluminum framing.</p> <p>The cab shall be built by the apparatus manufacturer in a facility located on the manufacturer's premises. (no exceptions)</p> <p>The cab shall be approximately 96.00" wide, with an interior width of approximately 87.50".</p> <p>The forward cab section shall have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section shall have a 12.00" raised roof, with an overall cab height of approximately 111.00". The overall height listed shall be calculated based on a truck configuration with the lowest suspension weight ratings, the smallest diameter tires for the suspension, no water weight, no loose equipment weight and no personnel weight. Larger tires, wheels and suspension shall increase the overall height listed.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>Floor to ceiling height inside the crew cab shall be 67.00".</p> <p>The cab shall be a full tilt design, allowing easy maintenance of the engine compartment. The engine shall be easily accessible and capable of being removed with the cab tilted.</p> <p>Provisions for checking the transmission, oil and power steering fluid levels shall be placed so that they are accessible without raising the cab.</p> <p>The engine hood shall be constructed of insulated aluminum.</p> <p>The engine hood shall be insulated for protection from heat and sound. The noise insulation shall keep the DBA level within the limits stated in the current NFPA series 1900 pamphlet.</p> <p>The cab shall have 3-point rubber mounting and shall be tilted by a hydraulic pump connected to two (2) cab lift cylinders. The cab shall then be locked down by a 2-point automatic locking mechanism that actuates after the cab has been lowered.</p> <p>All cab access steps shall be 22.00" wide x 8.00" minimum depth, located inside the door, protecting the step from weather elements.</p> <p>A 20.00" slip resistant handrail shall be provided adjacent to all door openings to assist with entrance into the cab.</p> <p>The cab doors shall be approximately 35.00" wide x 68.00" high.</p> <p>The cab and crew cab doors shall be constructed of extruded aluminum with a nominal material thickness of .125". The exterior door skins shall be constructed from .090" aluminum.</p> <p>All cab and crew cab doors shall contain a conventional roll down window.</p> <p>The crew cab shall be of the totally enclosed design.</p> <p>Crew cab entrance doors shall be located on the side of the cab behind the front wheels.</p> <p>The crew cab doors shall be double pan type and measure approximately 35.00" wide x 80.00" high.</p> <p>The cab and crew cab shall be completely open to allow visual and audio communication with the passengers.</p> <p>Flush mounted, chrome plated paddle type door handles shall be provided on the exterior of the cab and crew cab doors.</p> <p>All interior cab and crew cab door handles shall also have flush paddle handles.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>The cab doors shall be provided with both interior (rotary knob) and exterior (keyed) locks as required by FMVSS 206. The locks shall be capable of activating when the doors are open or closed. The doors shall remain locked if locks are activated when the doors are opened, then closed.</p> <p>The door hinges shall be a stainless steel piano type with a .25" pin.</p> <p>There shall be double automotive type rubber seals around the perimeter of all cab and crew cab doors to ensure a weather tight fit.</p> <p>Door liners shall be constructed of smooth aluminum, painted to match the cab interior.</p> <p>Bright aluminum treadplate shall be overlayed on the outside rear wall of the crew cab except for areas that are not typically visible when the cab is lowered.</p> <p>Full circular inner fender liners, in the wheel wells, shall be provided.</p> <p>A curved, safety glass windshield shall provide over 2,754 square inches of clear viewing area.</p> <p>The cab windshield shall have bright trim inserts in the rubber molding holding the glass in place.</p> <p>All cab glass shall be tinted.</p> <p>Economical windshield replacement glass shall be readily available from local auto glass suppliers.</p> <p>Two (2) sunvisors, 28.00" long, shall be provided. The sunvisors shall be located above the windshield with one (1) mounted on each side of the cab.</p> <p>The two (2) windshield wipers shall be electrically controlled and meet FMVSS requirements.</p> <p>Each wiper shall be individually controlled and have a speed modulation feature allowing the driver to adjust the speed of the wiper. The windshield wipers shall also be furnished with a "return to park" feature, which allows the wiper to return to the stored position when the wiper is not in use.</p> <p>Each wiper shall be equipped with a washer and wiper control.</p> <p>The washer reservoir shall be able to be filled without raising the cab.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>CAB INTEGRITY CERTIFICATION</u></p> <p>The fire apparatus manufacturer shall provide a cab integrity certification with this proposal. The certification shall state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events shall be documented with photographs, Real time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer shall provide a state licensed professional engineer to witness and certify all testing events. Testing shall meet or exceed the requirements below:</p> <ul style="list-style-type: none"> - European Occupant Protection Standard ECE Regulation No.29. - SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. - SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks. - Roof Crush The cab shall be subjected to a roof crush force of 22,500 lbs. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of 10 metric tons. - Side Impact The same cab shall be subjected to dynamic preload where a 13,275 lb moving barrier is slammed into the side of the cab at 5.5 mph, striking with an impact of 13,000 ft-lbs of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab shall see in a rollover incident. - Frontal Impact The same cab shall withstand a frontal impact of 32,600 ft-lbs of force using a moving barrier in accordance with SAE J2420. - Additional Frontal Impact The same cab shall withstand a frontal impact of 65,200 ft-lbs of force using a moving barrier. (Twice the force required by SAE J2420) <p>The same cab shall withstand all tests without any measurable intrusion into the survival space of the occupant area.</p> <p>There shall be no exception to any portion of the cab integrity certification. Nonconformance shall lead to immediate rejection of bid.</p> <p><u>CAB MODIFICATION</u></p> <p>The engine tunnel shall be designed to provide maximum occupant space, and required clearance to the engine and related components. The engine tunnel shall include a modification on the passenger side to accommodate the Turbo and related components.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>CAB FLOOR</u> The cab and crew cab floor areas shall be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.</p> <p>The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a .25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.</p> <p><u>GRILLE</u> A front cab grille shall be supplied. It shall consist of a polished stainless steel grille screen with decorative brite anodized aluminum framework.</p> <p><u>FENDER CROWNS</u> Stainless steel fender crowns shall be installed at the cab wheel openings.</p> <p><u>MOLDING (on sides of cab)</u> Chrome molding shall be provided on both sides of cab.</p> <p><u>CAB LIFT</u> A hydraulic cab lift system shall be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.</p> <p>Hydraulic pump shall have a manual override for backup in the event of electrical failure.</p> <p>Lift controls shall be located on the front area of the body in a convenient location within an enclosed compartment.</p> <p>The cab shall be locked down by a two (2)-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system shall be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms shall return to the normally closed and locked position.</p> <p><u>MIRRORS</u> A Velvac, model 2010, west coast mirror shall be mounted on each side of the front cab door. Mirror dimensions shall be 7.00" wide x 16.00" high, and shall be heated and motorized. The shell shall be bright annealed stainless steel.</p> <p>Both mirrors shall be heated and have a remote control that is convenient to the driver.</p> <p><u>BUMPER</u> A one (1) piece, ten (10) gauge, 304-2B type polished stainless steel bumper, a minimum of 10.00" high, shall be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>The bumper shall be extended 19.00" from front face of cab.</p> <p>Documentation shall be provided, upon request to show that the options selected have been engineered for fit-up and approval for this modular bumper extension. A chart shall be provided to indicate the option locations and shall include, but not be limited to the following options: air horns, mechanical sirens, speakers, hose trays (with hose capacities), winches, lights, discharge, and suction connections.</p> <p><u>HOSE TRAY</u> A hose tray, constructed of aluminum, shall be placed in the center of the bumper extension.</p> <p>The tray shall have a capacity of 150' of 1.50" double jacket cotton-polyester hose.</p> <p>Black rubber grating shall be provided at the bottom of the tray. Drain holes are also provided.</p> <p><u>GRAVEL PAN</u> A gravel pan, constructed of bright aluminum treadplate, shall be furnished between the bumper and cab face.</p> <p>The gravel pan shall be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.</p> <p><u>WINCH RECEIVER</u> A winch receiver shall be provided in the center of the bumper behind the bumper skin. A small cover shall be provided to gain access to the receiver hitch pin from the top of the bumper extension. The winch receiver shall have a 2.00" inside dimension for a portable winch with a maximum weight rating of 9,000 pounds.</p> <p><u>COVER, HOSE TRAY</u> A bright aluminum treadplate cover shall be provided over the one (1) hose tray.</p> <p>The cover shall be attached with a stainless steel hinge and located on the center tray.</p> <p>A lift and turn latch shall secure the cover in the closed position and a pneumatic stay arm shall hold the cover in the open position.</p> <p><u>TOW HOOKS</u> Two (2) chromed steel tow hooks shall be installed under the bumper and attached to the front frame members. The tow hooks shall be designed and positioned to allow up to a 6,000 pound straight horizontal pull in line with the centerline of the vehicle. The tow hooks shall not be used for lifting of the apparatus.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>CAB INTERIOR</u> Headliner shall be installed in both forward and rear cab sections. Headliner material shall be vinyl. A sound barrier shall be part of its composition. Material shall be installed on aluminum sheet and securely fastened to interior cab ceiling.</p> <p>Forward portion of cab headliner shall permit easy access for service of electrical wiring or other maintenance needs.</p> <p><u>CAB INTERIOR UPHOLSTERY</u> The cab interior upholstery shall be dark silver gray.</p> <p><u>INTERIOR PAINT (Cab)</u> The cab interior metal surfaces shall be painted gray, vinyl texture paint.</p> <p><u>GRAB HANDLE</u> A black rubber covered grab handle shall be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handle shall be securely mounted to the post area between the door and windshield.</p> <p>The driver's grab handle shall be 3.00" higher than the officer's grab handle, to allow additional clearance between the steering wheel and grab handle.</p> <p><u>DRIVER SEAT</u> A Seats Inc. #911 "scissor action" air-ride, mid-height with headrest style seat shall be provided in the cab for the driver.</p> <p>The driver's seat shall be furnished with three (3)-point shoulder type seat belt. The seat belt shall be furnished with automatic retractor. Extension shall be provided with the seat belt so the male end can be easily grasped and the female end easily located while sitting in a normal position.</p> <p><u>OFFICER SEAT</u> A Seats Incorporated 911 SCBA seat with high-back shall be provided in the cab for the officer. The SCBA cavity shall be adjustable front to rear in 0.50" increments to accommodate different size SCBA bottles.</p> <p>Moving the SCBA cavity shall be accomplished by unbolting, relocating and rebolting in the desired location.</p> <p>The officer seat shall be furnished with three point shoulder type seat belts. The seat belts shall be furnished with automatic retractors. 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.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>REAR FACING PASSENGER SIDE OUTBOARD SEAT</u></p> <p>One (1) rear facing, Seats Incorporated 911 SCBA seat shall be provided in the passenger side outboard position in crew cab. The SCBA cavity shall be adjustable front to rear in .50" increments to accommodate different size SCBA bottles.</p> <p>Moving the SCBA cavity shall be accomplished by unbolting, relocating and rebolting in the desired location.</p> <p>Seat shall be furnished with three-point shoulder type seat belt. The seat belt shall be furnished with automatic retractors. Extension shall be provided with the seat belt so the male end can be easily grasped and the female end easily located while sitting in a normal position.</p> <p><u>REAR FACING DRIVER SIDE OUTBOARD SEAT</u></p> <p>One (1) rear facing, Seats Incorporated 911 SCBA seat shall be provided in the driver side outboard position in crew cab. The SCBA cavity shall be adjustable front to rear in .50" increments to accommodate different size SCBA bottles.</p> <p>Moving the SCBA cavity shall be accomplished by unbolting, relocating and rebolting in the desired location.</p> <p>Seat shall be furnished with three-point shoulder type seat belt. The seat belt shall be furnished with automatic retractors. Extension shall be provided with the seat belt so the male end can be easily grasped and the female end easily located while sitting in a normal position.</p> <p><u>FORWARD FACING CENTER SEATS</u></p> <p>There shall be two (2) forward facing, Seats Incorporated 911 SCBA seats provided at the center position in the crew cab. The SCBA cavity shall be adjustable front to rear in .50" increments to accommodate different size SCBA bottles.</p> <p>Moving the SCBA cavity shall be accomplished by unbolting, relocating and rebolting in the desired location.</p> <p>The seats shall be furnished with a three three-point, shoulder type seat belt. The seat belts shall be furnished with automatic retractors. 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.</p> <p><u>RADIO COMPARTMENT</u></p> <p>A radio compartment shall be provided under the officer's seat.</p> <p>The inside compartment dimensions shall be 17.63" deep x 15.75" across x 5.25" high.</p> <p>A drop-down door with a chrome plated lift and turn latch shall be provided for access.</p>		

Specifications	Bidder Complies													
	Yes	No												
<p>The compartment shall be constructed of smooth aluminum and painted to match the cab interior.</p> <p><u>SEAT UPHOLSTERY</u> All Seats Inc. 911 seat upholstery shall be gray woven with black Imperial 1200 material.</p> <p><u>AIR BOTTLE HOLDERS</u> All SCBA type seats in the cab shall have a Ziamatic model ULLH SCBA holder bracket. This bracket shall be compliant with the current NFPA 1901 standards and shall include a backplate, two (2) seats, a footplate and the model LLS ("Load & Lock") strap to hold the bottle in the bracket. The bracket seats shall be a "one size fits all" style seat and shall accommodate SCBA cylinders from the high pressure 30-minute to the high pressure 60-minute. Seats shall be adjustable up and down by unbolting, relocating, and rebolting in the desired position.</p> <p><u>SEAT BELTS</u> All seating positions in the cab and crew cab shall have red seat belts.</p> <p><u>SEAT BELT MONITORING SYSTEM</u> A seat belt monitoring system (SBMS) shall be provided. The SBMS shall be capable of monitoring up to ten (10) sensors indicating the status of each seating position in the cab with green and red LED indicators as follows:</p> <table style="margin-left: 40px; border: none;"> <tr> <td>Seat Occupied</td> <td>Buckled</td> <td>Green</td> </tr> <tr> <td>Seat Occupied</td> <td>Unbuckled</td> <td>Red</td> </tr> <tr> <td>No Occupant</td> <td>Buckled</td> <td>Red</td> </tr> <tr> <td>No Occupant</td> <td>Unbuckled</td> <td>Not Illuminated</td> </tr> </table> <p>The SBMS shall include an audible alarm that shall be activated when a red illumination condition exists and the parking brake is released, or a red illumination condition exists and the transmission is not in park.</p> <p><u>HELMET STORAGE, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, section 14.1.8.4.1 requires a location for helmet storage be provided.</p> <p>There is no helmet storage on the apparatus as manufactured. The fire department shall provide a location for storage of helmets.</p> <p><u>CAB WARRANTY</u> The bidder shall furnish a ten (10) year cab warranty. The warranty shall cover defects in design or workmanship in the cab tubular support and mounting supports and other cab structural components identified in the specifications. A copy of the warranty shall be submitted with the bid.</p>	Seat Occupied	Buckled	Green	Seat Occupied	Unbuckled	Red	No Occupant	Buckled	Red	No Occupant	Unbuckled	Not Illuminated		
Seat Occupied	Buckled	Green												
Seat Occupied	Unbuckled	Red												
No Occupant	Buckled	Red												
No Occupant	Unbuckled	Not Illuminated												

Specifications	Bidder Complies	
	Yes	No
<p><u>ENGINE COMPARTMENT LIGHT</u> An engine compartment light shall be installed under the engine hood, of which the switch is an integral part. Light shall have a .125" diameter weep hole in its lens to prevent moisture retention.</p> <p><u>CAB INTERIOR LIGHTING</u> Auxiliary lights shall be provided in the cab and consisting of:</p> <ul style="list-style-type: none"> - One (1) Clear Dome Light: Located in the center, controlled by automatic door switches. - Two (2) Adjustable Map Lights: With switches mounted on the cab ceiling. - An LED Courtesy Light at Each Door Opening: Controlled by automatic door switches. <p><u>CREW CAB INTERIOR LIGHTING</u> Auxiliary lights shall be provided in the crew cab and consist of:</p> <ul style="list-style-type: none"> - Two (2) Weldon, Model 8081, Red/Clear dome lights located one (1) each side, controlled by the following: <ul style="list-style-type: none"> Clear forward light controlled by the door switch and the lens switch. Red rearward light controlled by the lens switch. - A courtesy light at each door opening, controlled by automatic door switches <p><u>CAB HEATER/DEFROSTER</u> Two (2)-29,000 BTU fresh air heater/defroster units shall be provided inside the cab. Three (3)-speed blower and temperature control shall be provided with the heating units. Blower control shall allow for independent control of defrost and heat for driver and passenger.</p> <p><u>AIR CONDITIONING</u> A high performance, customized air conditioning system shall be furnished inside the cab and crew cab. A 19.1 cubic inch compressor shall be installed on the engine.</p> <p>The air conditioning system shall be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit within 30 minutes at 50% relative humidity. The cooling performance test shall be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.</p> <p>A roof mounted condenser with a BTU rating sufficient to meet and exceed the performance specification shall be installed on the cab roof. Mounting the condensor below the cab or body would reduce the performance of the system and shall not be acceptable.</p> <p>Two (2) evaporator units shall be installed, one (1) in the cab and one (1) in the crew cab. The evaporator units shall have an adequate BTU rating to meet the performance</p>		

Specifications	Bidder Complies	
	Yes	No
<p>specifications. Adjustable air outlets shall be strategically located on the evaporator cover per the following:</p> <ul style="list-style-type: none"> Two (2) shall be directed towards the drivers location Two (2) shall be directed towards the officers location Four (4) shall be directed towards the crew cab area <p>The air conditioner refrigerant shall be R-134A and shall be installed by a certified technician.</p> <p>The air conditioner shall be controlled by a single electronic control panel. For ease of operation, the control panel shall include variable adjustment for temperature and fan control and be conveniently located on the dash in clear view of the driver. The control panel shall include robust knobs for both fan speed and temperature adjustment.</p> <p><u>INTERIOR CAB INSULATION</u></p> <p>The cab and crew cab walls shall be insulated with 1.50" insulation and the ceiling shall have 1.00" insulation to reduce heat transfer into the cab.</p> <p>The insulation shall be covered with a vinyl liner or a metal panel painted to match the interior.</p> <p><u>CAB INSTRUMENTATION</u></p> <p>The cab instrument panel shall include gauges, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches shall be identified by a label adjacent to each item. Actuation of the headlight switch shall illuminate the labels in low light conditions. Telltale indicator lamps shall not be illuminated unless necessary. The cab instruments and controls shall be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.</p> <p><u>GAUGES</u></p> <p>The gauge panel shall include the following nine (9) black faced gauges with black bezels to monitor vehicle performance:</p> <ul style="list-style-type: none"> Voltmeter gauge (volts): <ul style="list-style-type: none"> Low volts (11.8 VDC) <ul style="list-style-type: none"> Amber telltale light on indicator light display with steady tone alarm High volts (15.5 VDC) <ul style="list-style-type: none"> Amber telltale light on indicator light display with steady tone alarm Engine Tachometer (RPM) Speedometer MPH Fuel level gauge (Empty - Full in fractions): <ul style="list-style-type: none"> Low fuel (1/8 full) <ul style="list-style-type: none"> Amber telltale light on indicator light display with steady tone alarm 		

Specifications	Bidder Complies	
	Yes	No
<p>Engine Oil pressure Gauge (PSI) Low oil pressure to activate engine warning lights and alarms Red telltale light on indicator light display with steady tone alarm</p> <p>Front Air Pressure Gauges (PSI) Low air pressure to activate warning lights and alarm Red telltale light on indicator light display with steady tone alarm</p> <p>Rear Air Pressure Gauges (PSI) Low air pressure to activate warning lights and alarm Red telltale light on indicator light display with steady tone alarm</p> <p>Transmission Oil Temperature Gauge (Fahrenheit): High transmission oil temperature activates warning lights and alarm Amber telltale light on indicator light display with steady tone alarm</p> <p>Engine Coolant Temperature Gauge (Fahrenheit): High engine temperature activates an engine warning light and alarms Red telltale light on indicator light display with steady tone alarm</p> <p><u>INDICATOR LAMPS</u></p> <p>To promote safety, the following telltale indicator lamps shall be located on the instrument panel in clear view of the driver. The indicator lamps shall be "dead-front" design that is only visible when active. The colored indicator lights shall have descriptive text or symbols.</p> <p>The following amber telltale lamps shall be present:</p> <ul style="list-style-type: none"> Low coolant Trac cntl (traction control) (where applicable) Check engine Check trans (check transmission) Air rest (air restriction) Driver door open Passenger door open Tower (tower raised) (where applicable) DPF (engine diesel particulate filter regeneration) HET (engine high exhaust temperature) (where applicable) ABS (antilock brake system) MIL (engine emissions system malfunction indicator lamp) (where applicable) Regen inhibit (engine emissions regeneration inhibit) (where applicable) Trans temp (transmission temperature) Side roll fault (where applicable) Front air bag fault (where applicable) Aux brake overheat (auxiliary brake overheat) (where applicable) <p>The following red telltale lamps shall be present:</p> <ul style="list-style-type: none"> Ladder rack down Parking brake Stop engine 		

Specifications	Bidder Complies	
	Yes	No
<p>The following green telltale lamps shall be present:</p> <ul style="list-style-type: none"> Left turn Right turn Battery on Ignition Aux brake (auxiliary brake engaged) (where applicable) <p>The following blue telltale lamps shall be present:</p> <ul style="list-style-type: none"> High beam <p><u>ALARMS</u></p> <p>Audible steady tone warning alarm: A steady audible tone alarm shall be provided whenever a warning message is present.</p> <p><u>INDICATOR LAMP AND ALARM PROVE-OUT</u></p> <p>A system shall be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms shall perform prove-out when the ignition switch is held in the up position for 3-5 seconds to ensure proper performance.</p> <p><u>CONTROL SWITCHES</u></p> <p>For ease of use, the following controls shall be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches shall have backlit labels for low light applications.</p> <p>Headlight/Parking light switch: A three (3) position maintained rocker switch shall be provided. The first switch position shall deactivate all parking and headlights. The second switch position shall activate the parking lights. The third switch shall activate the headlights.</p> <p>Panel backlighting intensity control switch: A variable voltage control switch shall be provided. The switch turned clockwise increases the panel backlighting intensity to a maximum level and the switch turned counter clockwise decreases the panel backlighting intensity to a minimum level.</p> <p>Ignition switch: A three (3) position maintained/maintained/momentary rocker switch shall be provided. The first switch position shall deactivate vehicle ignition. The second switch position shall activate vehicle ignition. The third momentary position shall perform prove-out on the telltale indicators and alarms when the ignition switch is held in the up position for 3-5 seconds to ensure proper performance. A green indicator lamp is activated with vehicle ignition.</p> <p>Engine start switch: A two (2) position momentary rocker switch shall be provided. The first switch position is the default switch position. The second switch position shall activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>Hazard switch shall be incorporated into the steering column.</p> <p>Heater and defroster controls.</p> <p>Turn signal arm: A self-canceling turn signal with high beam headlight controls.</p> <p>Windshield wiper control shall have high, low, and intermittent modes.</p> <p>Parking brake control: An air actuated push/pull park brake control.</p> <p>Chassis horn control: Activation of the chassis horn control shall be provided through the center of the steering wheel.</p> <p><u>CUSTOM SWITCH PANELS</u></p> <p>The design of cab instrumentation shall allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There shall be positions for up to five (5) switch panels in the engine tunnel console. All switches have backlit labels for low light applications.</p> <p>High idle engagement switch: A maintained rocker switch with integral indicator lamp shall be provided. The switch shall activate and deactivate the high idle function. The OK TO ENGAGE HIGH IDLE indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch shall indicate when the high idle function is engaged.</p> <p>OK to high idle indicator lamp: A green indicator light shall be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.</p> <p>Diesel particulate filter regeneration switch (where applicable) Diesel particulate filter regeneration inhibit switch (where applicable)</p> <p><u>DIAGNOSTIC PANEL</u></p> <p>A diagnostic panel shall be accessible while standing on the ground and shall be located inside the driver's side door left of the steering column. The diagnostic panel shall allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches shall allow engine and ABS systems to provide blink codes should a problem exist. The diagnostic panel shall include the following:</p> <ul style="list-style-type: none"> Engine diagnostic port Transmission diagnostic port ABS diagnostic port Roll sensor diagnostic port Engine diagnostic switch (blink codes flashed on check engine telltale indicator) 		

Specifications	Bidder Complies	
	Yes	No
<p>An ABS diagnostic switch shall be accessible while standing on the ground and located inside the passenger's cab side door. The diagnostic switch shall allow ABS system blink codes should a problem exist. The diagnostic panel shall include the following:</p> <p style="padding-left: 40px;">ABS diagnostic switch (blink codes flashed on ABS telltale indicator).</p> <p>- High Air Restriction Warning Indicator Light (electronic).</p> <p><u>WIPER CONTROL</u></p> <p>Wiper control shall consist of a two (2)-speed individual windshield wiper control with windshield washer controls.</p> <p><u>WINDSHIELD WIPER DURABILITY CERTIFICATION</u></p> <p>Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers shall survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 <i>Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles</i>. The bidder shall certify that the wiper system design has been tested and that the wiper system has met these criteria.</p> <p><u>SWIVEL MOUNT</u></p> <p>There shall be one (1) Johnny Ray, Model 203 swivel mount bracket(s) provided for the fire department's radio equipment. The swivel mount bracket(s) shall be located overhead within reach of both the driver and officer.</p> <p><u>ELECTRICAL POWER CONTROL SYSTEM</u></p> <p>A compartment shall be provided in or under the cab to house the vehicles electrical power and signal circuit protection and control components. The power and signal protection and control compartment shall contain circuit protection devices and power control devices. Power and signal protection and control components shall be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray.</p> <p>Serviceable components shall be readily accessible.</p> <p>Circuit protection devices, which conform to SAE standard, shall be utilized to protect each circuit. All circuit protection devices shall be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers shall be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258. PTO power circuits shall be protected by Type III manual reset non-cycling circuit breakers conforming to SAE J553 or J258 which remain open until manually reset. When required, automotive type fuses conforming to SAE J554, J1284, J1888 or J2077 shall be utilized to protect electronic equipment.</p> <p>Power control relays and solenoids shall have a direct current (dc) rating of 125 percent of the maximum current for which the circuit is protected.</p>		

Specifications	Bidder Complies											
	Yes	No										
<p>Visual status indicators shall be supplied to identify control safety interlocks and vehicle status. In addition to visual status indicators, audible alarms designed to provide early warning of problems before they become critical shall be used.</p> <p><u>VOLTAGE MONITOR SYSTEM</u> A voltage monitor system shall be provided to indicate the status of each battery system connected to the vehicles electrical load. The monitor system shall provide visual and audio warning when the system voltage is above or below optimum levels.</p> <p><u>POWER AND GROUND STUD</u> A 12-volt power stud and a grounding stud shall be provided in the electrical component compartment for 2-way radio equipment.</p> <p><u>EMI/RFI PROTECTION</u> The electrical system proposed shall include means to control undesired electromagnetic and radio frequency emissions. State of the art electrical system design and components shall be used to insure radiated and conducted EMI (electromagnetic interference) and RFI (radio frequency interference) emissions are suppressed at their source.</p> <p>The apparatus proposed shall have the ability to operate in the electromagnetic environment typically found in fire ground operations. The contractor shall be able to demonstrate the EMI and RFI testing has been done on similar apparatus and certifies that the vehicle proposed meets SAE J551 requirements.</p> <p>EMI/RFI susceptibility shall be controlled by applying immune circuit designs, shielding, twisted pair wiring and filtering. The electrical system shall be designed for full compatibility with low level control signals and high powered 2-way radio communication systems. Harness and cable routing shall be given careful attention to minimize the potential for conducting and radiated EMI-RFI susceptibility.</p> <p><u>VEHICLE DATA RECORDER</u> A vehicle data recorder (VDR) shall be provided. The VDR shall be capable of reading and storing vehicle information. The VDR shall be capable of operating in a voltage range from 8VDC to 16VDC. The VDR shall not interfere with, suspend, or delay any communications that may exist on the CAN data link during the power up, initialization, runtime, or power down sequence. The VDR shall continue operation upon termination of power or at voltages below 8VDC for a minimum of 10ms.</p> <p>The vehicle data recorder shall be capable of recording the following data via hardwired and/or CAN inputs:</p> <table style="margin-left: 40px; border: none;"> <tr> <td>Vehicle Speed -</td> <td>MPH</td> </tr> <tr> <td>Acceleration -</td> <td>MPH/sec</td> </tr> <tr> <td>Deceleration -</td> <td>MPH/sec</td> </tr> <tr> <td>Engine Speed -</td> <td>RPM</td> </tr> <tr> <td>Engine Throttle Position -</td> <td>% of Full Throttle</td> </tr> </table>	Vehicle Speed -	MPH	Acceleration -	MPH/sec	Deceleration -	MPH/sec	Engine Speed -	RPM	Engine Throttle Position -	% of Full Throttle		
Vehicle Speed -	MPH											
Acceleration -	MPH/sec											
Deceleration -	MPH/sec											
Engine Speed -	RPM											
Engine Throttle Position -	% of Full Throttle											

Specifications	Bidder Complies	
	Yes	No
<p>ABS Event- On/Off</p> <p>Seat Occupied Status - Yes/No by Position (7-12 Seating Capacity)</p> <p>Seat Belt Buckled Status - Yes/No by Position (7-12 Seating Capacity)</p> <p>Master Optical Warning Device Switch - On/Off</p> <p>Time - 24 Hour Time</p> <p>Date - Year/Month/Day</p> <p><u>BATTERY SYSTEM</u></p> <p>Six (6) 12 volt, Exide Model 31S950X3W batteries that include the following features shall be provided:</p> <ul style="list-style-type: none"> - 950 CCA, cold cranking amps - 190 amp reserve capacity - High cycle - Group 31 - Rating of 5700 CCA at 0 degrees Fahrenheit - 1140 minutes of reserve capacity - Threaded stainless steel studs <p>Each battery case shall be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover shall be manifold vented with a central venting location to allow a 45 degree tilt capacity.</p> <p>The inside of each battery shall consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.</p> <p><u>BATTERY SYSTEM</u></p> <p>A single starting system shall be provided.</p> <p>An ignition switch and starter button shall be located on the instrument panel.</p> <p><u>MASTER BATTERY SWITCH</u></p> <p>A master battery switch, to activate the battery system, shall be provided inside the cab within easy reach of the driver.</p> <p>An indicator light shall be provided on the instrument panel to notify the driver of the status of the battery system.</p> <p><u>BATTERY COMPARTMENTS</u></p> <p>Batteries shall be placed on non-corrosive mats and be stored in well-ventilated compartments located under the cab.</p> <p>Heavy-duty battery cables shall be used to provide maximum power to the electrical system. Cables shall be color-coded.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>Battery terminal connections shall be coated with anti-corrosion compound. Battery solenoid terminal connections shall be encapsulated with semi-permanent rubberized compound.</p> <p><u>BATTERY CHARGER</u></p> <p>A Charging Systems International, Dual Pro Charger, dual bank battery charger shall be provided.</p> <p>This charging system shall include the single remote indicator.</p> <p>The battery charger shall be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.</p> <p>Battery charger shall be located in the front left body compartment, mounted as high and out of the way as possible.</p> <p>The battery charger indicator shall be located on the driver's side pump panel.</p> <p><u>ELECTRIC POWER FOR WINCH</u></p> <p>Electric power provisions shall be furnished for the portable winch from the chassis battery system.</p> <p>The receiver plug shall be located next to each of the hitch receivers.</p> <p>A total quantity of four (4) receptacles shall be provided.</p> <p><u>ALTERNATOR</u></p> <p>A Penntex PX-328S alternator shall be provided. It shall have a rated output current of 285 amps as measured by SAE method J56. The alternator shall be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.</p> <p><u>RADIO ANTENNA MOUNT</u></p> <p>Antenna mounting base(s), Model MATM with 25 feet of coax cable and weatherproof cap, shall be provided for a two way radio. The mount(s) shall be located passenger side on the cab roof just to the rear of the front cab seats. The cable shall be routed routed to the center front of cab ceiling, over the windshield post.</p> <p>There shall be one (1) provided.</p> <p><u>CUSTOMER RADIO WIRING</u></p> <p>There shall be one (1) 12 volt combination wiring leads of which each shall include, one (1) battery switched, one (1) ignition and one (1) negative, for use with radio equipment. Each lead shall be 18" long and be provided to the overhead swivel area where the radio will be installed. The leads shall be clearly marked and in a coil. A breaker rated for 30 amps shall be provided for circuit protection of the battery switched lead with a minimum of 10 gauge</p>		

Specifications	Bidder Complies	
	Yes	No
<p>wire. The ignition lead is for sensing purposes only.</p> <p>The wires shall be colored coded as follows: -red for battery switched -yellow for ignition -black for ground</p> <p><u>ELECTRONIC LOAD MANAGEMENT</u> A Kussmaul Load Manager 2 shall be provided on the apparatus. The device is an electronic load management (ELM) system that monitors the vehicles 12-volt electrical system, and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.</p> <p>The ELM shall monitor the vehicle's voltage while at the scene (parking brake applied). It shall sequentially shut down individual electrical loads when the system voltage drops below a preset value. Two (2) separate electrical loads shall be controlled by the load manager. The ELM shall sequentially re-energize electrical loads as the system voltage recovers.</p> <p><u>AMP DRAW REPORT</u> The bidder shall provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.</p> <p>The manufacturer of the apparatus shall provide the following:</p> <ol style="list-style-type: none"> 1) Documentation of the electrical system performance tests. 2) A written load analysis, which shall include the following: <ol style="list-style-type: none"> A) The nameplate rating of the alternator. B) The alternator rating under the conditions specified per: Applicable NFPA 1901 or 1906 (Current Edition). C) The minimum continuous load of each component that is specified per: Applicable NFPA 1901 or 1906 (Current Edition). D) Additional loads that, when added to the minimum continuous load, determine the total connected load. E) Each individual intermittent load. <p>All of the above listed items shall be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>EXTERIOR LIGHTING</u> Exterior lighting shall meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements in effect at time of proposal.</p> <p>Front headlights shall be halogen type, rectangular shaped, quad style mounted in a chrome and polished aluminum housing.</p> <p>Five (5) clearance and marker lights shall be installed across the leading edge of the cab.</p> <p><u>DIRECTIONAL (Front)</u> Front turn signals shall be Whelen Model: 60A00TAR, LED populated amber arrow lights.</p> <p>The turn signals shall be located below the headlights. Each light shall be mounted with an outside polished trim.</p> <p>In addition to the front facing directional, a Weldon, Model: 9186-8560-20, marker/turn indicator shall be provided on each side of the cab.</p> <p><u>LIGHTS, FRONT ZONE LOWER</u> One (1) pair of Whelen model 60*02F*R, flashing "Super" LED lights shall be installed on the cab face above the headlights, in a common bezel with the directional lights.</p> <p>The color of these lights shall be red Super LED/clear lens.</p> <p>These lights shall meet or exceed NFPA front lower zone requirements.</p> <p>Per NFPA, these lights shall be activated by a switch in the cab.</p> <p><u>BACK-UP ALARM</u> An ECCO, Model SA917-PM2, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse shall be provided. The device shall sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum five (5) dBA above surrounding environmental noise levels.</p> <p><u>CD MANUAL, FIRE APPARATUS PARTS</u> A custom parts manual for the complete fire apparatus shall be provided in CD format with the completed unit.</p> <p>The manual shall contain the following:</p> <ul style="list-style-type: none"> - Job number - Part numbers with full descriptions - Table of contents - Parts section sorted in functional groups reflecting a major system, component, or 		

Specifications	Bidder Complies	
	Yes	No
<p>assembly</p> <ul style="list-style-type: none"> - Parts section sorted in Alphabetical order - Instructions on how to locate a part <p>The manual shall be specifically written for the chassis and body model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.</p> <p><u>SERVICE PARTS INTERNET SITE</u></p> <p>The service parts information included in this manual is also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.</p> <p><u>CD MANUAL, CHASSIS SERVICE</u></p> <p>A CD format chassis service manual containing parts and service information on major components shall be provided with the completed unit.</p> <p>The manual shall contain the following sections:</p> <ul style="list-style-type: none"> - Job number - Table of contents - Troubleshooting - Front Axle/Suspension - Brakes - Engine - Tires - Wheels - Cab - Electrical, DC - Air Systems - Plumbing - Appendix <p>The manual shall be specifically written for the chassis model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.</p> <p><u>CD MANUAL, CHASSIS OPERATION</u></p> <p>A CD format chassis operation manual shall be provided.</p> <p><u>ELECTRICAL WIRING DIAGRAMS</u></p> <p>Two (2) electrical wiring diagrams, prepared for the model of chassis and body, shall be provided.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>WATER TANK</u></p> <p>Booster tank shall have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated.</p> <p>Tank joints and seams shall be nitrogen welded inside and out.</p> <p>Tank shall be baffled in accordance with NFPA Bulletin 1901 requirements.</p> <p>Baffles shall have vent openings at both the top and bottom to permit movement of air and water between compartments.</p> <p>Longitudinal partitions shall be constructed of .38" polypropylene plastic and shall extend from the bottom of the tank through the top cover to allow for positive welding.</p> <p>Transverse partitions shall extend from 4.00" off the bottom of the tank to the underside of the top cover.</p> <p>All partitions shall interlock and shall be welded to the tank bottom and sides.</p> <p>Tank top shall be constructed of .50" polypropylene. It shall be recessed .38" and shall be welded to the tank sides and the longitudinal partitions.</p> <p>Tank top shall be sufficiently supported to keep it rigid during fast filling conditions.</p> <p>Construction shall include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels shall be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.</p> <p>A sump that is 8.00" long x 8.00" wide x 6.00" deep shall be provided at the bottom of the water tank.</p> <p>Sump shall include a drain plug and the tank outlet.</p> <p>Tank shall be installed in a fabricated cradle assembly constructed of structural steel.</p> <p>Sufficient crossmembers shall be provided to properly support bottom of tank. Crossmembers shall be constructed of steel bar channel or rectangular tubing.</p> <p>Tank shall "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, shall be placed on all horizontal surfaces that the tank rests on.</p> <p>Stops or other provision shall be provided to prevent an empty tank from bouncing excessively while moving vehicle.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>Mounting system to be approved by the tank manufacturer.</p> <p>Fill tower shall be constructed of .50" polypropylene and shall be a minimum of 8.00" wide x 14.00" long.</p> <p>Fill tower shall be furnished with a .25" thick polypropylene screen and a hinged cover.</p> <p>An overflow pipe, constructed of 4.00" schedule 40 polypropylene, shall be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.</p> <p><u>WATER TANK WARRANTY</u> The tank shall have a lifetime warranty.</p> <p>If the tank manufacturer determines that the tank problem has rendered the truck out-of-service, the tank manufacturer shall dispatch a service technician WITHIN 48 HOURS (2 DAYS) to repair the tank (This time period is for the United States and Canada only).</p> <p><u>HOSE BED</u> The hose body shall be fabricated of .125"-5052 aluminum with a 38,000 psi tensile strength.</p> <p>Hose body width shall be a minimum of 68.00" inside.</p> <p>Upper and rear edges of side panels shall have a double break for rigidity, a split tube finish shall not be acceptable.</p> <p>The upper inside area of the beavertails shall be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.</p> <p>Flooring of the hose bed shall be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats shall be a minimum of .50" x 4.50" with spacing between slats for hose ventilation.</p> <p>Hose bed shall accommodate 1500 feet of 2.50" and 400 feet of 1.50" hose.</p> <p>One (1) adjustable hosebed divider shall be furnished for separating hose.</p> <p>Each divider shall be constructed of a .25" aluminum sheet.</p> <p>Each divider shall be fully adjustable by sliding in tracks, located at the front and rear of the hose bed. It shall be held in place by tightening bolts at each end.</p> <p>Acorn nuts shall be installed on all bolts in the hose bed which have exposed threads.</p> <p>Flat surfaces shall be sanded for uniform appearance, or constructed of brushed aluminum.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>CROSS DIVIDER</u> A cross-divider shall be provided in the hosebed located to the rear of the hydraulic generator. The divider shall be bolted to the side sheets.</p> <p><u>HOSE BED COVER</u> The black hose bed cover shall be furnished with lift-a-dot fasteners across the front and sides. A flap with a chain weight and a spring clip-and-hook hold downs shall be provided at the rear of the cover.</p> <p><u>RUNNING BOARDS</u> Running boards shall be fabricated of .125" bright aluminum treadplate.</p> <p>Each running board shall be supported by a welded 2.00" square tubing and channel assembly, which shall be bolted to the pump compartment substructure.</p> <p>Running boards shall be 12.75" deep and spaced .50" away from the pump panel.</p> <p>A splashguard shall be provided above the running board treadplate.</p> <p><u>TAILBOARD</u> Rear step shall also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.</p> <p>The rear tailboard shall be 16.00" deep.</p> <p>The exterior side shall be flanged down and in.</p> <p>Flanges shall not be notched.</p> <p>Entire rear surface between the beavertails shall be covered with smooth aluminum.</p> <p>Inside surface of each beavertail in the hose bed area shall be covered with stainless steel to protect the paint finish.</p> <p>The remaining inside surface of the beavertails shall be covered with bright aluminum treadplate.</p> <p><u>TOW BARS</u> Two (2) tow bars shall be installed under the tailboard.</p> <p>Tow bars shall be fabricated of 1.00" CRS bar rolled into a 3.00" radius.</p> <p>Tow bar assemblies shall be constructed of .38" structural angle. When force is applied to the bar, it shall be transmitted to the frame rail.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>Tow bar assemblies shall be designed and positioned to allow up to a 30 degree upward angled pull of 17,000 pounds, or a 20,000 pound straight horizontal pull in line with the Centerline of the vehicle.</p> <p>Tow bar design shall have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.</p> <p><u>HITCH RECEIVER</u></p> <p>A hitch receiver shall be installed at the rear and the sides of the apparatus. The side receivers shall be located to the rear of the wheels, under the rear platform.</p> <p>The hitch receivers shall be constructed of heavy steel tubing and reinforced to the truck framework, for the receiving portion. This shall be a Class III/IV trailer hitch. A class IV rating shall be obtained only when a weight distributing hitch is used.</p> <p>Slide-in portion shall be held in place by two (2) safety pins with clips.</p> <p><u>COMPARTMENTATION</u></p> <p>Body and compartments shall be fabricated of .125", 5052-H32 aluminum with a tensile strength range of 31,000 to 38,000 psi.</p> <p>Side compartments shall be an integral assembly with the rear fenders.</p> <p>Circular fender liners shall be provided for prevention of rust pockets and ease of maintenance.</p> <p>Compartment flooring shall be of the sweep out design with the floor higher than the compartment door lip.</p> <p>The compartment door opening shall be framed by flanging the edges in 1.75" and bending out again .75" to form an angle.</p> <p>Drip protection shall be provided above the doors by means of bright aluminum extrusion or formed bright aluminum treadplate.</p> <p>The top of the compartment shall be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers shall have the corners "TIG" welded.</p> <p>Side compartment covers shall be separate from the compartment tops.</p> <p>Front facing compartment walls shall be covered with bright aluminum treadplate.</p> <p>All screws and bolts which protrude into a compartment shall have acorn nuts on the ends to prevent injury.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>UNDERBODY SUPPORT SYSTEM</u></p> <p>Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load shall be provided.</p> <p>The backbone of the support system shall be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads.</p> <p>The support system shall include .25" formed vertical and horizontal steel angle supports bolted to the chassis frame rails with .625" diameter bolts.</p> <p>A steel frame shall be mounted on the top of these supports to create a "floating substructure" which shall result in a 400 pound equipment support rating per lower side compartment and a 500 pound equipment support rating for the rear tailboard compartment.</p> <p>The "floating substructure" shall be separated from the horizontal members with neoprene elastomer isolators. These isolators shall reduce the natural flex stress of the chassis from being transmitted to the body.</p> <p>The isolators shall have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.</p> <p>The neoprene isolators shall be installed in a modified "V" three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.</p> <p>A design with body compartments hanging on the chassis in an unsupported fashion shall not be acceptable.</p> <p><u>AGGRESSIVE WALKING SURFACE</u></p> <p>All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards.</p> <p><u>LOUVERS</u></p> <p>Louvers shall be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they shall be formed into the metal and not added to the compartment as a separate plate.</p> <p><u>TESTING OF BODY DESIGN</u></p> <p>Body structural analysis shall be fully tested. Proven engineering and test techniques such as finite element analysis, stress coating and strain gauging have been performed with special attention given to fatigue, life and structural integrity of the body and substructure.</p> <p>The body shall be tested while loaded to its greatest in-service weight.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>The criteria used during the testing procedure shall include:</p> <ul style="list-style-type: none"> - Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb. - Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions. - Driving the vehicle on at 35 mph on a "washboard" road. - Driving the vehicle at 55 mph on a smooth road. - Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement. <p>Evidence of actual testing techniques shall be made available upon request.</p> <p><u>BODY WARRANTY</u></p> <p>A copy of the fire apparatus manufacturer's warranty shall be included with the bid. The warranty shall state that the body shall be free of structural failures caused by defective design or workmanship for a warranty period of ten (10) years from the date the new vehicle is first delivered or 100,000 miles, whichever occurs first and that defective parts, under the warranty, shall be repaired or replaced without charge to the original purchaser.</p> <p><u>COMPARTMENTATION, DRIVER'S SIDE</u></p> <p>A full height, roll-up door compartment ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 34.50" wide x 66.13" high x 25.75" deep in the lower 58.25" of the compartment and 15.63" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 28.75" wide x 58.25" high.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p> <p>A roll-up door compartment over the rear wheels shall be provided. The interior dimensions of this compartment shall be 66.50" wide x 31.38" high x 25.75" deep in the lower 25.38" of the compartment and 15.63" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 58.25" wide x 25.12" high.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p>		
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Specifications	Bidder Complies	
	Yes	No
<p>A full height, roll-up door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 47.50" wide x 66.13" high x 25.75" deep in the lower 58.25" of the compartment and 15.63" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed.</p> <p>The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 44.75" wide x 58.25" high.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p> <p><u>COMPARTMENTATION, PASSENGER'S SIDE</u></p> <p>A full height, roll-up door compartment ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 34.50" wide x 66.13" high x 25.75" deep in the lower 58.25" of the compartment and 15.63" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 28.75" wide x 58.25" high. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p> <p>A roll-up door compartment over the rear wheels shall be provided. The interior dimensions of this compartment shall be 66.50" wide x 31.38" high x 25.75" deep in the lower 25.38" of the compartment and 15.63" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 58.25" wide x 25.12" high. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p> <p>A full height, roll-up door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 47.50" wide x 66.13" high x 25.75" deep in the lower 58.25" of the compartment and 15.63" deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 44.75" wide x 58.25" high.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>ROLL-UP DOOR, SIDE COMPARTMENTS</u></p> <p>Seven (7) compartment doors with a finish that is an anodized satin finish shall be installed on the side compartments. These roll-up style doors shall be double faced, aluminum construction, and manufactured by A&A Manufacturing (Gortite).</p> <p>Lath sections shall be an interlocking rib design and shall be individually replaceable without complete disassembly of door.</p> <p>Between each slat at the pivoting joint shall be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals shall allow door to operate in extreme temperatures ranging from plus 180 to minus 40 degrees Fahrenheit. Side, top and bottom seals shall be provided to resist ingress of dirt and weather and be made of Santoprene.</p> <p>All hinges, barrel clips and end pieces shall be nylon 66. All nylon components shall withstand temperatures from plus 300 to minus 40 degrees Fahrenheit. Hardened plastic shall not be acceptable.</p> <p>A polished stainless steel lift bar shall be provided for each roll-up door.. The lift bar shall be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge shall be supplied over lift bar for additional area to aid in closing the door.</p> <p>Door(s) shall be constructed from an aluminum box section. The exterior surface of each slat shall be flat. The interior surfaces shall be concave to provide strength and prevent loose equipment from jamming the door from inside.</p> <p>To conserve space in the compartment(s), the spring roller assembly shall not exceed 3.00" in diameter. A roll-up door that retracts below the compartment ceiling (garage door style) shall not acceptable.</p> <p>The header for the roll-up door assembly shall not exceed 4.00".</p> <p>A heavy-duty magnetic switch shall be used for control of "open compartment door" warning lights.</p> <p>All mechanical components of the door shall be warranted to be free from defects in materials and workmanship for the lifetime of the vehicle. All parts covered under this warranty shall be to the original owner.</p> <p>The roll up doors shall also be warranted against corrosion perforation for a period of ten (10) years.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>COMPARTMENTATION, REAR</u></p> <p>A roll-up door compartment above the rear tailboard shall be provided.</p> <p>Interior dimensions of this compartment shall be 40.00" wide x 40.63" high x 25.88" deep in the lower 32.38" of height and 15.75" deep in the remaining upper portion. Depth of the compartment shall be calculated with the compartment door closed.</p> <p>Rear compartment shall be open into the rear side compartments.</p> <p>Clear door opening of this compartment shall be 33.25" wide x 32.38" high.</p> <p>Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.</p> <p><u>ROLL-UP DOOR, REAR COMPARTMENT</u></p> <p>The roll-up door shall be of an anodized satin finish, double faced, aluminum construction and manufactured by A&A Manufacturing (Gortite).</p> <p>Lath sections shall be an interlocking rib design and shall be individually replaceable without complete disassembly of door.</p> <p>Between each slat at the pivoting joint shall be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals shall allow door to operate in extreme temperatures ranging from plus 180 to minus 40 degrees Fahrenheit. Side, top and bottom seals shall be provided to resist ingress of dirt and weather and be made of Santoprene.</p> <p>All hinges, barrel clips and end pieces shall be nylon 66. All nylon components shall withstand temperatures from plus 300 to minus 40 degrees Fahrenheit. Hardened plastic shall not be acceptable.</p> <p>A polished stainless steel lift bar shall be provided for opening door. Lift bar shall be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge shall be supplied over lift bar for additional area to aid in closing the door.</p> <p>Door(s) shall be constructed from an aluminum box section. The exterior surface of each slat shall be flat. The interior surfaces shall be concave to provide strength and prevent loose equipment from jamming the door from inside.</p> <p>To conserve space in the compartment(s), the spring roller assembly shall not exceed 3.00" in diameter. A roll-up door that retracts below the compartment ceiling (garage door style) shall not acceptable.</p> <p>The header for the roll-up door assembly shall not exceed 4.00".</p>		

Specifications	Bidder Complies	
	Yes	No
<p>A heavy-duty magnetic switch shall be used for control of "open compartment door" warning lights.</p> <p>All mechanical components of the door shall be warranted to be free from defects in materials and workmanship for the lifetime of the vehicle. All parts covered under this warranty shall be to the original owner.</p> <p><u>PULL-OUT ADJUSTABLE HEIGHT TRAY</u> There shall be four (4) slide-out trays with 2.00" sides and a minimum capacity of 250 pounds provided. Capacity rating shall be in the extended position.</p> <p>Slides shall be equipped with ball bearings for ease of operation and years of dependable service.</p> <p>Tray location shall be located as directed by EFC.</p> <p>Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for it shall be located at the front of the tray for ease of use with a gloved hand.</p> <p>Each tray shall be adjustable up and down within the compartment.</p> <p><u>SLIDE OUT TOOLBOARD</u> A slide out aluminum toolboard shall be provided.</p> <p>It shall be a minimum of .188" thick with .20" diameter holes in a pegboard pattern with 1.00" centers between holes.</p> <p>A 1.00" x 1.00" aluminum tube frame shall be welded to the edge of the pegboard.</p> <p>The board shall be mounted on a General Device track on the bottom to allow easy extension and retraction with a maximum tool load of 250 lb.</p> <p>The slide shall be mounted on adjustable tracks side to side within the compartment.</p> <p>The board shall have positive lock in the stowed and extended position.</p> <p>There shall be (2) Two toolboard(s) provided, shall be painted to match compartment interior, and installed as directed by EFC.</p> <p><u>SWING OUT TOOLBOARD</u> A swing out aluminum toolboard shall be provided.</p> <p>It shall be a minimum of .188" thick with .20" diameter holes in a pegboard pattern with 1.00" centers between holes.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>A 1.00" x 1.00" aluminum tube frame shall be welded to the edge of the pegboard.</p> <p>The board shall be mounted on a pivoting device at the front of the compartment on the top and bottom to allow easy movement in and out of the compartment. The maximum tool load shall be 400 pounds.</p> <p>The board shall have positive lock in the stowed and extended position.</p> <p>The board shall be mounted mounted on adjustable tracks from front to back within the compartment.</p> <p>There shall be (2) Two toolboard(s) provided, shall be painted to match compartment interior, and installed in each of the compartments over the rear wheels.</p> <p><u>ADJUSTABLE SHELVES</u></p> <p>There shall be four (4) shelves, with a minimum capacity of 215 pounds provided. The shelf construction shall consist of .125" pan-shaped aluminum with 2.00" sides. Each shelf shall be infinitely adjustable by means of a threaded fastener, which slides in a track.</p> <p>The location shall be as directed by EFC.</p> <p><u>MOUNTING TRACKS</u></p> <p>There shall be seven (7) sets of tracks for mounting shelf(s) in all body compartments. These tracks shall be installed vertically to support the adjustable shelf(s).</p> <p><u>RUB RAIL</u></p> <p>Bottom edge of the side compartments shall be trimmed with a bright aluminum extruded rub rail.</p> <p>Trim shall be 2.12" high with 1.38" flanges turned outward for rigidity.</p> <p>The rub rails shall not be an integral part of the body construction, which allows replacement in the event of damage.</p> <p><u>BODY FENDER CROWNS</u></p> <p>Stainless steel fender crowns shall be provided around the rear wheel openings.</p> <p>A rubber welting shall be provided between the body and the crown to seal the seam and restrict moisture from entering.</p> <p>A dielectric barrier shall be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>HARD SUCTION HOSE</u> Hard suction hose shall not be required.</p> <p><u>HANDRAILS</u> The handrails shall be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface.</p> <p>Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces.</p> <p>Drain holes shall be provided in the bottom of all vertically mounted handrails.</p> <ul style="list-style-type: none"> - Four (4) handrails shall be provided, two above each side pump panel. - One (1) vertical handrail shall be provided on the driver's side body, on the front bulkhead door frame. - One (1) vertical handrail, not less than 29.00" long, shall be located on each rear beavertail. - One (1) full width horizontal handrail shall be provided below the hose bed at the rear of the apparatus. <p><u>AIR BOTTLE STORAGE</u> A total of four (4) air bottle compartments shall be provided, two (2) each side of the body. The air bottle compartment shall be in the form of a PVC round tube to accommodate different size air bottles. A Cast Products door with latch shall be provided to contain the air bottle.</p> <p><u>EXTENSION LADDER</u> There shall be a 26', three (3) section, aluminum, Duo-Safety, Series 925-A extension ladder provided.</p> <p><u>ROOF LADDER</u> There shall be one (1) 12' aluminum, Duo-Safety, Series 775-A roof ladder(s) provided.</p> <p><u>LADDER STORAGE</u> The ladders shall be stored inside the hose bed, on the passenger's side. The ladders shall be banked together and lie flat in a storage trough. Ladder storage assembly shall be fabricated of unpainted aluminum and have stainless steel slides on the track angles to aid in loading and removal of ladders.</p> <p>The front sheet of the hosebed shall have a cut-out to allow the ladders to extend into the cargo area above the pump. The ladders shall extend into the cargo compartment as far as possible to minimize the amount that they shall extend over the rear of the hose bed. A nylon strap shall be provided at the rear to contain the ladders.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>Aluminum grating shall be provided above the ladders.</p> <p><u>FOLDING LADDER, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, section 5.7.1.2 requires a folding ladder. The folding ladder is not on the apparatus as manufactured. There shall be one (1) 10' aluminum, Series 585-A Duo-Safety folding ladder provided by the fire department. The ladder shall be installed in a U-shaped trough inside the ladder storage compartment.</p> <p><u>PIKE POLE 8 FT, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, Section 5.8.3 requires one (1) 8 ft or longer pike pole mounted in a bracket fastened to the apparatus.</p> <p>The pike pole is not on the apparatus as manufactured. The fire department shall provide and mount the pike pole.</p> <p><u>PIKE POLE 6 FT, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, Section 5.8.3 requires one (1) 6 ft pike pole or plaster hook mounted in a bracket fastened to the apparatus.</p> <p>The pike pole is not on the apparatus as manufactured. The fire department shall provide and mount the pike pole.</p> <p><u>PIKE POLE STORAGE</u> Aluminum tubing shall be used for the storage of two (2) pike poles and shall be located inside the ladder storage compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate shall be provided.</p> <p><u>REAR FOLDING STEPS</u> Bright finished, non-skid luminescent folding steps shall be provided at the rear. The luminescent coating is rechargeable from any light source and can hold a charge for up to 24 hours. The steps can be used as a hand hold with two openings wide enough for a gloved hand.</p> <p><u>MIDSHIP FIRE PUMP</u> Midship fire pump shall be a Hale QPAK, 1000 gpm single (1) stage midship mounted centrifugal type.</p> <p>Pump shall be the class "A" type.</p> <p>Pump shall deliver the percentage of rated discharges at the pressures indicated below:</p> <ul style="list-style-type: none"> - 100% of rated capacity at 150 psi net pump pressure. - 100% of rated capacity at 165 psi net pump pressure. - 70% of rated capacity at 200 psi net pump pressure. - 50% of rated capacity at 250 psi net pump pressure. 		

Specifications	Bidder Complies	
	Yes	No
<p>Entire pump and both suction and discharge passages shall be hydrostatically tested to a pressure of 500 psi.</p> <p>Pump shall be fully tested at the pump manufacturer's factory to the performance requirements as outlined by the current NFPA 1901 standards and shall be free from objectionable pulsation and vibration.</p> <p>The pump body and related parts shall be of fine grain, alloy cast iron with a minimum tensile strength of 30,000 psi (2041.2 bar). All moving parts in contact with water shall be of high quality bronze or stainless steel. Pumps utilizing castings made of lower tensile strength cast iron shall not be acceptable.</p> <p>Pump body shall be split on a single plane for easy removal of entire impeller assembly, including wear rings and bearings from beneath the pump without disturbing pump piping or the mounting of the pump in the chassis.</p> <p>Pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machined, hand-ground, and individually balanced. The vanes of the impeller intake eyes shall be hand-ground and polished to a sharp edge. They shall be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.</p> <p>Pump shaft shall be electric furnace heat-treated, corrosion resistant stainless. Pump shaft shall be sealed with double oil seal to keep road dirt and water out of drive unit.</p> <p>Pump shaft shall be rigidly supported by three (3) bearings for minimum deflection. The bearings shall be heavy duty, deep groove ball bearings in the gearbox and they shall be splash lubricated.</p> <p><u>MECHANICAL SEAL ON PUMP</u></p> <p>Only one (1) mechanical seal shall be required on the suction (inboard) side of the pump. The mechanical seal shall be two (2.00) inches in diameter and shall be spring loaded, maintenance-free, and self-adjusting.</p> <p>The mechanical seal construction shall be a carbon sealing ring, stainless steel coil spring, Viton rubber boot, and a tungsten carbide seat with a Teflon backup seal.</p> <p><u>PUMP TRANSMISSION</u></p> <p>The drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory. The pump drive unit shall be of sufficient size to withstand up to 16,000 foot/pound of torque from the engine in both road and pump operating conditions. The drive unit shall be designed with ample lubrication reserve to maintain the proper operating temperature.</p> <p>The gearbox drive shafts shall be of heat treated chrome nickel steel and at least 2.75 inches</p>		

Specifications	Bidder Complies	
	Yes	No
<p>in diameter, on both the input and output drive shafts. They shall be designed to withstand the full torque of the engine in both road and pump operating conditions. All gears, both drive and pump, shall be of the highest quality, electric furnace, chrome nickel steel. Bores shall be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust.</p> <p>The pump ratio shall be selected by the apparatus manufacturer to provide the maximum performance with the engine and transmission selected. Three (3) green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift from Road to Pump position. Two (2) lights shall be located in the truck driving compartment and one (1) light on pump operator's panel, adjacent to the throttle control.</p> <p><u>AIR PUMP SHIFT</u></p> <p>Pump shift engagement shall be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab.</p> <p>Two (2) indicator lights shall be provided adjacent to the pump shift inside the cab. One (1) green light shall indicate the pump shift has been completed and be labeled "pump engaged". The second green light shall indicate when the pump has been engaged and the chassis transmission is in pump gear. This indicator light shall be labeled "OK to pump".</p> <p>Another green indicator light shall be installed adjacent to the hand throttle on the pump panel and indicate either the pump is engaged and the road transmission is in pump gear, or the road transmission is in neutral and the pump is not engaged. This light shall be labeled "Warning: Do not open throttle unless light is on".</p> <p>The pump shift control in the cab shall be illuminated to meet NFPA requirements.</p> <p><u>TRANSMISSION LOCK-UP</u></p> <p>The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control, in the cab, is activated.</p> <p><u>AUXILIARY COOLING SYSTEM</u></p> <p>A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water. Heat exchanger shall be cylindrical type and shall be a separate unit. It shall be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger shall be plumbed to the master drain valve.</p> <p><u>INTAKE RELIEF VALVE</u></p> <p>An Elkhart relief valve shall be installed on the suction side of the pump preset at 125 psig.</p> <p>Relief valve shall have a working range of 75 psig to 250 psig.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>Outlet shall terminate below the framerrails with a 2.50" National Standard hose thread adapter and shall have a "do not cap" warning tag.</p> <p>Control shall be located behind an access door at the right (passenger's) side pump panel.</p> <p><u>PRESSURE CONTROLLER</u></p> <p>A Pressure Governor shall be provided. An electric pressure governor shall be provided which is capable of automatically maintaining a desired preset discharge pressure in the water pump. When operating in the pressure control mode, the system shall automatically maintain the discharge pressure set by the operator (within the discharge capabilities of the pump and water supply) regardless of flow, within the discharge capacities of the water pump and water supply.</p> <p>A pressure transducer shall be installed in the water discharge of the pump. The transducer continuously monitors pump pressure sending a signal to the Electronic Control Module (ECM).</p> <p>The governor can be used in two (2) modes of operation, RPM mode and pressure modes.</p> <p>In the RPM mode, the governor can be activated after vehicle parking brake has been set. When in this mode, the governor shall maintain the set engine speed, regardless of engine load (within engine operation capabilities).</p> <p>In the pressure mode, the governor system can only operate after the fire pump has been engaged and the vehicle parking brake has been set. When in the pressure mode, the pressure controller monitors the pump pressure and varies engine speed to maintain a precise pump pressure. The pressure controller shall use a quicker reacting J1939 database for engine control. (excluding Cat engines)</p> <p>A preset feature allows a predetermined pressure or rpm to be set.</p> <p>A pump cavitation protection feature is also provided which shall return the engine to idle should the pump cavitate. Cavitation is sensed by the combination of pump pressure below 30 psi and engine speed above 2000 rpm for more than five (5) seconds.</p> <p>The throttle shall be a vernier style control, with a large control knob for use with a gloved hand. A throttle ready light shall be provided adjacent to the throttle control. A large .75" RPM display shall be provided to be visible at a glance.</p> <p>Check engine, and stop engine indicator lights shall be provided for easy viewing.</p> <p>Large .75" push buttons shall be provided for menu, mode, preset, and silence selections.</p> <p>The water tank level indicator shall be incorporated in the pressure governor.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>A fuel level indicator shall be incorporated in the pressure controller.</p> <p>A pump hour meter shall be incorporated in the pressure controller.</p> <p>The pressure controller shall incorporate monitoring for engine temperature, oil pressure, fuel level alarm, and voltage. Pump monitoring shall include, pump gearcase temperature, error codes, diagnostic data, pump service reminders, and time stamped data logging, to allow for fast accurate trouble shooting. It shall also notify the driver/engineer of any problems with the engine and the apparatus. Complete understandable messages shall be provided in a 20-character display, providing for fewer abbreviations in the messages. An automatic dim feature shall be included for night operations.</p> <p>The pressure controller shall include a USB port for easy software upgrades, which can be downloaded through a USB memory stick, eliminating the need for a laptop for software installations.</p> <p>A complete interactive manual shall be provided with the pressure controller.</p> <p><u>HALE ESP PRIMING PUMP</u> Priming pump shall be a positive displacement vane type, electrically driven, and conforming to standards outlined in NFPA pamphlet #1901.</p> <p>One (1) priming control shall both open the priming valve and start the priming motor.</p> <p>Primer shall be environmentally safe, self lubricating style.</p> <p><u>PUMP WARRANTY</u> A Hale five (5) year limited warranty shall be provided for the pump. The standard five (5) year limited warranty includes parts and labor for the first two (2) years and parts only for years three (3), four (4), and five (5).</p> <p>A copy of the five (5) year limited warranty document shall be furnished with bid.</p> <p><u>PUMP MANUALS</u> Two (2) pump manuals from the pump manufacturer shall be furnished with the apparatus. Manuals shall cover pump operation, maintenance, and parts.</p> <p><u>PLUMBING</u> All inlet and outlet plumbing, 3.00" and smaller, shall be plumbed with either stainless steel pipe or synthetic rubber hose reinforced with high-tensile polyester braid. Small diameter secondary plumbing such as drain lines shall be stainless steel, brass or hose.</p> <p>Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with victaulic or rubber couplings.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>Plumbing manifold bodies shall be ductile cast iron or stainless steel.</p> <p>All lines to drain through either a master drain valve or shall be equipped with individual drain valves. All individual drain lines for discharges shall be extended with a hose to drain below the chassis frame.</p> <p>All water carrying gauge lines shall be of flexible polypropylene tubing.</p> <p><u>PUMP PLUMBING WARRANTY</u> The stainless steel plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system shall be warranted for a period of ten (10) years or 100,000 miles. This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of delivery.</p> <p>A copy of the warranty shall be submitted with the bid.</p> <p><u>MAIN PUMP INLETS</u> A 5.00" pump manifold inlet shall be provided on each side of the vehicle. The suction inlets shall include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.</p> <p>The main pump inlets shall have National Standard Threads with a long handle chrome cap.</p> <p>The cap shall be the VLH, which incorporates a thread design to automatically relieve stored pressure in the line when disconnected.</p> <p><u>SHORT SUCTION TUBE</u> The suction tubes on the midship pump shall have "short" suction tubes to allow for installation of adapters without excessive overhang.</p> <p><u>VALVES</u> All ball valves shall be Akron Brass in-line valves. The Akron valves shall be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.</p> <p>Valves shall have a ten (10) year warranty.</p> <p><u>INLET (Left side)</u> On the left side pump panel shall be one (1) 2.50" auxiliary suction, terminating in 2.50" National Standard Hose Thread. The auxiliary suction shall be provided with a strainer, chrome swivel and plug.</p> <p>The location of the valve for the one (1) inlet shall be recessed behind the pump panel.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>INLET CONTROL</u> Control for the side auxiliary inlet(s) shall be located at the inlet valve.</p> <p><u>INLET BLEEDER VALVE</u> A .75" bleeder valve shall be provided for each side gated inlet. The valves shall be located behind the panel with a swing style handle control extended to the outside of the panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders shall be routed below the chassis frame rails.</p> <p><u>TANK TO PUMP</u> The booster tank shall be connected to the intake side of the pump with heavy duty piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line shall run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing.</p> <p>A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.</p> <p><u>TANK REFILL</u> A 1.50" combination tank refill and pump re-circulation line shall be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.</p> <p><u>DISCHARGE OUTLETS (Left Side)</u> There shall be one (1) discharge outlet with a 2.50" valve on the left side of the apparatus, terminating with a male 2.50" National Standard hose thread adapter.</p> <p><u>DISCHARGE OUTLET, 4.00"</u> There shall be a 4.00" discharge outlet with a 3.50" Akron Slo-Cloz valve with a 3.00" ball, installed on the right side of the apparatus, terminating with male a 4.00" National Standard hose thread adapter. This discharge outlet shall be actuated with a lever control at the pump operator's control panel.</p> <p><u>DISCHARGE OUTLET (Rear)</u> There shall be one (1) discharge outlet piped to the rear of the hose bed, on driver's side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing shall consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.</p> <p><u>DISCHARGE CAPS</u> Chrome plated, rocker lug, caps with chains shall be furnished for all side discharge outlets.</p> <p>The caps shall be the VLH, which incorporates an exclusive thread design to automatically</p>		

Specifications	Bidder Complies	
	Yes	No
<p>relieve stored pressure in the line when disconnected.</p> <p><u>OUTLET BLEEDER VALVE</u> A .75" bleeder valve shall be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application.</p> <p>The valves shall be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles shall be chrome plated and provide a visual indication of valve position.</p> <p>The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders shall be located at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders shall be routed below the chassis frame rails.</p> <p><u>ELBOWS, LEFT SIDE OUTLETS</u> The 2.50" discharge outlets, located on the left side pump panel, shall be furnished with a 2.50"(F) National Standard hose thread x 2.50"(M) National Standard hose thread, chrome plated, 45 degree elbow.</p> <p>The elbow shall be the VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.</p> <p><u>ELBOWS, REAR OUTLETS</u> The 2.50" discharge outlets, located at the rear of the apparatus, shall be furnished with a 2.50"(F) National Standard hose thread x 2.50"(M) National Standard hose thread, chrome plated, 45 degree elbow.</p> <p>The elbow shall be the VLH, which incorporates a thread design to automatically relieve stored pressure in the line when disconnected.</p> <p><u>ELBOW, 4.00" OUTLET</u> The 4.00" outlet shall be furnished with a 4.00"(F) National Standard hose thread x 4.00" Storz elbow adapter with Storz cap.</p> <p><u>DISCHARGE OUTLET CONTROLS</u> The discharge outlets shall incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism shall indicate the position of the valve.</p> <p>If a handwheel control valve is used, the control shall be a minimum of a 3.9" diameter chrome plated handwheel with a dial position indicator built in to the center of the handwheel.</p>		

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	Yes	No
<p><u>CROSSLAY HOSE BEDS</u></p> <p>Two crosslays with 1.50" outlets shall be provided. Each bed to be capable of carrying 200 feet of 1.75" double jacketed hose and shall be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.</p> <p>Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.</p> <p>The crosslay controls shall be at the pump operator's panel.</p> <p>The center crosslay dividers shall be fabricated of .25" aluminum and shall provide adjustment from side to side. The divider shall be unpainted with a DA finish. The remainder of the crosslay bed shall be painted job color.</p> <p>Vertical scuffplates, constructed of stainless steel, shall be provided at the front and rear ends of the bed on each side of vehicle.</p> <p>Crosslay bed flooring shall consist of removable perforated brushed aluminum.</p> <p><u>CROSSLAY/SPEEDLAY HOSE RESTRAINT</u></p> <p>An elastic netting shall be provided across the top and on the ends of two (2) crosslay(s)/speedlay(s) to secure the hose during travel.</p> <p><u>BOOSTER HOSE REEL</u></p> <p>A Hannay electric rewind booster hose reel shall be installed over the pump in a recessed open compartment on the left side of the apparatus.</p> <p>A polished stainless steel roller and guide assembly shall be mounted on the reel side of the apparatus.</p> <p>Discharge control shall be provided at the pump operator's panel. Plumbing to the reel shall consist of 1.50" Aeroquip hose and a 1.50" valve.</p> <p>The exterior finish of the reel shall be painted #269 gray from the reel manufacturer..</p> <p>Reel motor shall be protected from overload with an automatic reset circuit breaker of no less than 50 amps.</p> <p>Electric rewind control shall be two (2) rubber covered buttons, one (1) mounted on each pump panel.</p> <p>Booster hose, 1.00" diameter and 200 feet, with chrome plated Barway, or equal couplings shall be provided.</p> <p>Working pressure of the booster hose shall be a minimum of 800 psi. Capacity of the hose</p>		

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	Yes	No
<p>reel shall be 200 feet of 1.00" booster hose.</p> <p>A Task Force, model B-BGH 10-125 gpm, booster hose nozzle shall be provided.</p> <p><u>HOSE ROLLER ASSEMBLY</u> one (1) additional polished stainless steel roller and guide assembly shall be mounted on the opposite side where the reel is mounted.</p> <p><u>PUMP COMPARTMENT</u> The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. It shall be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.</p> <p>The pump compartment shall be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist.</p> <p>Pump compartment, pump, plumbing and gauge panels shall be removable from the chassis in a single assembly.</p> <p><u>PUMP CONTROL PANELS (Side Control)</u> All pump controls and gauges shall be located at the left (driver's) side of the apparatus and properly marked.</p> <p>The pump panel on the right (passenger's) side is removable with lift and turn type fasteners. The left (driver's) side is fastened with screws.</p> <p>The control panels shall be 45.00" wide.</p> <p>The gauge and control panels shall be two (2) separate panels for ease of maintenance.</p> <p>Polished stainless steel trim collars shall be installed around all inlets and outlets.</p> <p>All push/pull valve controls shall have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.</p> <p>The identification tag for each valve control shall be recessed in the face of the tee handle. All discharge outlets shall have color coded identification tags, with each discharge having its own unique color. Color coding shall include the labeling of the outlet and the drain for each corresponding discharge.</p> <p>All line pressure gauges shall be mounted in individual chrome plated castings with the identification tag recessed in the casting below the gauge. All remaining identification tags</p>		

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	Yes	No
<p>shall be mounted on the pump panel in chrome plated bezels. Mounting of the castings and identification bezels shall be done with a threaded peg cast on the back side of the bezel or screws.</p> <p><u>PUMP PANEL CONFIGURATION</u> The pump panel configuration shall be arranged and installed in an organized manner that shall provide user-friendly operation.</p> <p><u>PUMP AND GAUGE PANEL</u> The pump and gauge panels shall be constructed of black vinyl covered aluminum to allow easy identification of the gauges and controls and to eliminate glare.</p> <p>A polished aluminum trim molding shall be provided on both sides of the pump panel.</p> <p>The passenger's side pump panel shall be removable and fastened with swell type fasteners.</p> <p>Engine monitoring graduated LED indicators shall be incorporated with the pressure controller.</p> <ul style="list-style-type: none"> - Check Transmission Warning Indicator Light - Stop Engine Warning Indicator Light - Check Engine Warning Indicator Light. <p><u>AIR HORN SWITCH</u> An air horn control switch shall be provided at the pump operator's control panel. This switch shall be red and properly labeled and put within easy reach of the operator in the electrical switch panel.</p> <p><u>GAUGES, VACUUM and PRESSURE</u> The pump vacuum and pressure gauges shall be silicone filled and manufactured by Class 1, Inc.</p> <p>The gauges shall be a minimum of 4.00" in diameter and shall have white faces with black lettering, with a pressure range of 30.00"-0-600#.</p> <p>Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.</p> <p>The pump pressure and vacuum gauges shall be installed adjacent to each other at the pump operator's control panel.</p> <p>Test port connections shall be provided at the pump operator's panel. One shall be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They</p>		

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	Yes	No
<p>shall have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They shall be marked with a label.</p> <p>This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.</p> <p><u>PRESSURE GAUGES</u></p> <p>The individual "line" pressure gauges for the discharges shall be interlube filled and manufactured by Class 1.</p> <p>They shall be a minimum of 2.00" in diameter and shall have white faces with black lettering.</p> <p>Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.</p> <p>Gauges shall have a pressure range of 30"-0-400#.</p> <p>The individual pressure gauge shall be installed as close to the outlet control as practical.</p> <p>This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.</p> <p><u>WATER LEVEL GAUGE</u></p> <p>An electric water level gauge shall be incorporated in the pressure controller that registers water level by means of 9 LEDs. They shall be at 1/8 level increments with a tank empty LED. The LEDs shall be a bright type that is readable in sunlight, and have a full 180-degree of clear viewing.</p> <p>To further alert the pump operator, the gauge shall have a warning flash when the tank volume is less than 25%, and shall have "Down Chasing LEDs when the tank is almost empty.</p> <p>The level measurement shall be ascertained by sensing the head pressure of the fluid in the tank or cell.</p> <p><u>LIGHT SHIELD</u></p> <p>Illumination shall be provided for controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus and the equipment provided on it. External illumination shall be a minimum of five (5) foot-candles on the face of the device. Internal illumination shall be a minimum of four (4) footlamberts.</p> <p>Lights shall be installed under a stainless steel shield. A light shall come on above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel. A pump engaged indicator shall come on at the operator's panel when the pump is shifted into gear from inside the cab. The</p>		

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	Yes	No
<p>remaining lights to be actuated from a switch located on the pump panel.</p> <p><u>MICROPHONE & SPEAKER COMPARTMENT</u> A microphone and speaker compartment with a polished stainless steel door shall be furnished adjacent to the pump operator's panel in the front body bulkhead. The compartment size shall be approximately 12.00" high x 9.00" wide x 6.00" deep.</p> <p><u>ELECTRICAL</u> All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. All wiring shall be high temperature crosslink type. Wiring shall be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers shall be provided which conform to SAE Standards. Wiring shall be color, function and number coded. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.</p> <p>Electrical wiring and equipment shall be installed utilizing the following guidelines:</p> <p>(1) All holes made in the roof shall be caulked with silicon, rope caulk is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof.</p> <p>(2) Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body.</p> <p>(3) Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. Also a coil of wire shall be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.</p> <p>(4) Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections shall require this compound in the plug to prevent corrosion and for easy separation (of the plug).</p> <p>(5) All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.</p> <p>(6) All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal. All emergency light switches shall be mounted on a separate panel installed in the cab. A master warning light switch and individual switches shall be provided to allow preselection of emergency lights. The light switches shall be "rocker" type with an internal indicator light to show when switch is energized. All switches shall be properly identified and mounted in a removable panel for ease in servicing.</p>		

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	Yes	No
<p>Identification of the switches shall be done by either printing or etching on the switch panel. The switches and identification shall be illuminated.</p> <p>All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished. Rear identification lights shall be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments.</p> <p>An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.</p> <p>The results of the tests shall be recorded and provided to the purchaser at time of delivery.</p> <p><u>STEP LIGHTS</u></p> <p>Four (4) Ri-Tar, Model M27HW2 Super LED, step lights shall be provided. One (1) step light shall be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard.</p> <p>These step lights shall be actuated with the pump panel light switch.</p> <p>All other steps on the apparatus shall be illuminated per the current edition of NFPA 1901.</p> <p><u>REAR FMVSS LIGHTING</u></p> <p>A pair of Weldon, Model 3884, three (3) lamp modules shall be provided. Each module shall include a stop-tail light, arrow directional light and backup light mounted in a polished aluminum housing.</p> <p>The lights shall be mounted on the face of the rear body compartments.</p> <p>Four (4) red reflectors shall be provided.</p> <p>A Weldon, Model 23882-2600-00 license plate bracket shall be mounted on the driver's side above the warning lights. A Weldon, Model 9186-23882-30, step lamp shall illuminate the license plate.</p> <p>The three (3) identification lights located at the rear shall be installed per the following: As close as practical to the vertical Centerline. Centers spaced not less than six (6) inches or more than twelve (12) inches apart. Red in color. All at the same height.</p> <p>The outside clearance lights located at the rear shall be installed per the following: To indicate the overall width of the vehicle. At least one (1) each side of the vertical Centerline.</p>		

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	Yes	No
<p>All at the same height. As near the top as practical. To be visible from the rear and the side.</p> <p>Per FMVSS 108 and CMVSS 108 requirements.</p> <p><u>"DO NOT MOVE APPARATUS" INDICATOR</u> A flashing red indicator light, located in the driving compartment, shall be illuminated automatically per the current NFPA requirements. The light shall be labeled "Do Not Move Apparatus If Light Is On".</p> <p>The same circuit that activates the Do Not Move Apparatus indicator shall activate a steady tone alarm when the parking brake is released.</p> <p><u>OPEN DOOR INDICATOR LIGHT</u> Two (2) red indicator lights shall be provided and located in clear view of the driver, warning of an open passenger or equipment compartment door.</p> <p>One (1) light shall indicate status of doors on the driver's side of the vehicle and the other light shall indicate the status of the passenger side and rear compartment doors.</p> <p><u>COMPARTMENT LIGHTING</u> There shall be seven (7) compartments with Amdor LED compartment light strips. The strips shall be centered vertically along each side of the door framing. The compartments with these strip lights shall be located in all body compartments.</p> <p>Any remaining compartments shall include 6.00" diameter Truck-Lite, Model: 79384, lights in each enclosed compartment. Each light shall have a number 1076 one filament, two wire bulb.</p> <p>Opening the compartment door shall automatically turn the compartment lighting on.</p> <p><u>PUMP COMPARTMENT LIGHT</u> A compartment light shall be provided inside the pump enclosure.</p> <p><u>PERIMETER SCENE LIGHTS, CAB</u> There shall be a Truck-Lite, model 40003, 4.00" grommet mount weatherproof light provided for each cab door. Lighting shall be designed to provide illumination on areas under the driver, officer, and crew cab riding area exits, which shall be activated automatically when the exit doors are opened and by the same means as the body perimeter lights.</p> <p>The lighting shall be capable of providing illumination at a minimum level of two (2) foot-candles on ground areas within 30.00" of the edge of the apparatus in areas which personnel climb in or out of the apparatus or descend from the apparatus to the ground level.</p>		

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	Yes	No
<p><u>PERIMETER SCENE LIGHTS, BODY</u></p> <p>There shall be a total of four (4) Truck-Lite, model 60, grommet mount weatherproof lights provided on the apparatus. Two (2) lights shall be provided under the rear step area and two (2) lights shall be provided under the pump panel running boards. The lights shall be spaced one (1) each side of apparatus and have a clear lens. The perimeter scene lights shall be activated by a parking brake.</p> <p>The lighting shall be capable of providing illumination at a minimum level of two (2) foot-candles on ground areas within 30.00" of the edge of the apparatus in areas designed for personnel to climb onto the apparatus or descend from the apparatus to the ground level.</p> <p><u>DECK LIGHTS</u></p> <p>Two (2)-6.00" Unity AG deck lights with swivel mount shall be provided at the rear of the hose bed, one (1) each side.</p> <p>One (1) light shall be furnished with a 160,000 candle power halogen spot bulb and the other shall be furnished with a 6,000 candle power halogen flood bulb.</p> <p><u>PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT</u></p> <p>NFPA 1901, 2009 edition, section 5.8.3 requires two portable hand lights mounted in brackets fastened to the apparatus.</p> <p>The hand lights are not on the apparatus as manufactured. The fire department shall provide and mount these hand lights.</p> <p><u>HAND HELD SPOTLIGHT</u></p> <p>There shall be N/Aone (1) spotlight provided, Novatech Lighting Systems, model 2000-101, 100,000 candlepower, 50-watt, hand held and installed adjacent to the officer's seat. The light shall be furnished with coil cord.</p> <p>The light(s) shall be powered from hard wired to the 12 VDC system.</p> <p><u>AIR HORN SYSTEM</u></p> <p>Two (2) Hadley round air horns with 6.00" bell shall be provided and located, in the front bumper, recessed one (1) each side. The horn system shall be piped to the air brake system wet tank utilizing .38" tubing. A pressure protection valve shall be installed in-line to prevent loss of air, in the air brake system.</p> <p><u>AIR HORN CONTROL</u></p> <p>Two (2) lanyard rope pull controls shall be provided, one (1) within reach of the driver and one (1) within reach of the officer.</p> <p><u>ELECTRONIC SIREN</u></p> <p>A Federal, model E-Q2B, electronic siren with noise canceling microphone shall be provided.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>Siren head shall be located in the cab lower instrument panel.</p> <p>The electronic siren shall be actuated by a push button located on the officer's side instrument panel and by the horn button in the steering wheel.</p> <p>The driver shall have the option to control the siren or the chassis horns from the horn button by means of a selector switch located on the instrument panel.</p> <p><u>SPEAKER</u> A Federal, Model BP200-EF, 200 watt speaker shall be provided. A chrome-plated "EF" flat grille shall be installed in front of the speaker.</p> <p>The speaker(s) shall be recessed in the front bumper on the driver's side.</p> <p><u>LIGHTBAR</u> One (1) 56.00" Whelen, Model Justice LED lightbar shall be mounted on the cab roof.</p> <p>This lightbar shall include the following: Six (6) red flashing forward facing LED modules. Two (2) clear flashing forward facing LED modules. Two (2) red flashing front corner LED modules. Two (2) red flashing rear corner LED modules.</p> <p>One (1) switch located in the cab on the switch panel shall control this lightbar.</p> <p>All lenses shall be clear.</p> <p>To meet NFPA requirements, all clear warning lights shall be disabled when the parking brake is set.</p> <p><u>SIDE ZONE LOWER LIGHTING</u> Four (4) Whelen model RS*02ZCR, flashing LIN3 Super LED warning lights shall be located in the following positions: Two (2) lights, one (1) each side on the bumper extension. The color of these lights shall be red. Two (2) lights, located over the rear wheels. The color of these lights shall be red each rear fender.</p> <p>The above four (4) lights shall be required to meet or exceed the lower level optical warning and optical power requirements of NFPA.</p> <p>These lights shall be controlled by a lighted switch on the cab instrument panel.</p> <p>These lights shall be installed in a plastic, chrome-plated flange.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>REAR ZONE LOWER LIGHTING</u> Two (2) Whelen, Model RS*02ZCR, flashing LIN3 Super LED lights shall be located at the rear of the apparatus.</p> <p>The color of the lights shall be red. One (1) switch located in the cab on the switch panel shall control these lights.</p> <p>These lights shall be installed in a plastic, chrome-plated flange</p> <p><u>WARNING LIGHTS (Rear of Hose Bed)</u> Two (2) Whelen model: MCSLED2R, LED warning beacons shall be provided at the rear of the truck, located one (1) each side. These lights shall be activated by a lighted switch on the instrument panel.</p> <p>The color of the lights shall be red LEDs with both domes clear</p> <p>The rear warning lights shall be mounted on top of the compartmentation with all wiring totally enclosed. The rear deck lights shall be mounted on the beavertails high as possible.</p> <p><u>TRAFFIC DIRECTING LIGHT</u> There shall be one (1) Whelen Model TAM83 30.45" long x 1.74" high x 2.17" deep, amber LED traffic directing light installed at the rear of the apparatus.</p> <p>The Whelen model TACTLD1 control head shall be included with this installation. The auxillary warning mode shall be activated with the control head only.</p> <p>This traffic directing light shall be surface mounted over the rear door, at the rear of the apparatus as high as practical.</p> <p>The traffic directing light controller shall be located within the switch panel in the dashboard. The controller shall be within easy reach of the driver.</p> <p><u>ELECTRICAL SYSTEM GENERAL DESIGN for ALTERNATING CURRENT</u> The following guidelines shall apply to the 120/240 VAC system installation:</p> <p><u>General</u> Any fixed line voltage power source producing alternating current (ac) line voltage shall produce electric power at 60 cycles plus or minus 5 cycles.</p> <p>Except where superseded by the requirements of NFPA 1901, all components, equipment and installation procedures shall conform to NFPA 70, National Electrical Code (herein referred to as the NEC).</p> <p>Line voltage electrical system equipment and materials included on the apparatus shall be listed and installed in accordance with the manufacturer's instructions. All products shall</p>		

Specifications	Bidder Complies	
	Yes	No
<p>be used only in the manner for which they have been listed.</p> <p><u>Grounding</u> Grounding shall be in accordance with Section 250-6 "Portable and Vehicle Mounted Generators" of the NEC. Ungrounded systems shall not be used. Only stranded or braided copper conductors shall be used for grounding and bonding.</p> <p>An equipment grounding means shall be provided in accordance with Section 250-91 (Grounding Conductor Material) of the NEC.</p> <p>The grounded current carrying conductor (neutral) shall be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. The neutral conductor shall be colored white or gray in accordance with Section 200-6 (Means of Identifying Grounding Conductors) of the NEC.</p> <p>In addition to the bonding required for the low voltage return current, each body and driving or crew compartment enclosure shall be bonded to the vehicle frame by a copper conductor. This conductor shall have a minimum amperage rating of 115 percent of the nameplate current rating of the power source specification label as defined in Section 310-15 (amp capacities) of the NEC. A single conductor properly sized to meet the low voltage and line voltage requirements shall be permitted to be used.</p> <p>All power source system mechanical and electrical components shall be sized to support the continuous duty nameplate rating of the power source.</p> <p><u>Operation</u> Instructions that provide the operator with the essential power source operating instructions, including the power-up and power-down sequence, shall be permanently attached to the apparatus at any point where such operations can take place.</p> <p>Provisions shall be made for quickly and easily placing the power source into operation. The control shall be marked to indicate when it is correctly positioned for power source operation. Any control device used in the drive train shall be equipped with a means to prevent the unintentional movement of the control device from its set position.</p> <p>A power source specification label shall be permanently attached to the apparatus near the operator's control station. The label shall provide the operator with the information detailed in Figure 19-4.10.</p> <p>Direct drive (PTO) and portable generator installations shall comply with Article 445 (Generators) of the NEC.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>Overcurrent protection</u> The conductors used in the power supply assembly between the output terminals of the power source and the main over current protection device shall not exceed 144 inches. (3658 mm) in length.</p> <p>For fixed power supplies, all conductors in the power supply assembly shall be type THHW, THW, or use stranded conductors enclosed in nonmetallic liquid tight flexible conduit rated for a minimum of 194 degree Fahrenheit (90 degrees Celsius).</p> <p>For portable power supplies, conductors located between the power source and the line side of the main overcurrent protection device shall be type SO or type SEO with suffix WA flexible cord rated for 600-volts at 194 degrees Fahrenheit (90 degrees Celsius).</p> <p><u>Wiring Methods</u> Fixed wiring systems shall be limited to the following:</p> <ul style="list-style-type: none"> - Metallic or nonmetallic liquid tight flexible conduit rated at not less than 194 degrees Fahrenheit (90 degrees Celsius) <li style="padding-left: 40px;">or - Type SO or Type SEO cord with a WA suffix, rated at 600 volts at not less than 194 degrees Fahrenheit (90 degrees Celsius) <p>Electrical cord or conduit shall not be attached to chassis suspension components, water or fuel lines, air or air brake lines, fire pump piping, hydraulic lines, exhaust system components, or low voltage wiring. In addition the wiring shall be run as follows.</p> <ul style="list-style-type: none"> - Separated by a minimum of 12 inches (305 mm), or properly shielded, from exhaust piping - Separated from fuel lines by a minimum of six (6) inches (152 mm) distance. <p>Electrical cord or conduit shall be supported within six (6) inches (152 mm) of any junction box and at a minimum of every 24 inches (610 mm) of continuous run. Supports shall be made of nonmetallic materials or corrosion protected metal. All supports shall be of a design that does not cut or abrade the conduit or cable and shall be mechanically fastened to the vehicle.</p> <p><u>Wiring Identification</u> All line voltage conductors located in the main panel board shall be individually and permanently identified. The identification shall reference the wiring schematic or indicate the final termination point. When prewiring for future power sources or devices, the unterminated ends shall be labeled showing function and wire size.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>Wet Locations</u> All wet location receptacle outlets and inlet devices, including those on hardwired remote power distribution boxes, shall be of the grounding type provided with a wet location cover and installed in accordance with Section 210-7 "Receptacles and Cord Connections" of the NEC.</p> <p>All receptacles located in a wet location shall be not less than 24 inches (610 mm) from the ground. Receptacles on off-road vehicles shall be a minimum of 30 inches (762 mm) from the ground.</p> <p>The face of any wet location receptacle shall be installed in a plane from vertical to not more than 45 degrees off vertical. No receptacle shall be installed in a face up position.</p> <p><u>Dry Locations</u> All receptacles located in a dry location shall be of the grounding type. Receptacles shall be not less than 30 inches (762 mm) above the interior floor height.</p> <p>All receptacles shall be marked with the type of line voltage (120-volts or 240-volts) and the current rating in amps. If the receptacles are direct current, or other than single phase, they shall be so marked.</p> <p><u>Listing</u> All receptacles and electrical inlet devices shall be listed to UL 498, Standard for Safety Attachment Plugs and Receptacles, or other appropriate performance standards. Receptacles used for direct current voltages shall be rated for the appropriate service.</p> <p><u>Electrical System Testing</u> The wiring and associated equipment shall be tested by the apparatus manufacturer or the installer of the line voltage system.</p> <p>The wiring and permanently connected devices and equipment shall be subjected to a dielectric voltage withstand test of 900-volts for one (1) minute. The test shall be conducted between live parts and the neutral conductor, and between live parts and the vehicle frame with any switches in the circuit(s) closed. This test shall be conducted after all body work has been completed.</p> <p>Electrical polarity verification shall be made of all permanently wired equipment and receptacles to determine that connections have been properly made.</p> <p><u>Operational Test per Current NFPA 1901 Standard</u> The apparatus manufacturer shall perform the following operation test and ensure that the power source and any devices that are attached to the line voltage electrical system are properly connected and in working order. The test shall be witnessed and the results certified by Underwriters Laboratories.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>The prime mover shall be started from a cold start condition and the line voltage electrical system loaded to 100 percent of the nameplate rating.</p> <p>The power source shall be operated at 100 percent of its nameplate voltage for a minimum of two (2) hours unless the system meets category certification as defined in the current NFPA 1901 standard.</p> <p>Where the line voltage power is derived from the vehicle's low voltage system, the minimum continuous electrical load as defined in the current NFPA 1901 standard shall be applied to the low voltage electrical system during the operational test.</p> <p><u>GENERATOR</u></p> <p>The apparatus shall be equipped with a complete electrical power system. The generator shall be a Harrison 10.0 kW Hydraulic unit. The wiring and generator installation shall conform to the present National Electrical Codes Standards of the National Fire Protection Association. The installation shall be designed for continuous operation without overheating and undue stress on components.</p> <p><u>Generator Performance</u></p> <ul style="list-style-type: none"> - Continuous Duty Rating: 10,000 watts - Nominal Volts: 120/240 - Amperage: 83 @ 120 volts, 41 @ 240 volts - Phase: Single - Cycles: 60 hertz - Engine Speed at Engagement: Idle - Pump RPM range: 900 to 3,300 <p>The output of the generator shall be controlled by an internal hydraulic system. An electrical instrument gauge panel shall be provided for the operator to monitor and control all electrical operations and output.</p> <p>The generator shall be driven by a transmission power take off unit, through a hydraulic pump and motor.</p> <p>The generator shall include an electrical control inside the cab. The hydraulic engagement supply shall be operational at any time (no interlocks).</p>		

Specifications	Bidder Complies	
	Yes	No
<p>An electric/hydraulic valve shall supply hydraulic fluid to the clutch engagement unit provided on the chassis PTO drive.</p> <p><u>Generator Instruments and Controls</u> To properly monitor the generator performance a digital meter panel shall be furnished and mounted next to the circuit breaker panel. The meter shall indicate the following items:</p> <ul style="list-style-type: none"> - Voltage - Amperage for both lines - Frequency - Generator run hours - Over current indication - Over temperature indication - "Power On" indication - Two (2) fuse holders with two (2) amp fuses (for indicator light protection) <p>The meter and indicators shall be installed near eye level in the compartment. Instruments shall be flush mounted in an appropriate sized weatherproof electrical enclosure. All instruments used shall be accurate within +/- two (2) percent.</p> <p><u>Generator Wiring:</u> The system shall be installed by highly qualified electrical technicians to assure the required level of safety and protection to the fire apparatus operators. The wiring, electrical fixtures and components shall be to the highest industry quality standards available on the domestic market. The equipment shall be the type as designed for mobile type installations subject to vibration, moisture and severe continuous usage. The following electrical components shall be the minimum acceptable quality standards for this apparatus:</p> <p><u>Wiring:</u> All electrical wiring shall be fine stranded copper type. The wire shall be sized to the load and circuit breaker rating; ten (10) gauge on 30 amp circuits, 12 gauge on 20 amp circuits and 14 gauge on 15 amp circuits. The cable shall be run in corner areas and extruded aluminum pathways built into the body for easy access.</p> <p><u>Load Center:</u> The main load center shall be a provided with circuit breakers rated to load demand.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>Circuit Breakers:</u> Individual breakers shall be provided for all on-line equipment.</p> <p><u>GENERATOR LOCATION</u> The generator shall be mounted in the hosebed on the driver's side. The flooring in this area shall be either reinforced or constructed, in such a manner, that it shall handle the additional weight of the generator.</p> <p><u>GENERATOR START</u> A switch shall be located on the cab instrument panel to engage the generator.</p> <p><u>CIRCUIT BREAKER PANEL</u> The circuit breaker panel shall be located as directed by EFR.</p> <p><u>120 VOLT LIGHTING</u> There shall be one (1) Fire Research Model FCA851-S75 Focus 750 watt 120 volt, light(s) provided center. The light(s) shall be mounted on a special bracket on the front of the cab roof that allows it to be installed below the visor.</p> <p>The lights selected above shall be controlled by the circuit breaker located in the breaker panel as well as a switch in the following locations: driver side switch panel no additional switch location no additional switch location</p> <p><u>120 VOLT LIGHTING</u> A Kwik-Raze model KR-SB-836-TM Silver Billet, tripod light shall be provided with TM truck mount, mounting brackets.</p> <p>The light shall be top raising with a 48.00" inner telescoping pole.</p> <p>A receptacle shall be located next to each tripod light.</p> <p>A 20 amp, 120 volt, twist-lock plug with protective boot.</p> <p>Light fixture shall be a single 750 watt 120 volt Magnafire 3000 series unit.</p> <p>An on/off switch shall be built into the light head.</p> <p>A total of Two (2) shall be provided at the rear of the apparatus one (1) each side.</p> <p><u>LIGHT TOWER</u> A Will-Burt Night Scan Chief Model NS 2.3-3600 M light tower shall be provided. This light tower shall include four (4) 900 watt flood lights and extends to 7.5'.</p>		

Specifications	Bidder Complies	
	Yes	No
<p>The light tower shall be installed on the custom chassis crew cab roof.</p> <p>The control shall be a removable hand held controller located near the AC system breaker box.</p> <p>A label shall be provided at the operator's location to indicate mast operation instructions, warning information, extended tower height from the ground and bulb replacement data.</p> <p>This tower shall be connected to the Do Not Move Truck Indicator in the cab.</p> <p><u>ELECTRIC CORD REEL</u></p> <p>Furnished with the 120 volt AC electrical system shall be a Hannay, series 1600, cord reel. The reel shall be provided with a 12-volt electric rewind switch, that is guarded to prevent accidental operation and labeled for its intended use. The switch shall be protected with a fuse and installed at a height not to exceed 72 inches above the operators standing position.</p> <p>The exterior finish of the reel(s) shall be painted #269 gray from the reel manufacturer..</p> <p>A Nylatron guide to be provided to aid in the payout and loading of the reel. A ball stop shall be provided to prevent the cord from being wound on the reel.</p> <p>A label shall be provided in a readily visible location adjacent to the reel. The label shall indicate current rating, current type, phase, voltage and total cable length.</p> <p>A total of one (1) cord reel shall be provided located as directed by EFC.</p> <p>The cord reel should be configured with three (3) conductors.</p> <p><u>CORD</u></p> <p>Provided for electric distribution shall be one (1) length installed on the reel of 200 feet of black 10/3 electrical cord. No connector shall be installed on the end of the cord.</p> <p><u>PORTABLE JUNCTION BOX</u></p> <p>There shall be three (3)-120 vac, 20 amp twist lock receptacles and one (1)-120 vac, 20 amp straight blade (household) receptacle provided in a portable junction box. The junction box shall be of weatherproof construction and have flip up lids lined with soft neoprene rubber at each outlet opening.</p> <p>Box shall be fitted with a quarter inch thick, polypropylene faceplate which is brightly backlit with a twenty-five watt lamp, making the junction box easy to locate.</p> <p>No connector.</p> <p>A total of one (1) shall be provided.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>KUSSMAUL AUTO EJECT FOR SHORELINE</u></p> <p>one (1) shoreline receptacle shall be provided to operate the dedicated 120-volt circuits on the truck without the use of the generator.</p> <p>The shoreline receptacle (s) shall be provided with a NEMA 5-20, 120 volt, 20 amp, straight blade Kussmaul auto eject plug with a yellow weatherproof cover. The cover is spring loaded to close, preventing water from entering when the shoreline is not connected.</p> <p>A solenoid wired to the vehicle's starter is energized when the engine is started. This instantaneously drives the plug from the receptacle.</p> <p>The shoreline shall be connected to the battery charger.</p> <p>A mating connector body shall also be supplied with the loose equipment. The shoreline receptacle shall be located on the driver side of pump panel.</p> <p><u>HYDRAULIC REEL WITH CAPACITY FOR 100' OF HOSE</u></p> <p>The reel capacity shall be a minimum of 100 feet of .25" I.D. Dual hydraulic hose. Surfaces where the hose comes in contact with the reel roller shall be constructed of stainless steel, chrome plated steel or plastic.</p> <p>The hose reel shall include the following features:</p> <ul style="list-style-type: none"> - Heavy-duty construction for durability - All stainless steel hardware - Standard (Silver) powder coated finish - Rolled disc edges - Universal frame with four motor locations - Meets NFPA requirements for reel overage of 10% - Tested at a 2:1 safety factor <p>The reel shall be equipped with a 12-volt electric rewind motor operated by a push button rewind switch. The switch shall be guarded to prevent accidental operation and installed at a height not to exceed 72 inches above the operators standing position.</p> <p>A Nylatron guide to be provided to aid in the payout and loading of the reel. A ball stop shall be provided on the end of the hose to prevent the hose end from being wound around the reel.</p> <p>A label shall be provided in a readily visible location adjacent to the reel. The label shall indicate maximum flow pressure and total cable length.</p> <p>A total of two (2) reels shall be installed as directed by EFC.</p> <p>Reel shall be designed for a N/A.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>REEL WARRANTY</u> The hydraulic reel shall come with a five (5) year warranty provided by the reel manufacturer.</p> <p><u>LOOSE EQUIPMENT</u> The following equipment shall be furnished with the completed unit:</p> <ul style="list-style-type: none"> - One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit <p><u>NFPA REQUIRED LOOSE EQUIPMENT, PROVIDED BY FIRE DEPARTMENT</u> The following loose equipment as outlined in NFPA 1901, 2009 edition, section 5.8.2 and 5.8.3 shall be provided by the fire department. All loose equipment shall be installed on the apparatus before placed in emergency service, unless the fire department waives NFPA section 4.21.</p> <ul style="list-style-type: none"> - 800 ft (60 m) of 2½" (65 mm) or larger fire hose. - 400 ft (120 m) of 1½" (38 mm), 1¾" (45 mm), or 2" (52 mm) fire hose. - One (1) handline nozzle, 200 gpm (750 L/min) minimum. - Two (2) handline nozzles, 95 gpm (360 L/min) minimum. - One (1) playpipe with shutoff and 1" (25 mm), 1 1/8" (29 mm), and 1¼" (32 mm) tips. - One (1) SCBA complying with NFPA 1981, <i>Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services</i>, for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer. - One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s). - One (1) first aid kit. - Four (4) combination spanner wrenches mounted in bracket(s) fastened to the apparatus. - Two (2) hydrant wrenches mounted in brackets fastened to the apparatus. - Four (4) ladder belts meeting the requirements of NFPA 1983, <i>Standard on Fire Service Life Safety Rope and System Components</i> (if equipped with an aerial device). - One (1) double female 2½" (65 mm) adapter with National Hose threads, mounted in a bracket fastened to the apparatus. 		

Specifications	Bidder Complies	
	Yes	No
<ul style="list-style-type: none"> - One (1) double male 2½" (65 mm) adapter with National Hose threads, mounted in a bracket fastened to the apparatus. - One (1) rubber mallet, for use on suction hose connections, mounted in a bracket fastened to the apparatus. - Two (2) salvage covers each a minimum size of 12 ft × 14 ft (3.7 m × 4.3 m). - One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, <i>Standard for High Visibility Public Safety Vests</i>, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front. - Five (5) fluorescent orange traffic cones not less than 28" (711 mm) in height, each equipped with a 6" (152 mm) retro-reflective white band no more than 4" (152 mm) from the top of the cone, and an additional 4" (102 mm) retro-reflective white band 2" (51 mm) below the 6" (152 mm) band. - Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. - One automatic external defibrillator (AED). - If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, shall be carried mounted in brackets fastened to the apparatus. - If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side shall be carried. Any intake connection larger than 3 in. (75 mm) shall include a pressure relief device that meets the requirements of 16.6.6. - If the apparatus does not have a 2½" National Hose (NH) intake, an adapter from 2½" NH female to a pump intake shall be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake. - If the supply hose carried has other than 2½" National Hose (NH) threads, adapters shall be carried to allow feeding the supply hose from a 2½" NH thread male discharge and to allow the hose to connect to a 2½" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake. 		

Specifications	Bidder Complies	
	Yes	No
<p><u>SOFT SUCTION HOSE, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, section 5.7.2 requires a minimum of 20 ft of suction hose or 15 ft of supply hose.</p> <p>Hose is not on the apparatus as manufactured. The fire department shall provide suction or supply hose.</p> <p><u>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, section 5.8.3 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus.</p> <p>The extinguisher is not on the apparatus as manufactured. The fire department shall provide and mount the extinguisher.</p> <p><u>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, section 5.8.3 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department shall provide and mount the extinguisher.</p> <p><u>AXE, FLATHEAD, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, Section 5.8.3 requires one (1) flathead axe mounted in a bracket fastened to the apparatus.</p> <p>The axe is not on the apparatus as manufactured. The fire department shall provide and mount the axe.</p> <p><u>AXE, PICKHEAD, PROVIDED BY FIRE DEPARTMENT</u> NFPA 1901, 2009 edition, Section 5.8.3 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus.</p> <p>The axe is not on the apparatus as manufactured. The fire department shall provide and mount the axe.</p> <p><u>PAINT</u> The exterior custom cab and body painting procedure shall consist of a six (6) step finishing process as follows:</p> <p>1. <u>Manual Surface Preparation</u> - All exposed metal surfaces on the custom cab and body shall be thoroughly cleaned and prepared for painting. Surfaces that shall not be painted include all chrome plated, polished stainless steel, anodized aluminum and bright aluminum treadplate. Each imperfection on the exterior metal surface shall be removed or filled and then sanded smooth for a smooth appearance. All seams shall be sealed before painting.</p>		
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Specifications	Bidder Complies	
	Yes	No
<p>2. <u>Chemical Cleaning and Treatment</u> - The metal surfaces shall be properly cleaned using a high pressure and high temperature acid etching system. Surfaces are chemically cleaned to remove all dirt, oil, grease and metal oxides to ensure the subsequent coatings bond well. An ultra pure water final rinse shall be applied to all metal surfaces, excluding undercarriage components, at the conclusion of the metal treatment process.</p> <p>3. <u>Primer/Surfacer Coats</u> - A two (2) component urethane primer/surfacer shall be hand applied to the chemically treated metal surfaces to provide a strong corrosion protective base coat and to smooth out the surface.</p> <p>4. <u>Hand Sanding</u> - The primer/surfacer coat shall be lightly sanded to an ultra smooth finish.</p> <p>5. <u>Sealer Primer Coat</u> - A two (2) component sealer primer coat shall be applied over the sanded primer.</p> <p>6. <u>Topcoat Paint</u> - Two (2) coats of an automotive grade, two (2) component acrylic urethane paint, shall also be applied.</p> <p>All removable items such as brackets, compartment doors, door hinges, trim, etc. shall be removed and painted separately to insure paint behind all mounted items. Body assemblies that can not be finish painted after assembly shall be finish painted before assembly.</p> <p>The cab and the body shall be painted Candy Apple red (matching existing EVFC apparatus as close as possible.</p> <p>Prior to reassembly and reinstallation of lights, handrails, door hardware and any miscellaneous items an isolation tape, gasket or dielectric material shall be used to prevent damage to the finish painted surfaces (no exceptions). A nylon washer shall be installed under each acorn nut or metal screw that is fastened directly to an exterior painted surface.</p> <p><u>PAINT - ENVIRONMENTAL IMPACT</u></p> <p>The contractor shall meet or exceed his current State regulations concerning paint operations.</p> <p>The contractor shall, upon demand, present evidence that his manufacturing facility meets the above conditions and that it is in compliance with his State EPA rules and regulations.</p> <p><u>PAINT CHASSIS FRAME ASSEMBLY</u></p> <p>The chassis frame assembly shall be painted black before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc. Components that are included with the chassis frame assembly that shall be painted black are frame rails, cross members, axles, suspension, steering gear, fuel tank, body substructure supports, battery boxes, air tanks and mounting brackets, miscellaneous mounting brackets, etc.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>WARRANTY - PAINT AND CORROSION</u> The cab and body exterior paint finish shall be warranted against blistering, peeling, corrosion, lack of adhesion or any other manufacturing or material defect for a period of ten (10) years.</p> <p>The cab and body shall also be warranted against corrosion perforation for a period of ten (10) years.</p> <p>A copy of the manufacturer's warranty shall be included with the bid.</p> <p><u>PAINT, COMPARTMENT INTERIOR</u> Interior of compartmentation shall be painted with a gray spatter type paint.</p> <p><u>REFLECTIVE BAND</u> A 10.00" white reflective band shall be provided across the front of the vehicle and along the sides of the body.</p> <p>The reflective band provided on the cab face shall be at the headlight level.</p> <p><u>CHEVRON STRIPING, REAR</u> There shall be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The entire rear surface, excluding the rear compartment door, shall be covered.</p> <p>The colors shall be red and fluorescent yellow green diamond grade.</p> <p>Each stripe shall be 6.00" in width.</p> <p>This shall meet the requirements of NFPA 1901, 2009 edition, which states that 50% of the rear surface shall be covered with chevron striping.</p> <p><u>CHEVRON STRIPING ON THE FRONT BUMPER</u> There shall be alternating chevron striping located on the front bumper.</p> <p>The colors shall be red and fluorescent yellow green diamond grade.</p> <p>The size of the striping shall be 4.00".</p> <p><u>REFLECTIVE STRIPE, CAB DOORS</u> A 6.00" x 16.00" black reflective stripe shall be provided across the interior of each cab door. The stripe shall be located approximately 1.00" up from the bottom, on the door panel.</p> <p>This stripe shall meet the NFPA 1901 requirement.</p>		

Specifications	Bidder Complies	
	Yes	No
<p><u>GRAPHICS</u> Graphics will match EVFC's 1997 pumper as close as possible.</p> <p><u>GOLD LEAF BODY STRIPE</u> A printed gold leaf effect stripe shall be provided on each side of the body, over the fender.</p> <p><u>GOLD LEAF STRIPE ON THE CAB</u> There shall be one (1) printed gold leaf effect stripe on each side of the cab, low and over the fender. It shall include black outline with an accent stripe.</p> <p><u>LETTERING</u> The lettering shall be totally encapsulated between two (2) layers of clear vinyl.</p> <p><u>LAMINATION WARRANTY</u> The manufacturer shall provide a three (3) year warranty against defects in material and workmanship with the graphics process. A copy of the fire apparatus manufacturer's warranty shall be included with the bid.</p> <p><u>LETTERING</u> Sixty-one (61) to eighty (80) printed gold leaf effect lettering, 3.00" high, outlining and shading shall be provided.</p> <p><u>FACTORY VISIT FINAL INSPECTION</u> A factory visit shall be provided for four (4) persons after the apparatus has been completed and prior to delivery to New Jersey.</p> <p><u>ADDITIONAL EQUIPMENT</u> Two (2) Akron # 356 5"NSTF x 6"NSTM adapters</p>		