CITY OF LOS BANOS
FIRE DEPARTMENT

INVITATION FOR SEALED BIDS

PROPOSAL FOR THE PURCHASE OF ONE
2014/15 MODEL
TYPE 1 CLASS A FIRE APPARATUS
CUSTOM 4 DOOR CAB, 6 CREW MEMBERS

City of Los Banos
Fire Department
333 7th Street
Los Banos, CA 93635
(209) 827-7025

Chet Guintini
Fire Chief

The sealed bids must be received no later than 2:00 PDT
July 29, 2014
By the office of the City Clerk
In the Council Chambers of City Hall,
520 J Street
Los Banos, CA 93635

INVITATION FOR SEALED BIDS

CITY OF LOS BANOS
FIRE DEPARTMENT
333 7TH Street
Los Banos, CA 93635
(209) 827-7025

NOTICE IS HEREBY GIVEN that the LOS BANOS FIRE DEPARTMENT invites and will receive sealed BIDS up to the hour of 2:00 P.M. PDT (Pacific Daylight Time) on Tuesday July 29, 2014 for the purchase of one (1) 2014/15 Type 1 Class A Fire Apparatus Custom 4 Door Cab, (6 Personnel). At said time, said bid proposals will be publicly opened and read aloud in the City of Los Banos Council Chambers by the office of the City Clerk at:

Los Banos City Hall
520 "J" Street
Los Banos, California 93635

Questions regarding the Bid Documents are to be directed to Chet Guintini, Fire Chief, by writing or email at chet.guintini@losbanos.org

BIDS shall be submitted only on forms provided in the Bid Packet. Bids shall be in the hands of the City Clerk of the City of Los Banos, 520 J Street, Los Banos, California, 93635 on or before the hour of 2:00 P.M. PDT on Tuesday July 29, 2014. No late BIDS will be accepted and will be returned unopened. No oral, telegraphic, electronic, facsimile, or telephone bid submittals or modifications will be considered. Bids received after the bid submittal deadline will be rejected and returned to the bidder unopened.

The Bid Package forms can be obtained from the City of Los Banos website at www.losbanos.org.

The City of Los Banos reserves the right to reject any and/or all BIDS received.

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Information for Bidders

BIDS will be received by the City of Los Banos Office of the City Clerk for the Los Banos Fire Department (herein called the "OWNER"), at the City Council Chambers of the City of Los Banos, 520 J Street, Los Banos, CA, 93635, until 2:00 p.m. Pacific Daylight Time (PDT), on Tuesday July 29, 2014, then publicly opened and read aloud.

Each BID must contain one complete original set of bid proposal/forms. The bid forms include Signature Sheet, References List, Certification of Bidder, Certification of Restriction of Lobbying, Service and Parts Data, Addendum and Bid Specification Checklist. All bid documents and attachments, where noted, shall require the bidder's signature. The completed bid documents must be submitted in a sealed envelope and addressed to the OWNER at 520 J Street, Los Banos, CA, 93635. Each sealed envelope containing a BID must be plainly marked on the outside as "**Fire Apparatus Bid; Attention City Clerk**", and the envelope shall also bear on the outside, the name of the BIDDER, and their address. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the City of Los Banos at 520 J Street, Los Banos, CA, 93635, and also clearly state "**Fire Apparatus Bid; Attention City Clerk**"

All BIDS must be made on the required BID PROPOSAL Forms included within the Bid Documents. A complete set of bid Proposal Forms, including signed Addendum, if issued, must be submitted. BID prices must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted unless otherwise indicated. Only one set of original BID PROPOSAL Forms are required to be submitted.

The Bid Form shall be signed by a person or persons legally authorized to bind Bidder to the Contract. The individuals signing each document shall warrant that they are authorized to bind the Bidder.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within 90 calendar days after the actual date and time of the opening thereof. Should there be reasons why the BID cannot be awarded within the specified period; the time may be extended by mutual agreement between the OWNER and the BIDDER.

BID must be accompanied by a Bid Security payable to the OWNER for an amount not less than $5,000.00 or a Bidder's Bond executed by a surety authorized by the Insurance Commissioner to transact business of insurance in the State of California. The Bidder's Bond shall be made out to the City of Los Banos for an amount not less than $5,000.00 and no BID shall be considered unless accompanied by either security.

As soon as the BID amounts have been compared, the OWNER will return the bid security of all except the three lowest responsible BIDDERS. When the BID PROPOSAL is

awarded, the bid security of the two remaining unsuccessful BIDDERS will be returned. The Bid Security of the successful BIDDER will be retained until the Type 1 Class A Fire Apparatus is delivered to the designated OWNER facility and accepted by OWNER.

Each BIDDER is responsible for the review of the Bid Documents. The failure and omission of any BIDDER to do any of the foregoing shall not relieve any BIDDER from any obligation with respect to the BID. Any addendums will be released as necessary at www.LosBanos.org . Addendums shall be signed, dated and submitted with Bidder's package.

All Bids shall remain firm for at least ninety (90) calendar days after the date and time of the bid opening unless otherwise specified.

A conditional or qualified BID will not be accepted.

The City of Los Banos will not be responsible for, nor be bound by, any oral instructions, interpretations, or explanations issued by the City of Los Banos or its representatives. Any request for clarifications or questions of the bid shall be made in writing or email and deliverable to:

City of Los Banos Fire Department
Attn: Chet Guintini
Chet.guitnini@LosBanos.org
333 7th Street
Los Banos, CA 93635

Requests for clarification or questions shall be delivered to the Fire Department by 5:00PM PDT on July 14, 2014. Any City response to a request for clarification, questions and answers will be posted to the City's website at www.losbanos.org not later than 5:00PM PDT, July 21, 2014 and if necessary become a part of the bid as an Addendum.

Proposed timeline of events associated with the awarding of Proposal:

Release of Advertisement for Bids		June 16, 2014
Deadline to submit questions/clarifications	5:00 P.M.	July 14, 2014
Addendums/Questions/Clarifications Posted	5:00 P.M.	July 21, 2014
Bid Opening	2:00 P.M.	July 29, 2014
City Council awards Bid		August 20, 2014
Issuance of a Purchase Order	By	August 22, 2014

Prior to receiving, the new 2014/15 Fire Apparatus will be inspected to insure that it meets the specifications. The new equipment/vehicle must be completely assembled, ready to operate, and serviced by BIDDER before delivery.

Bid Form

TO: City of Los Banos
520 J Street
Los Banos, CA 93635

BID DATE: _____

In compliance with the Invitation for Sealed Bids for

One (1) New 2014/15 Type 1 Class A Fire Apparatus,
Custom 4 Door Cab, 6 Crew Members

the undersigned, as Bidder, hereby OFFERS TO SELL to the City of Los Banos Fire Department, in accordance with the terms and conditions, requirements and specifications set forth in the Bid Documents for the price quoted in this Bid,

One (1) New 2014/15 Type 1 Class A Fire Apparatus.
Custom 4 Door Cab, 6 Crew Members

MANUFACTURER: _____
MODEL: _____
DELIVERY DATE: _____

TOTAL NET PRICE $ _____

Total Net Price includes 8% California Sales Tax, Freight and Delivery Charges but excludes Federal Excise Tax, if any.

The undersigned certifies under penalty of perjury that the above quotation constitutes a bona-fide offer to sell, that he/she is an authorized representative of the firm listed, that the quotation is in no way sham or collusive, and that issuance of a Purchase Order by City constitutes acceptance of Bidder's offer on the terms and conditions stated in the bid documents, and forms a contract. Bidder will not withdraw its Bid for at least ninety (90) calendar days from the date and time of the bid opening.

_____
BIDDER

_____
ADDRESS

_____
TELEPHONE NUMBER

_____
PRINT NAME – AUTHORIZED

_____
AUTHORIZED SIGNATURE

THIS PAGE <u>MUST</u> BE COMPLETED AND RETURNED WITH BID

Are you claiming a Local Business Preference? Yes _____ No _____

If yes, submit written proof of the address of your principle place of business and a copy of your current City Business License.

THIS PAGE <u>MUST</u> BE COMPLETED AND RETURNED WITH BID

General Provisions

1. Qualification of Bidder

The City may make such investigation as it deems necessary to determine the ability of the bidder to provide the services requested herein, and the bidder shall furnish to the City all information and data for this purpose as the City may request. The City reserves the right to reject any bid should the evidence submitted by, or investigation of, the bidder fail to satisfy the City that such bidder is properly qualified to carry out the obligations of the bid and to complete the requirements contemplated therein.

2. Default

In the event the successful bidder who is awarded a purchase order and/or contract resulting from this bid shall be in breach or default, the City may procure the items/services from other sources and may deduct from any monies due, or that may thereafter become due to the successful bidder, the difference between the price named in the purchase order and/or contract and actual cost thereof to the City. Prices paid by the City must be considered the prevailing market price at the time such purchase is made. These rights and remedies shall not be exclusive but in addition to any other rights and remedies provided by contract law. Periods of performance may be extended if the facts as to the cause of delay justify such extension in the opinion of the City of Los Banos.

3. Cancellation of Purchase Order and/or Contract

The City may terminate any purchase order and/or contract derived from this bid as follows:

A. WITHOUT CAUSE at any time by giving thirty (30) calendar days written notice to the successful bidder.

B. WITH CAUSE (Default) at any time by giving ten (10) calendar days written notice to the successful bidder. Cancellation for cause shall be at the discretion of the City and shall be, but is not limited to, failure to supply the items, materials, equipment or services specified within the time allowed or within the terms, conditions or provisions of this bid.

The successful bidder may not cancel any purchase order and/or contract derived from this bid, without prior written consent of the City.

4. Rejection of Bid

THE OWNER RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS OR ANY PART THEREOF, TO WAIVE ANY INFORMALITIES IN THE BID, AND ALSO TO WITHHOLD AWARD FOR A PERIOD OF NINETY (90) CALENDAR DAYS FROM DATE OF BID OPENING.

5. Nondiscrimination

A. During the performance of this bid, bidder and any sub-bidders shall not unlawfully discriminate against any employee or applicant for employment because of race, color, ancestry, religion, sex, national origin, marital status, age, medical condition (cancer related), physical handicap (including AIDS), or sexual orientation. Equal employment extends, but is not limited to recruitment, compensation, benefits, layoff, termination, and all other conditions of employment. Bidder and sub-bidders shall ensure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Bidder and sub-bidders shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and the applicable regulations promulgated thereunder (California Administrative Code, Title 2, Section 7285.0 et seq.) The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900, set forth in Chapter 5 of Division 4 of Title 2 of the California Administrative Code and incorporated into this contract by reference and made a part hereof as if set forth in full.

B. Bidder and any sub-bidders shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

C. Bidder shall include the nondiscrimination and compliance provisions of the clause in all subcontracts to perform work under the contract.

D. Bidder shall grant access by representative of the Department of Fair Employment and Housing and the City upon reasonable notice at any time during normal business hours, but in no case less than twenty-four (24) hours notice, to such of its books, records, accounts, other sources of information and its facilities as said Department or City shall require to ascertain compliance with this clause.

6. Non-discrimination of the Disabled

The City will not aid or perpetuate discrimination against a qualified disabled individual by funding as an agency, organization, or person that discriminates on the basis of handicap in providing aid, benefit, or service to beneficiaries of the program or activity. The City is committed to provide access to all City services, programs, and meetings open to the public for people with disabilities.

In this regard the City and all of its vendors and bidders will take all reasonable steps to ensure that disabled individuals have the maximum opportunity for the same level of aid, benefit, or service as any other individual.

7. Governing Law and Venue

This bid, or any contract that may result from the award of this bid, shall be deemed to be made under, and shall be governed by and construed in accordance with, the laws of the state of California. Any action brought to enforce the terms, or provision of this bid or any contract that may result from the award of this bid, shall have venue in the County of Merced, State of California.

8. Liabilities

The bidder shall hold the City, its officers, agents, servants, and employees, harmless from liability of any nature or kind because of use of any copyrighted, or uncopyrighted composition, secret process, patented or unpatented invention, articles or appliances furnished or used under this order, and agrees to defend, at its own expense, any and all actions brought against the City or bidder because of the unauthorized use of such items.

9. Warranty, Manufacturer

Manufacturer shall fully warrant all materials and equipment furnished under the terms of this bid against poor and inferior quality. While under warranty, manufacturer shall repair or replace inoperable materials or equipment in a timely manner to minimize the disruption of City operations. A copy or description of the manufacturer's warranty shall accompany each bid for the material and equipment proposed, detailing the scope and length of the warranty. Where the successful bidder is also the manufacturer of the materials or equipment provided under this bid, the Manufacturer's Warranty requirement will supersede the successful bidder warranty requirement of this bid.

10. F.O.B Point

All shipments shall be FOB Destination, unless otherwise indicated in the bid specifications. Any charges for boxing, packing, crating, cartage, handling, insurance, unloading, inside delivery, and any other related charges shall be included in the bid price provided on the Bid Form.

11. Delivery and Inspection

Vehicles shall be delivered to the City of Los Banos, Fire Department – Station No. 1 located at 333 7th Street, Los Banos California, on a regular workday between the hours of 8:00 am and 2:00 pm by arrangement with the Fire Chief or his designee by calling (209) 827-7025.

And or as agreed upon by both parties as specified in the specifications, Listed on page 3, Items, Factory Inspection Trips and Delivery Requirements.

Title to vehicles shall not pass to City until the units have been delivered to the designated location and have been inspected and accepted by the Fire Chief or his designee.

The Bidder shall supply at the time of delivery and acceptance all vehicle certification and registration necessary for operation in the State of California. Vehicle weight certificates shall be supplied when the vehicle has been constructed from a cab and chassis configuration. Vehicles shall be registered with California exempt licensing using DMV Form 5050. Vehicle registration shall be as follows: City of Los Banos, 520 J Street, Los Banos, CA 93635.

12. Payment

The City will make payment in full within 30-days of delivery and acceptance of and upon receipt of correct invoice(s). The invoice shall be delivered to the City of Los Banos, Accounts Payable Division, 520 J Street, Los Banos, CA 93635; invoices shall conspicuously display the City's purchase order number. Payment terms of less than 20 calendar days are not acceptable.

And or the City will make full payment upon acceptance of the apparatus at the Manufacturer’s facility by Fire Department representatives. The apparatus will then be driven to Los Banos by Fire Department representatives.

Award of Bid

An evaluation team shall validate and evaluate all bids received. All requirements identified in this bid must be satisfied in order to ensure that a bid will qualify for consideration.

1. <u>Lowest Responsive Bidder</u>

Although competitive pricing is essential in the award of this bid, consideration shall be given, but not limited to:

a. The ability of the Bidder to comply with Terms and Conditions set forth herein.
b. The ability of the Bidder to comply with the Specifications or Scope of Work set forth herein.

2. <u>Lowest Responsible Bidder</u>

a. The quality and performance of the supplies/equipment to be provided by the bidder;

b. The ability, capacity and skill of the bidder to perform the contract or accomplish the transaction within the time specified, without delay;

c. The character, integrity, reputation, judgment, experience and efficiency of the bidder;

d. The quality of bidder's performance on previous purchases by, or contracts with, the City;

e. The ability of the bidder to provide future maintenance, repair parts and services for the supplies/equipment provided;

f. In evaluating competitive bids, the Owner shall determine the lowest responsive and responsible bidder, and any local bidder shall be granted a preference in an amount equal to five (5%) percent of the lowest responsive and responsible bid, if that low bid has been submitted by a non-local bidder. If, after deduction of the five (5%) percent preference from a local bidder's bid, it is equal to or less than the lowest bid, the bid shall be awarded to the local bidder. To qualify as a local bidder, firms or individuals must submit written proof of the address of their principle place of business and a copy of their current City business license with each bid for which a preference is claimed. Proof of address is normally the address to which contract and payments will be sent. Local preference only applies to supplies, materials, and/or equipment. Local preference will not apply to bids conducted with other public agencies nor when prohibited by State and Federal statutes or regulations to be awarded to the lowest responsive and responsible bid, or otherwise exempt from local preferences. A total amount of such a preference granted in a single bid shall not exceed Five Thousand and

No/100ths ($5,000.00) Dollars over a non-local bidder.

3. Award

The City reserves the right to:

a. Award bids received on the basis of individual items/services, or groups of items/services, or on the entire list of items/services;

b. Reject any or all responses, or any part thereof;

c. Waive any informality in the bids;

An evaluation of the bidder's ability, quality, and performance as set forth under "Most Responsive Bidder" and "Lowest Responsible Bidder", of this bid, will be used in addition to total cost as a basis of award for any ensuing contract.

4. Protest

The lack of prompt procedure to resolve disputes regarding the bidding process would impair the Owner's ability to carry out its purpose of contracting his project in a timely manner. Therefore, to he maximum extent authorized by law and nowithstanding any other procedures specified in these Contract Documents, all disputes and/or protests regarding the bidding process shall be subject to the following procedure. In submitting a Bid to the Owner for this project, the Bidder agrees to comply with and to be bound by this procedure.

Any Bid protest must be submitted in writing to the Owner before 5:00 PDT on the fifth (5th) working day following the Bid opening.

1. The initial protest document must contain a complete statement of the basis for the protest, and all supporting documentation. A non-refundable fee of One Thousand Dollars ($1,000.00) made payable to the "City of Los Banos" shall accompany the protest documents and will be used by the Owner to recover costs in evaluating the bid protest. A bid protest submitted without the requisite fee shall not be considered by the owner.

2. The party filing the protest must have actually submitted a Bid for the work. A subcontractor of a party submitting a Bid for the work may not submit a Bid protest.
3. A party may not rely on the Bid protest submitted by another Bidder, but must timely pursue its own protest.

4. The protest must refer to the specific portion of the Contract Documents which forms the basis for the protest.

5. The protest must include the name, address, and telephone number of the

person representing the protesting party.

6. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest which may be adversely affected by the outcome of the protest. Such parties shall include all other Bidder's who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

7. The Owner will give the protested Bidder five (5) working days after the receipt of the protest to submit a written response. The responding Bidder shall transmit the response to the protesting Bidder concurrent with the delivery to the Owner.

8. The procedure and time limits set forth in this paragraph are mandatory and are the Bidder's sole and exclusive remedy in the event of Bid protest. The Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings.

If the Owner determines that a protest is frivolous, the protesting Bidder may be determined to be non-responsive and/or non-responsible and that Bidder may be determined to be ineligible for further contract awards.

5. Change Orders

The Los Banos Fire Department may at any time, without notice to any sureties, by written change order, make any changes in the work specified in the resulting contract, including but not limited to changes:

1. In the terms and conditions of the Contract
2. In the written Specifications

No Order, Statement or Conduct, Written or Oral, Shall Be Treated as a Change Order unless in Writing and Signed By Both Parties.

6. W-9 Form Required

Each bidder shall submit a completed W-9 form with their bid. In the event of contract award, this information is required in order to issue payment to your firm.

7. Debarment and Suspension Certification

Title 49, Code of Federal Regulations, Part 29

The bidder, under penalty of perjury, certifies that, except as noted below, he /she of any other person associated therewith in the capacity of owner, partner, director, officer,

and manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by and Federal agency;
- Has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- Dose not have a proposed debarment pending ; and
- Has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within 3 years.

If there are any exceptions to this certification, insert the exceptions in writing with bid package.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted, indicate to whom it applies, initiating agency, and dates of action.

8. DEBARRED BIDDERS

CONTRACTOR, including any of its officers or holders of a controlling interest, is obligate to inform CITY whether or not it is or has been on any debarred bidders' list maintained by the United States Government. Should CONTRACTOR be included on such a list during the performance of this project, it shall promptly so inform CITY. CONTRACTOR shall not award a contract of any amount to any party included in said debarred bidders list.

9. Delivery Failure

Should the bidder/Contractor fail to deliver the apparatus on or before the date as specified on the bids sheet. The City has the right to assess penalty of $150.00 Dollars per day until the apparatus is deliver and accepted by the Fire Department.

Reasonable time extension may be allowed, for items out of the control of the bidder/Contractor and without fault or negligence of the bidder, including but not restricted to such causes as the act of, stormy or inclement weather in which specified work cannot be done, strikes, boycotts, acts of God, acts of public enemy, fire, flood, epidemics, freight embargo, delays of suppliers which arise from unforeseeable causes beyond the control and without the fault or negligence of the both the bidder and supplier.

ATTACHMENT A

SIGNATURE SHEET

I/We the undersigned hereby certify that I/We am/are a duly authorized official of the company and have the authority to sign on behalf of the company and assures that all statements made in the bid are true. I/We agree to furnish and deliver the specified items/services at the prices stated herein, and have read, understand, and agree to the terms and conditions contained herein and on all of the attachments.

Name of Individual/Company: _____

Business Address: _____

Telephone No.:_____ Fax No.:_____

Signature of Authorized Official: _____

Name/Title of Authorized Official: _____

E-Mail Address: _____

THIS PAGE <u>MUST</u> BE COMPLETED AND RETURNED WITH BID

ATTACHMENT B

REFERENCE LIST

1) NAME: _____

ADDRESS: _____
P.O. Box/Street City State Zip

CONTACT PERSON/TITLE:_____

TELEPHONE NUMBER:_____FAX NUMBER:_____

DOLLAR AMOUNT OF CONTRACT:_____

DATE AND SERVICES PROVIDED: _____

2) NAME:_____

ADDRESS:_____
P.O. Box/Street City State Zip

CONTACT PERSON/TITLE:_____

TELEPHONE NUMBER:_____FAX NUMBER: _____

DOLLAR AMOUNT OF CONTRACT:_____

DATE AND SERVICES PROVIDED: _____

3) NAME:_____

ADDRESS:_____
P.O. Box/Street City State Zip

CONTACT SERVICES PROVIDED: _____

TELEPHONE NUMBER:_____FAX NUMBER: _____

DOLLAR AMOUNT OF CONTRACT:_____

DATE AND SERVICES PROVIDED: _____

THIS PAGE <u>MUST</u> BE COMPLETED AND RETURNED WITH BID

ATTACHMENT C

CERTIFICATION OF BIDDER
REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILTY MATTERS

I, _____ hereby certify that Bidder named in this Bid
(Name of Bidder)
Proposal, to the best of its knowledge and belief, that Bidder and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three (3) year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under a public transaction, violation of Federal or State anti-trust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.
3. Are not presently indicated for or otherwise criminally or civially charged by a government entity (Federal, State, or Local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and,
4. Have not with a three (3) year period preceding this application/proposal had one or more public transactions (Federal, State, or Local) terminated for cause or default.

If the above named Bidder is unable to certify any of the above statements in this certification, the Bidder shall attach an explanation to this certification page.

I, _____ certify and affirm the truthfulness and accuracy
(Name of Bidder)
of the contents of the above statements submitted on or with this certification and understands that the provision of 31 USC Section 3801 et seq. are applicable thereto.

_____
Signature and Title of Authorized Official

The undersigned chief legal counsel for _____ hereby
(Name of Bidder)
certifies that _____has authority under State and Local
(Name of Bidder)
law to comply with the subject assurances and that the certification above have been legally made.

_____ _____
Signature and Title of Authorized Official Date

THIS PAGE MUST BE COMPLETED AND RETURNED WITH BID

ATTACHMENT D

CERTIFICATION OF RESTRICTION ON LOBBYING

I, _____, _____hereby certify on behalf
(Name) (Title)
of _____that:
(Firm)

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

This certification is a material representation of fact upon which reliance is placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

_____
Name

_____
Title

_____
Firm

_____
Date

THIS PAGE <u>MUST</u> BE COMPLETED AND RETURNED WITH BID

ATTACHMENT E

SERVICE AND PARTS DATA

The Bidder shall state below the representatives responsible for assisting Owner as well as the location of the nearest distribution center which shall furnish a complete supply of parts and components for the repair and maintenance of the dump truck to be furnished. The Bidder shall also state below, or by separate attachment, its policy on transportation charges for parts other than those covered by warrenty.

Location of nearest Technical Services Representative to the Owner:

_____
Name of Firm

_____
Address

_____
Telephone

Location of nearest parts Distribution Center to the Owner:

_____
Name of Firm

_____
Address

_____
Telephone

Policy for delivery of parts and components to be purchased for service and maintenance:

_____
Regular Method of Shipment

_____
Cost of Procuring Agency

THIS PAGE <u>MUST</u> BE COMPLETED AND RETURNED WITH BID

ATTACHMENT F

ADDENDUM

BIDDER acknowledges receipt of the following ADDENDA:

No. _____,dated _____, 2014, Signed,_____

No. _____, dated _____, 2014, Signed,_____

No. _____, dated _____, 2014, Signed, _____

RETURN BLANK IF NO ADDENDUMS ISSUED

THIS PAGE <u>MUST</u> BE COMPLETED AND RETURNED WITH BID

LOS BANOS FIRE DEPARTMENT

Specification Type 1 Class A Fire Apparatus

Custom 4 door cab, 6 person crew

General Intent:

It is the Los Banos Fire Department's intent of this specification to describe the minimum requirements and specifications to manufacture and design a Type 1 Class A pumper apparatus, within the current production year.

It is not the intent in the specification to describe a finished or completed apparatus. As a manufacturer, it will be your responsibility to provide a complete set of specifications, drawings and product.

The apparatus shall meet or exceed all aspects of Chapter 5 of the latest edition of National Fire Protection Association Standard #1901

The apparatus manufacturer shall incorporate modern designs, approved Fire Service engineering methods and practices, and consideration for the high volume duty cycles, the constant equipment load factors, and potential for severe service commonly associated with emergency vehicle response and responsibilities. All specifications shall conform to the characteristics inherent to mobile fire apparatus and to the nature and purpose for which its use is intended.

The apparatus shall be designed to allow ready access to various parts for inspection, servicing and adjustments. Welding shall not be employed in the assembly of the apparatus in a manner to prevent the removal of components, mechanical or static, for service or repair.

All components, parts and equipment furnished shall be guaranteed to be new and of current manufacture production. All workmanship shall be of high quality and accomplished in a professional manner so as to insure a functional high quality apparatus with an aesthetic appearance.

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.

Bidder Qualifications:

Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of twenty (20) years. Each bidder shall provide 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. Warranty, repair and service work will be performed in a manufacturer approved facility within 90 miles of the City of Los Banos, California.

Because of the severe service requirements the department will impose on the apparatus, bidders shall provide a list of a minimum of six (6) Fire Departments serving a population of 50,000 to 100,000 residences in which similar to the Los Banos apparatus is utilized. The brand of chassis and build up proposed has been in service for over one year. The list shall be for California Fire Departments only and shall provide contact names and phone numbers.

Each bid shall be accompanied by a set of Contractors Specification consisting of a detailed description of the apparatus being provided under contract. Computer runoff (summary listing) is not acceptable as specifications.

It is not the intention of the City of Los Banos Fire Department to write out any manufacturer of similar or equal equipment. This specification is written around the specific need for the Los Banos Fire Department. Bid award shall be made to the manufacturer whose bid is most compliant to the technical aspects of the specifications at the most competitive price and which best meets the primary mission of the apparatus.

The City of Los Banos reserves the right to reject any and all bids, and the right to not accept the lowest bid.

Each bid shall be accompanied by a Manufacturer Proposal consisting of a detailed description of the apparatus and equipment proposed and furnished and conform under this proposal. Bidders shall submit a detailed proposal and drawings. A letter only, from the manufacturer will not be accepted.

Quality and Workmanship:

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 to the various components and parts that require periodic maintenance ease of operation to include 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 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 or part for service or repair. All steel welding shall follow American Welding Society D1.1-96 recommendations for structural steel welding. All aluminum welding shall be completed to American Welding Society and ANSI D1.2-96 requirements for structural welding of aluminum.

Flux core arc welding shall use alloy rods, type 7000, American Welding Society Standards A5.20-E70T1. All welding shall be completed by certified welders. And all welds shall be inspected by a certified American Welding Society Inspector.

Certifications: National Fire Protection Association Pamphlet 1901

All items of these specifications shall conform to the intent of criteria as specified by the National Fire Protection Association Pamphlet 1901 latest edition, entitled (suggested specifications of motor vehicles).

The completed apparatus chassis and body shall be certified by the apparatus manufacturer to conform to all applicable requirements of all Divisions and Chapters of the following publications; Federal Motor Vehicle Safety Standards, California Motor Vehicle Code, California Code of Regulations Title 8, Title 13, 15, and 21.The referenced publications shall be those in effect at the time of contract inception.

The chassis engine shall be approved to operate within California and shall be emission certified for compliance with all applicable California Air Resources Standards in effect at the time of ownership transfer.

Factory Inspection Trips:

The manufacturer shall include provisions for three (3) factory inspection trips for three (3) department representatives. The contractor shall be responsible for all costs related to transportation, meals and lodging for the department representatives. Air transportation shall be furnished for travel exceeding 200 miles.

The inspection trips shall be conducted as follows, One (1) trip at pre-construction, One (1) trip prior to finish paint (pre-paint) One (1) trip after completion of apparatus (pre-delivery). Each trip shall be scheduled by the manufacturer to occur at a time that is most advantageous to the related inspection. The final inspection shall occur after the post-paint assembly is complete and all required equipment mounting is complete.

Department representatives shall remain at the manufacturer's facility at the expense of the manufacturer, until they are satisfied that the objectives of each inspection have been complete.

Delivery Requirements:

The completed apparatus shall be delivered under its own power to insure proper break in of new components and to confirm that correct operating conditions exist at time of arrival.

Los Banos Fire Department representatives shall be trained at the; manufacturer's facility prior to accepting the apparatus and driving the apparatus to Los Banos, CA. A delivery engineer, trained by the apparatus manufacturer shall provide 3 training classes over three department shifts to include training volunteer personnel. Training shall be conducted at the Los Banos Fire Department Ca.

General Specifications:

Cab Style: Shall be a custom medium four doors with an 8 inch raised roof, the raised portion shall start over the driver/officers seats. The cab shall tilt 45 degrees by hydraulic/electric pump; the cab seating shall have a capacity for six (6) personnel. The cab shall be constructed from heavy duty aluminum materials.

Cab Dimensions:

Width 100 inches, with maximum of 102 inches with mirrors

Length 136 inches minimum 141 inches maximum

Height Front 87 inches approximate Rear 95 inches approximate

Cab tilts 45 Degrees

Cab paint red, one solid color DuPont Elite

Wind shield 4200 square inches approximate

Custom exterior trim package

Interior finish shall be extreme duty i.e. harden finish color Gray

CHASSIS WHEEL BASE: The chassis wheel base shall be a maximum of 187 inches

CHASSIS FRAME RAILS: The frame shall consist of double rails running parallel to each other with cross members forming a ladder style frame. The chassis frame rails shall be constructed of 110,000 psi minimum yield high strength low alloy steel, formed into a "C" channel shape with dimension of 10.50" X 3.50" X 3.75".

The frame rails shall be power coated to insure superior paint adhesion.

Each double rail section shall be rated by a Resistance Bending Moment (RBM) minimum of 3,213,100 inch pounds. All frame and mounted components shall be secured with Grade eight (8) bolts, hardened washers, and distorted thread lock nuts.

PAINT, FRAME RAILS: The frame and running gear shall be painted gloss enamel black. To include axles, drivelines, air tanks, steering gear, frame mounting brackets, drag link and fuel tanks. The air system piping and electrical harnesses shall not be installed until after the paint has cured.

FRAME WARRANTY: The frame and cross members shall carry a limited lifetime warranty to the original purchaser. The warranty shall include conditional items listed in the detailed warranty document which will be provided with warranty package.

FRONT BUMPER: Shall consist of a 12" inch high, two rib front bumper constructed of highly polished, 10 gauge stainless steel. The bumper shall be a full wrap around type extending across the entire cap. The return portion of the wrap around shall make up the majority of the bumper extension, measuring up to 18" to 24".

There shall be a structural backing plate to reinforce the stainless steel bumper. The backing plate shall match the contour of the stainless steel bumper and shall be fabricated from ¼" steel C-channel. The backing plate shall be attached to the chassis frame rails with grade 8 bolts.

FRONT BUMPER EXTENSION: There shall be a twelve (12) to sixteen (16) inch frame extension provided. The extension shall be made from heavy duty steel C-channel, and bolted to the chassis frame rails through reinforcement plates utilizing grade 8 bolts.

GRAVEL SHIELD: A gravel shield constructed of a minimum of 1/8 " aluminum tread plate shall be installed above the frame extension between the bumper and front of the cab.

BUMPER COMPARTMENT, CENTER: There shall be a compartment provided in the front bumper gravelshield, centered between the frame rails fabricated of 1/8" (.125) smooth aluminum plate with drain holes, the compartment shall hold 150' feet of 1-3/4 double jacked hose.

STRAPS, CENTER FRONT BUMPER COMPARTMENT: The center bumper compartment shall have one (1) quick release restraint to secure the contents of the compartment.

FRONT TOW EYES: Two (2) chrome plated tow eyes shall be mounted through the front bumper. The eyes shall be fabricated from 1" thick cold drawn steel. The tow eyes shall have an inside diameter of 2" inches with chamfered edges. The tow eyes shall be mounted with Grade 8 bolts.

MECHANICAL SIREN: The front bumper shall include an electro mechanical Federal Signal Q2B siren model Q2B-012NNSD installed through the passenger side of the front bumper outboard. The Q2B siren shall be a streamlined, chrome plated siren designed to provide reliable and long life operation. The siren shall produce 123 decibels of sound distinctive to the QB2 sound that is a registered trademark of Federal Signal, and shall be provided with a heavy duty clutch and electric brake. The siren shall operate off the vehicles 12V system, the QB2 siren shall be recess mounted in the front bumper. A siren brake switch shall be located within reach of the driver. A dash mounted brake switch shall be provided on the officer's side.

SIREN FOOT SWITCH: A foot operated switch shall be installed on the driver's side wired to the mechanical siren.

SIREN DASH SWITCH, OFFICER SIDE: A dash mounted switch shall be installed on the officer's side wired to the mechanical siren.

AIR HORNS, PASSENGER'S SIDE/ DRIVER'S SIDE: Two (2) 24" long Grover air horns shall be installed in compliance with NFPA through the front bumper, one on the passenger side outboard of the frame rail, and one on the driver's side outboard of the frame rail. The air horns shall be plumbed to the chassis, air supply through an air protection valve.

AIR HORN RESERVOIR: One (1) air reservoir, with 1700 cubic inch capacity, shall be installed on the chassis to act as a supply tank for operating the air horns. The reservoir shall be isolated with a 90 PSI pressure protection valve on the reservoir supply side to prevent depletion of the air to the brake system.

SWITCH, HORN/AIR HORN/ SIREN SELECTOR: A driver controlled horn/air horn/siren selector switch shall be installed in the cab and operate either the air horns chassis electric horn and or siren through the horn ring button.

AIR HORN DASH SWITCH OFFICER: A dash mounted switch shall be installed on the officer's side wired to the air horns, the switch shall be clearly marked AIR HORN.

SPEAKER, DRIVER'S SIDE: there shall be one (1) speaker installed through the front bumper, driver side outboard. One (1) Federal Signal model #BP200-EF speaker shall be provided. The 200- watt speaker shall have two 100-watt neodymium drivers to produce a full 200 watts of output. The speaker shall be equipped with a stainless steel (electric F grills). The speaker shall be flush mounted through the bumper. The speaker shall be designed to perform in all weather conditions and be compatible with all Federal Signal sirens.

The BP200-EF speaker shall have a dual diverging manifold that shall project sound uniformly to both sides as well as to the front of the vehicle. The speaker shall be compact in design and shall measure 5.5" high X 7.7" long X 7.8" deep. The speaker shall meet Class A standards when used with a compliant Federal Signal siren.

FRONT AXLE: The front axle shall be Meritor MFS-20 with 20,000 pound capacity with oil seals and transparent cover for oil level inspection.

FRONT SUSPENSION: The front suspension shall be leaf spring suspension, the suspension shall include but not be limited to 20,000lbs capacities, case harden threaded bearing, and greaseable fitting.

FRONT SHOCK ABSORBERS: Two (2) Bilstein, nitrogen gas filled shock absorbers shall be provided and installed as part of the front suspension system. The shocks shall be a monotublar design and fabricated using a special extrusion method, utilizing a single blank of steel without a welded seam, achieving an extremely tight peak-to-valley tolerance and maintains consistent wall thickness. The monotubular design shall provide superior strength while maximizing heat dissipation and shock life.

The Bilstein front shocks shall include a digressive working piston assembly allowing independent tuning of the compression and rebound forces to provide optimum ride and comfort without compromise. The working piston design shall feature fewer parts than most conventional twin tube and road sensing shock designs and shall contribute to the durability and long life of the Bilstein shock absorbers.

FRONT BRAKES: The front axle shall be equipped with Meritor EX-225 Disc Plus air operated disc brakes and ventilated rotors, Meritor brake chambers shall be supplied and approved per application.

FRONT AXLE CRAMP ANGLE: The front axle cramp angle shall be 43 to 53 degrees to the left or right.

STEERING SYSTEM: The steering system shall be a package certified by TRW for the application. All components from the steering column to the drag link shall be manufactured by TRW. The steering system shall have the capacity to static steer the chassis loaded to 21,500 pounds with 425 tires.

FRONT TIRES: the front tires shall be Michelin 385/65R22.5 Load Range "L" XFE all weather tread with a capacity of 20,000 pounds.

FRONT WHEELS: The front wheels shall be Alcoa hub piloted, rated for a 385 /65R22.5 tire at 20,000 pound. The wheels shall be polished aluminum. The wheels shall feature one-piece forged strength and a polished finish that lasts.

FRONT WHEEL TRIM: The front axle wheels shall be trimmed with stainless steel hub and lug nut covers. The axle's hub cover shall be equipped with holes for oil level viewing.

MUD FLAPS, FRONT: The front axle mud flaps shall be constructed from hard black rubber and installed behind the front tires.

REAR AXLE: The rear axle shall be a Meritor RS-24-160 with a 24,000 pound service rating. The axle shall be oil lubricated and equipped with oil seals.

REAR SUSPENSION: The rear axle suspension shall be leaf spring type with a minimum capacity rating of 27,000 pounds. The suspension shall be a torque leaf, variable rate, self-leveling slipper type.

DRIVER CONTROLLED DIFFERENTIAL LOCK-UP: The Meritor RS series rear axle shall have a driver controlled differential lock-up. The lock-up shall only be engaged and disengaged when the vehicle is stationary.

VEHICLE TOP SPEED: The rear axle shall be geared for a top speed of 65-68 MPH at governed engine speed.

REAR BRAKES: The rear axle shall be equipped with 16-1/2" X 7" inch S-Cam air operated brakes with automatic slack adjusters.

REAR TIRES: The rear tires shall be Michelin 11R22.5 Load Range "H" XFE all weather tread with a rated capacity of 24,000 pounds.

REAR WHEELS: The rear wheels shall be Alcoa Polished aluminum, 8.25" X 22.5" 10-bolt hub piloted. The outside wheel shall have polished outer surface. The ground rating shall be a minimum of 27,000 pounds.

REAR WHEEL TRIM: The rear axle wheels shall be trimmed with stainless steel "Lincoln Hat" and lug nut covers.

BRAKE SYSTEM: The air brake system shall meet the requirements of FMVSS-121. The system shall consist of three (3) reservoirs with a total capacity of 5100 cubic inches. The system shall be of dual circuit and quick build up design powered by the engine mounted gear driven air compressor. The system shall be protected by a Wabco System Saver 1200 air dryer with an integral 100 watt heater with a Metri-Pack seal connector. The system shall also have automatic moisture ejector on the wet tank and quarter turn brass drain valves on the other tanks. All air reservoirs provided on the chassis shall be labeled for identification.

ANTI-LOCK BRAKES: A WABCO, 4-channel Anti-Lock Braking system shall be installed which includes four (4) wheel sensors and four (4) modulators to control and compensate braking force at each wheel. The system monitors all wheel ends of the axles regardless of suspension type, or which, axle sees braking forces first. An ABS warning light shall be installed on the driver's dash that remains illuminated until the vehicle is moving at least four (4) miles per hour. An ABS test switch shall be installed in the Diagnostic Information Panel that when pressed, sends the system into diagnostic mode causing the ABS light to blink (I/O) indicating a flash code. A listing of flash code definitions are provided in the WABCO Owner's Manual. Warranty for the system shall be for 3-years/300,000 miles.

PARK BRAKE CONTROL: a Meritor-WABCO manual hand control push-pull style valve shall operate the parking brake system. The control shall be yellow in color and meet the requirements of FMVSS. The backing brake control shall be mounted on the left hand dash to the right of the steering column within easy reach of the driver.

AIR COMPRESSOR: There shall be a Wabco SS318 single cylinder pass- through drive type compressor which shall be capable of producing 18.7 CFM at 1200 engine RPMs. The compressor shall feature a higher delivery efficiency translating to more air delivery per horsepower absorbed. The compressor shall include an aluminum cylinder head which shall improve cooling, reduce weight and decrease carbon formation. Superior piston and bore finishing technology shall reduce oil consumption and significantly increase the system component life.

AIR GOVERNOR: An air governor shall be provided to control the cut-in cut-out pressures of the engine mounted air compressor. The governor shall be calibrated to meet FMVSS requirements. The air governor shall be mounted to the right frame rail.

AIR SUPPLY LINES: The air system on the chassis shall be plumbed with color coded reinforced nylon tubing air lines. The primary (rear) brake line shall be green, the secondary (front) brake line red, the parking brake line shall be orange and the auxiliary outlet shall be blue. Brass compression type fitting shall be used on the nylon tubing. All drop hoses shall include fiber reinforced neoprene covered hoses.

ENGINE: The chassis engine shall be a Cummins ISL9 engine. The ISL9 engine shall be an in-line six (6) cylinder, four cycle diesel powered engine. The engine shall be rated at 450 horse power at 2100 RPM and shall be governed at 2200 RPM. The torque rating shall feature 1250 foot pounds of torque at 1400 RPM with 543 cubic inches (8.9 liter) of displacement.

The ISL9 engine shall feature a VGT Turbocharger, a high pressure common rail fuel system, fully integrated electronic controls with an electronic governor, and shall be EPA certified to meet the 2013/2014 emissions standards.

The engine shall include an engine mounted combination full flow/by-pass oil filter with replaceable spin on cartridge for use with the engine lubrication system. The engine shall include Citgo brand Citgard 500, or equivalent SAE 15W40 CJ4 low ash engine oil or better.

A wiring harness shall be supplied ending at the back of the cab. The harness shall include a connector which shall allow for a harness for the pump panel. The included circuits shall be provided for a tachometer, oil pressure, engine temperature, hand throttle, high idle and PSG system. A circuit for a data link shall also be provided at the back of the cab.

ENGINE HIGH IDLE CONTROL: The vehicle shall be equipped with an automatic high-idle control. The device shall operate only when the master switch is activated and the transmission is in neutral with parking brake set.

ENGINE COMPRESSION BRAKE: The engine shall be equipped with a Jacobs C-Brake compression brake controlled by two (2) switches located in the cab dash. An on/off switch and a low/medium/high switch. The compression brake shall interface with the anti-lock brake controller to prevent engine brake operation during adverse braking conditions. The engine compression brake shall activate upon 0% accelerator when in operation mode and shall activate the vehicles brake lights.

ENGINE COOLING SYSTEM: The engine cooling system shall be designed with heavy duty materials to meet the demands of the emergency response industry. The system shall have the cooling capacity to keep the engine properly cooled under all conditions of road and pumping operations. The cooling system shall be designed and tested to meet or exceed the requirements specified by the engine and transmission manufacturer and meet all EPA requirements.

RADIATOR: The engine radiator shall be designed for maximum cooling and designed for heavy duty service. The top tank shall include a sight glass for coolant level inspection. A low coolant warning shall be incorporated to alert the driver. The bottom tank of the radiator shall incorporate oil to water plate-type cooling for the transmission. The cooler shall be sufficient to cool an Allison Transmission.

CHARGE AIR COOLER: The charge air cooler shall be constructed of aluminum with cast, aluminum side tanks. The cooler shall have a frontal core area of approximately 1033 square inches. The cooler shall be mounted directly ahead of the radiator and to the radiator header. Rubber isolators shall be used at the mounting points to reduce transmission vibrations.

COOLING SYSTEM FAN: the engine cooling system shall incorporate a thermostatically controlled fan clutch. The fan shall automatically lock-up when the vehicle is placed in pumping mode. A shroud and recirculation shield system shall be used to ensure that once air has passed through the radiator, the same air is not drawn through again.

RADIATOR COOLANT, LONG LIFE: The cooling package shall include Extended Life coolant (ELC). The coolant shall contain a 50/50 mix of ethylene glycol and de-ionized water to keep the coolant from freezing to a temperature of -34 degrees Fahrenheit.

COOLANT HOSES: The chassis shall be equipped with silicone hoses for the radiator and heater circuits. All hoses shall be secured with stainless steel constant torque band clamps.

AUXILIARY ENGINE COOLER: The cooling system shall have a single bundle type coolant to water exchange installed between the engine and the radiator. The heat exchanger shall circulate water from the fire pump to the heat exchanger thereby reducing the temperature of the coolant. The exchanger shall be designed to prohibit water from the pump from coming in contact with the engine coolant.

ENGINE AIR INTAKE: The engine air intake system shall include an ember separator air intake filter which shall be located in the front of the cab behind the fascia. This filter shall protect the downstream air filter from embers using a combination of metal screens constructed of corrosion resistant steel.

ALTERNATOR: The alternator shall be 320 amps Leece Neville model 178-131-100. The alternator shall meet all current applicable NFPA 1901 Edition requirements for performance.

BATTERY SYSTEM: The battery system shall be a single system consisting of six (6) Group 31, 12-volt DC, heavy duty, high cycle automotive batteries. The battery bank shall have a group rating of 3750 cold cranking amperes (CCA) and a reserve of 1,080 minutes at 80 degrees Fahrenheit. All battery wiring shall be GXL battery cable capable of handling 125% of the actual load. The cables shall be run through a heat resistant flexible nylon HTZL loom rated at a minimum of 300 degrees. All cable connections shall be machine crimped and soldered.

BATTERY BOXES: The chassis batteries shall be mounted in a weld and bolted stainless steel battery box. The battery hold-downs shall be made of structural, stainless steel angle.

BATTERY JUMPER STUDS: One (1) set of battery jumper studs shall be provided on the chassis. The studs shall be connected to the chassis batteries with 1/0 color coded cables, red for positive and black for the negative cable. The studs shall be protected with color coded plastic covers. Each terminal shall be tagged indicating positive/negative terminals. The battery jumper studs shall be located in the driver's side front step well area.

MASTER BATTERY DISCONNECT SWITCH: The chassis will be equipped with a battery master disconnect switch. The switch shall be a heavy duty rotary type switch; the switch shall be located within easy access of the driver upon entering or exiting the cab. All electrical circuits shall be disconnected when in the off position.

BATTERY CHARGER: A Kussmaul 1200 battery conditioner shall be supplied; the conditioner shall be located in the cab behind the driver's seat.

BATTERY CONDITIONER DISPLAY: A Kussmaul battery conditioner display shall be supplied. The display shall be mounted in the driver's side cab wheel well area.

20 AMP SUPER AUTO-EJECT: A20 AMP Kussmaul super auto-eject electrical receptacle shall be supplied. It shall automatically eject the plug when the starter button is depressed. Color of the cover (yellow).

TRANSMISSION: The chassis shall equipped with an Allison 3000 EVS automatic transmission. It shall have 4th gear operating controls and programmed for Fire Apparatus vocation. An electronic oil level indicator shall be provided as well as a diagnostic reader port connection. The transmission shall be

geared to provide one-to-one ratio in fourth gear for fire pump applications. This dedicated lock-up circuit is provided for pump operation. The transmission fifth to reach its top speed Gear shall be an overdrive ratio, permitting the vehicle to reach its top speed. The transmission shall be equipped with an automatic neutral feature. Applying the parking brake shall command the transmission to neutral, regardless of the drive range requested on the shift selector which shall require re-selecting the drive range to shift out of neutral.

The transmission shall be equipped with two (2) PTO ports with engine speed capabilities. The transmission shall be cooled by the radiator-mounted heat exchanger. The transmission fluid shall meet Allison specifications TES-295.

The transmission shall be equipped with the oil level sensor (OLS) This sensor shall allow the operator to obtain an indication of the fluid level through the shift selector. The sensor display shall provide the following checks, correct fluid level, low fluid level and high fluid level.

TRANSMISSION SHIFTER, PUSH-BUTTON: The transmission shall be controlled by an Allison push button shifter internally illuminated for night operations. The shifter shall be mounted on the dash or dog house on the right side of the driver's seat. The transmission shall be capable of four (4) speed operation with overdrive. When activated the MODE switch shall provide the five (5) speed overdrive operation.

DRIVELINES: The chassis shall be equipped with Neapco 1710 series driveshaft with full round yoke and universal joints. The driveshaft tubing shall be a minimum of 4.00" diameter with .134" wall thickness. The drivelines shall be balanced at the minimum of 3000 RPM. Spicer 1710 series universal joints are acceptable.

FIRE PUMP MOUNTING: Extra heavy duty mounting brackets shall be bolted to the chassis frame rails for the installation of the fire pump. The mounting brackets shall be positioned aligning the pump insuring the angular velocity of the driveline joints are the same at each end allowing for full capacity performance with no vibration.

FUEL TANK: The chassis shall be equipped with a minimum 65 to 68 gallon rear mounted fuel tank. The tank shall be constructed of 12-gauge steel with stainless steel mounting straps and rubber isolators secured to the bottom flange of the chassis frame rails. The tank shall be baffled to prevent sloshing. The tank shall have a vent port to facilitate venting to the top of the filler neck for rapid filling without blow-back and a roll over ball check vent for temperature fuel expansion and draw. The exterior of the tank shall be painted with a PRP Corsol black anti-corrosive exterior metal treatment finish. A 0.50" inch NPT drain plug shall be centered in the bottom of the tank. The tank shall be provided with a fuel sending unit. The tank shall be certified to meet FMCSR 393.65 and 393.67.

FUEL LINES: The fuel lines shall be wire braid reinforced fuel grade lines. They shall have reusable fitting and be routed along the inside of the frame rails. Fuel lines shall be protected against chaffing.

FUEL FILTER: The Cummins engine shall be supplied with a fuel water separator type filter as a primary filter. The filter shall have a drain valve. The water/fuel filter shall be monitored by the chassis electrical system. A secondary fuel filter shall be included as approved by the engine manufacture.

ENGINE EXHAUST SYSTEM: The exhaust system shall design to meet or exceed all current EPA Emissions. All chassis components that may or may not be in close proximity to the exhaust system shall be protected from hot exhaust components.

WHEEL WELL LINERS: Full wheel well liners shall be installed beneath the cab to protect the bottom of the cab from road splash. The liners shall be constructed of aluminum and be full width.

FENDERETTES: Bright polished stainless steel fenderettes shall be installed at the wheel well opening. A rubber gasket shall be installed between the fenderette and the cab.

INTERMITTENT WINDSHIELD WIPERS: The cab shall have intermittent windshield wipers. The system shall be self canceling; control switch shall be located on the turn signal control arm.

ELECTRONIC WINDSHIELD FLUID LEVEL INDICATOR: Windshield fluid levels shall be monitored electronically.

EXTERIOR GRAB HANDLES: The cab shall have one (1) stainless steel handrail with knurled slip-resistant finish, positioned behind each cab door. Grab rails shall be a minimum of 24” in length.

EXTREME DUTY CAB INTERIOR: The cab interior shall be designed for extreme duty, to include insulated floor covering, insulated engine covering, and insulated head liner.

SUN VISORS: The cab shall be equipped with sun visors; the visors shall cover 90% of the cab windshield header.

GLOVE BOX: A glove box shall be an integral part of the dashboard located on the officer side of the cab. The area above the glove box shall be flat for a work station or MDT mounting.

CAB STEPS: All cab steps shall be of a stationary fixed design. Step shall meet NFPA requirements for step heights.

CAB DOORS: All cab doors shall be “Barrier Type” designed not to cover the step well area. Each door shall be flush type, and design for maximum opening. All doors shall include a rubber seal around the perimeter of the door to insure a weather tight fit.

The rear doors windows shall have factory dark tint applied.

DOOR HINGES: Each door shall be attached to the cab with stainless steel piano type hinges, with restraining straps.

CAB DOOR LOCKS: There shall be individual manual twist type door locks at each door handle. In accordance with FMVSS 206, all exterior lock shall be keyed alike.

WINDOW REGULATORS: All cab door windows shall be electrically operated. The driver's door shall contain four (4) switches to control the operation of each door window. All remaining door shall have one (1) heavy duty switch to control the window operation of that door.

FIXED CAB WINDOWS, LEFT AND RIGHT SIDES: There shall be a fixed window on both sides of the cab installed between the front and rear door. The glass shall be tempered and factory dark tint.

CAB TILT LOCK: The cab shall tilt 45 degrees by means of a pair of hydraulic cylinders driven by an electric pump. Once the cab is fully tilted, a safety latch shall automatically engage and act as a positive lock. The hydraulic cylinders shall be equipped with velocity fuses to prevent the cab from falling due to hydraulic system failure. The cab lock shall be released by a pull cable. The rear mounts consist of a pair of hydraulic cab latches mounted on rubber cushioned mounting brackets. The system shall be designed with an ignition interlock. The cab tilt operation requires the master battery switch to be in the on position with the parking brake applied.

CAB TILT PUMP: An electric over hydraulic cab lifting pump shall be provided to tilt the cab. The pump shall be operated by a remotely wired control box coiled cord. The control box shall be located on the right side of the apparatus body or pump panel.

CAB PAINT FINISH, SINGLE COLOR: The custom cab shall have a single color paint finish (red). The paint color shall be furnished by the customer. All paint products shall be DuPont.

FRONT GRILL: The front grill shall be of highly polished finish, stainless steel, chrome, and or other type finish design.

SIDE AIR INTAKE GRILLS WITH EMBER SEPARATOR: The cab shall have one (1) bright stainless steel grill installed on both the left and right sides of the cab. The grills shall be installed between the front and rear doors. The grills shall have a minimum open area of 119 square inches. An ember separator shall be installed between the grills and air filter system. The ember separator shall meet the current NFPA requirements.

CAB MIRRORS, HEATED/REMOTE CONTROLLED: The cab shall have two (2) side mounted Velvac model 713760 rear view mirrors. The mirrors shall be heated and remotely controlled. The mirrors main head shall have an 8"X16" mirror and a separate 6"X6 ½ parabolic mirrors. The mirror housing shall be polished stainless steel.

REAR CAB STEP WELL: There shall be a hinged tread plate door that provide access to the chassis battery system.

TREAD PLATE BACK OF CAB: The entire back of the cab shall be covered with 1/8" thick aluminum tread plate. The tread plate shall be coated with a rust inhibitor and fastened to the cab with stainless steel fastener. A bead of caulking shall be applied to the perimeter.

INTERIOR CAB FINISH: The interior of the cab shall be painted with a dark gray F-Shield. The cab metal finish shall be covered with a coat of adhesion promoting primer. This membrane achieves an extremely tough, flexible, chemical and abuse resistant finish.

FLOOR MATS ENGINE TUNNEL COVERING: The floor mats and engine tunnel shall be covered with gray pebble grain vinyl with ¼" foam backing. The edges of the floor mats shall be trimmed with bright aluminum angle.

CAB GRAB HANDLES, INTERIOR: Two (2) interior grab handles shall be installed in the cab on the "A" post, one each side. The grab handles shall be constructed of rubberized steel.

Four (4) interior grab handles shall be installed in the cab, one (1) each side on top of the front door panels adjacent to fixed window and one (1) each side on the rear door panels. The grab handles shall be constructed of bright stainless steel.

CAB DOOR PANELS: The interior door panels shall be finished with "F-Shield" extending from the window down to the lower kick plate. The color shall match the interior.

REFLECTIVE DOOR STRIPING: The lower panels shall be covered with reflective striping meeting NFPA requirements. Color red and gold/lime green.

INSTRUMENTATION: The apparatus shall include a full array of instrumentation, to include gauges that meet SAE-J-1939 protocol, the gauges crystal shall be polycarbonate, anti-fog, and anti-scratch coated.

CHASSIS ELECTRICAL SYSTEM: The chassis shall be equipped with a Weldon V-Max multiplexed system. Including the total management of the electrical system. I.E. Load management, sequencing, switch loads, receive digital and analog signals, perform and report diagnostics, report vehicle status, and be system expandable.

VISTA IV COLOR DISPLAY, DRIVER/OFFICER'S SIDE: The chassis shall be equipped with two (2) full color graphical displays that offer enhanced features for display, control and diagnostics of the multiplex system. There shall be a display located on the driver and officer's side dash panel.

VEHICLE DATA RECORDER: The chassis shall have a Weldon Vehicle Data Recorder (VDR) system installed. The system shall be designed to meet NFAP 1901. The following information shall be recorded, speed, acceleration, deceleration, engine RPM, engine throttle position, Abs events, seat occupied status, seat belt, master optical warning device switch position, time/date. The system shall comply with NFPA guidelines.

SEAT BELT WARNING SYSTEM: A Weldon seat belt warning system, integrated with the vehicle data recorder system, shall be installed for each seat within the cab. The system shall provide visual warning indicator in the cab and indicator light in the instrument panel, and an audible alarm and shall be integral with the Vista display screen. The warning system shall activate when any seat is occupied with a minimum of 60 pounds the corresponding seat belt remains unfastened, and the parking brake is released. The warning system shall also activate when any seat is occupied, and the corresponding seat

belt was fastened in an incorrect sequence, and the parking brake is released. Once activated the visual indicators and audible alarms shall remain active until all occupied seats have the seat belt fastened correctly.

CLIMATE CONTROL, HEATING /AIR CONDITIONING SYSTEM: The cab shall be equipped with a climate control system, heating /air conditioning mounted in a central location cab roof area. The system shall at minimum provide 45,000 BTU of heat at 320 CFM for defrosting, 65,000 BTU for heating and 50,000 BTU of cooling. All defrost/heating systems shall be plumbed with one (1) seasonal shut-off valve at the front corner on the right side of the cab. The A/C condenser shall be mounted to the roof or mounted per manufacture requirements.

A/C COMPRESSOR: The air conditioning compressor shall be belt driven, engine mounted, that shall be capable of producing the required BTU of Cooling.

CLIMATE CONTROL ACTIVATION: The heating, defrosting and air conditioning controls shall be located on the Vista display and control screen.

SEAT MATERIAL: The seat covering shall be Durawear materials or better.

SEAT COLOR: Seats shall be gray in color.

DRIVER'S SEAT: The driver's seat shall be a Bostrom Model Sierra high-back with air ride suspension. The seat shall be four (4) way adjustable by the driver in accordance with SAEJ1517. The seat shall be equipped with an integrated 3-point seat belt with automatic retractor. The belt shall be red in color to meet current NFPA requirements.

OFFICER'S SEAT: The officer's seat shall be a Bostrom Model Sierra high-back air suspension seat. The seat shall be four (4) way adjustable by the officer in accordance with SAEJ1517. The seat shall be equipped with a 3-point seat belt with automatic retractor. The belt shall be red in color to meet NFPA requirements.

CREW SEAT, DRIVER'S SIDE REAR FACING: One (1) outboard, rear facing, seat shall be installed behind the driver. The seat shall be Bostrom Tanker 450 SCBA-ABTS (all belt to seat) non-suspension seat. The seat back shall include spring-loaded flip up headrest. The seat shall be equipped with integrated 3-point shoulder harness, lap belt, and automatic retractors built into the seat assembly. The belt shall be red in color to meet current NFPA requirements.

There shall be one (1) Zico model ULLH air bottle bracket with a "CRS" Collision Restraint Strap provided with the seat. The bracket shall be a "Load and Lock" Walk away style in compliance with the latest edition of NFPA. The bracket shall consist of a black plate, short footplate, two non-mar double-coated seats, and adjustable strap assembly. The back plate and footplate are black thermoplastic coated for years of trouble-free service. One-size fits all U.S. made 30/60 minute rated self-contained breathing apparatus. There shall be one (1) SCBA seat cavity removable panel provided for a smooth back when the breathing air apparatus is not in use.

CREW SEAT, OFFICER'S SIDE REAR FACING: one (1) outboard, rear facing, seat shall be installed behind the officer. The seat shall be Bostrom Tanker 450 SCBA-ABTS all belt to seat non-suspension seat. Note: Details same as above.

CREW SEATS, INBOARD FORWARD FACING: Two (2) inboard, forward facing seats shall be installed in the crew area. The seats shall be Bostrom Tanker 450 SCBA-ABTS all belt to seat non-suspension seats. Note: Details same as above.

SLIDING MDT STATION: A sliding MDT station shall be installed on the dash, officer's side, constructed of smooth aluminum plate with a rough service coating.

RADIO AM/FM WEATHER BAND: A Jensen radio with weather band, AM/FM stereo receiver, compact disc (CD) player, and rear iPod input pigtail connection, satellite radio capability, a front panel mini stereo input jack, and four (4) speakers shall be installed in the cab. The CD player shall be compatible with CD-R, CD-RW and MP3 format disc. The radio shall be installed in the left hand overhead position. The speakers shall be installed inside the cab with two (2) speakers recessed within the headliner of the front of the cab just behind the windshield and two (2) speakers on the upper rear wall of the cab. A small antenna shall be located on the left hand side of the cab roof for AM/FM and weather band reception.

RADIO INSTALLATION: There shall be one (1) radio supplied by the Fire Department that shall be installed in the cab by the apparatus body builder. Location TBD

RADIO ANTENNA MOUNTS: There shall be three (3) standards antenna-mounting bases, model MNO, with 17 feet of coax cable and weatherproof cap provided for a two (2) way radio installation. The mounts shall be located on the cab roof, just to the rear of the light bar. The cables shall be routed under the officer's seat.

INTERCOM SYSTEM, SIX (6) POSITIONS: The apparatus shall be equipped with a Setcom 900 system with driver/officer wireless headsets. The Setcom System shall interface with the Fire Department Radios. The system shall also be incorporated intercom communications and plug in headsets for the four (4) rear crew positions. The system shall include all equipment necessary for a fully functioning system. Headsets two (2) Liberator wireless headsets Model CSB-900W Driver/officer's position. Headset four (4) hard wire 15' coil cord CSB-901R rear crew positions

POWER AND GROUND STUDS: The electrical distribution panel shall include two (2) power studs. The studs shall be size #10 and each of the power studs shall be circuit protected with a fuse of the specified amperage. One (1) power stud shall be capable of carrying up to 40 amp battery direct load and one (1) power stud shall be capable of carrying up to 20 amp ignition switched load. The two (2) power studs shall share one (1) ground stud, both studs and ground shall be clearly marked.

12-VOLT POWER OUTLETS: There shall be two (2) 12-volt power outlets provided in the cab, located in the center switch panel. The power outlets shall be wired to direct battery power and protected with the appropriate wire size and fuse.

ELECTRONIC SIREN: A Federal Model PA-300 electronic siren with noise canceling microphone shall be provided. The siren shall be mounted in the center of the dash panel. The siren shall feature, an electronic air horn, wail, yelp, hi-lo siren. The siren will be actuated by the control head and by the horn button/ring in the steering wheel. The driver will have the option to control the siren or the chassis horns from the horn button by means of a selector switch.

ELECTRONIC SIREN SPEAKER; THERE SHALL BE ONE (1) SPEAKER PROVIDED. THE SPEAKER WILL BE A Federal, model MS100, 100 watts. The speaker will be mounted with a Federal, Model ESFMT-EF, recess mount with stainless steel grill. The speaker will be recessed in the front bumper.

BACK UP ALARM: There shall be one (1) electronic back-up alarm installed at the rear of the apparatus. The alarm shall be wired to the transmission output signal and is automatically activated when the transmission is shifted into reverse.

LIGHTS, CAB DOME: There shall be six (6) combination clear/red LED dome lights with one (1) piece bezels installed in the cab head liner. The push on/off switches for the clear and red dome lights are integrally mounted in the dome light lens. The clear LED lights shall be activated when any cab door is in the open position, and will automatically switch off all of the red lights currently on and reactivated when the door is closed.

LIGHT (S), ADDITIONAL CLEAR CAB DOME: There shall be one (1) additional 7” LED clear round dome light mounted in the cabs headliner in a location specified by the fire department. The dome light shall be individually switched at the light.

LIGHT (S) ADDITIONAL RED CAB DOME: There shall be three (3) additional 7” LED red round dome lights mounted in the cab head liner. One (1) light above the officer’s seat and two (2) center of the crew compartment, each light shall be switched individually.

LIGHT, DOOR AJAR: A Whelen model TIR3 door ajar light shall be located on the cab ceiling. The light shall be self-contained flashing light that activates when any of the apparatus doors are open. The lens color shall be red. An audible alarm shall be installed in conjunction with the door-ajar warning light system. The light and audible alarm only operates when the ignition switch is in the “On” position and the parking brake is released.

MAP LIGHT, CAB: One (1) Gooseneck map light shall be installed on the right side of the dash operated by a rheostat mounted on the light base.

LIGHT, ENGINE MAINTENANCE: Two (2) white 4”LED round lights shall be mounted under the cab. The lights shall automatically activate when the cab is tilted to up position.

STANDARD FRONT LIGHTING: The headlamps, turn signals, front warning, and intersection lights shall be located within chrome warning light modules.

HEADLIGHTS: Four (4) halogen rectangular headlights shall be installed in the warning light modules, two (2) each side. The headlights shall be mounted in the lower position of the module.

DAY TIME RUNNING LIGHTS: The apparatus shall be equipped with daytime running lights. The daytime running lights shall operate only when the ignition switch is in the "On" position and the parking brake is released.

TURN SIGNALS: Whelen model 600 amber LED turn signal lamps shall be installed directly above the low beam headlights in the warning light modules.

TURN SIGNAL/MARKER LIGHTS: Whelen model 400 amber LED lamps shall be mounted outboard of the turn signal at 45-degree angle off the front of the cab. The lamps are part of the warning light module and are visible from both the front and side.

LED CORNERING LIGHTS: Whelen model 400 flashing LED-cornering lamps shall be mounted below the marker lights in the warning light module. The lamps are mounted at a 45-degree angle off the front of the cab and are visible from the side and front of the vehicle.

DOT LIGHTS: There shall be five (5) marker lights installed on the cab roof located as high as practical and spaced per DOT guidelines.

REMOTE CONTROLLED LIGHT: Two (2) Golight Stryker model 3020 Chrome lights shall be mounted on the roof of the cab per customer location, one (1) each side of the light bar.

LIGHTBAR, 69" FORWARD FACING: A Code 3 MX7000 LED light bar shall be mounted on the cab roof. The light bar shall measure 69" in length and positioned as far forward as possible. The light bar shall have the following additional options; E795LP Opticom (wired through the parking brake), two (2) red steady burn lights center of bar, corner sweeps and two (2) take down lights. The light bar shall have red LED modules with clear lenses. The light bar shall also meet NFPA 1901 edition requirements.

LIGHTS, INBOARD LOWER FRONT WARNING: Two (2) Whelen 600 Series Super-LED models 60R02FRR shall be installed, One (1) each side inboard of the turn signal in the warning light modules. The warning light shall incorporate red Linear Super-LEDs, a red optic hard coated polycarbonate lens, and utilize a metalized reflector with integrated TIR hybrid optic for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated lens/reflector assembly and conformal coated PC board shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant. The self contained flashing light shall have 14 Scan-Lock flashing patterns including synchronize feature and steady burn. The warning lights shall be covered under a five year warranty.

LIGHT, FRONT BUMPER WARNING: Two (2) Whelen 600 series Super-LED model 60R02FRR shall be installed, one (1) each side on the front bumper ends. Details and description same as listed above (Light, Inboard Lower Front Warning)

LIGHTS, CAB WHEEL WELL WARNING: Two (2) Whelen 600 Series Super-LED model 60R02FRR shall be installed, one (1) each in the cab wheel well area. Details and description same be as listed above.

CAB GROUND LIGHTS: There shall be four (4) Whelen model T0CACCCR 2" LED lights, one (1) mounted under each cab door. All cab ground lights shall automatically activate when any cab door is open and by a switch on the dash.

LIGHT, CAB SCENE: There shall be two (2) Whelen model 810CA0ZA 8-32 degrees scene lights provided, one (1) each side of the cab. Each scene light shall have a snap-in field re-lampable 1157 incandescent bulb and chrome plated trim flange. The lights shall be controlled by individual scene light switches located in the cab labeled Left Scene and Right Scene. Location: One (1) each side of the cab above the intake grilles

BACK UP CAMERA SYSTEM: One (1) Federal Signal model CAMSET-70 color camera system shall be installed in the vehicle. The system shall be wired to the vehicles 12 volt electrical system. The camera shall be wired to the Vista display screen. The color camera shall be installed facing rearward giving a clear and unobstructed view behind the vehicle. The system shall activate when the transmission is shifted in the reverse position. A switch located on the monitor shall activate the system regardless of the transmissions shift position.

The system shall consist of the following components: One (1) color camera model CAMCCD-REARNTSC with night vision and audio installed high at the rear of the vehicle. 65.5 feet of camera-to- monitor extension cable (CAMCABLE-20), Multiple camera control box (CAMBOX-4NTSC/CAMBOX-PAL), Mounting bracket and hardware (CAMLCD-BRACKET).

CARRING CAPACITY PLATE: A permanently attached carrying capacity plate in accordance with NFPA 1901 shall be installed in plain view of the driver. The tag shall have the following information: Overall Height, Overall Length, GVWR, and Seating Capacity.

SEATING CAPACITY PLATE: A permanently attached Seating Capacity Plate shall be mounted in the cab in plain view that reads "Seating Capacity-6 People".

OCCUPANCY/SEAT BELT PLATE: Occupancy/Seat Belt plates shall be provided and installed visible from each seated position, which reads; (OCCUPANTS MUST BE SEATED AND BELTED WHEN THE APPARATUS IS IN MOTION).

DO NOT WEAR HELMET PLATE: A plate shall be installed visible from each seating position the states: (DO NOT WEAR HELMET WHILE SEATED).

OVERALL HEIGHT / LENGTH / WEIGHT PLATE: An overall height/length/weight information plate shall be installed that is visible to the driver while in the seated position showing the apparatus complete overall height, length and gross vehicle weight current to apparatus manufactured date.

FLUID CAPACITY PLATE: A permanently affixed fluid data plate shall be installed in the driving compartment to indicate the type and quantities of the following fluid used in the vehicle.

- Engine Oil
- Engine Coolant
- Chassis Transmission Fluid
- Pump Primer Fluid (if applicable)
- Pump Transmission Lubrication Fluid (if Applicable)
- Drive Axle Lubrication Fluid
- Air Conditioning Refrigerant
- Air Conditioning Lubrication Oil
- Power Steering Fluid
- Cab Tilt Mechanism Fluid
- Transfer Case Fluid
- Equipment Rack Fluid
- Air Compressor System Lubricant
- Generator System Lubricant
- Front Tires Pressure-cold
- Rear Tires Pressure-cold

The following information shall also be supplied on the Fluid Data Plate

- Chassis Manufacturer
- Production Number
- Paint Number/Code
- Year Built
- Date Shipped
- Vehicle Identification Number

MOVEMENT WARNING PLATE: A permanently affixed movement warning plate shall be installed near the door ajar light that reads “DO NOT MOVE APPARATUS WHEN LIGHT IS ON”

DO NOT RIDE PLATE: A permanently affixed Do Not Ride warning plate shall be installed, located on the stepping areas of the vehicle warning personnel that riding on or in these areas while the vehicle in motion is prohibited. “DO NOT RIDE”

PUMP ENCLOSURE, SIDE CONTROL: The pump enclosure superstructure shall be constructed from heavy duty materials to include best practices and modern fire apparatus standerds. The front of the pump module shall be covered with aluminum tread plate to keep road debris from the pump. The

panel shall also have an access door/panel for access to the pump. The pump enclosure shall provide an area above the pump for crosslays, hydraulic generator and dunnage area. Dimensions and designs of the pump module shall be part of the manufactures proposal.

PUMP PANELS: The operator's controls and gauges shall be mounted on pump panels constructed of 1/8" black anodized aluminum or 14 gauge T-304 stainless steel materials. The operator's master gauge panel shall be vertically hinged with push latches for access to gauges and auxiliary controls. All gauges and controls shall be properly identified with color-coded metal tags. The gauges shall be functionally grouped above each control.

The right side upper panel shall be vertically hinged with double doors and push latches for pump compartment access. The right side lower panel shall be removable for serviceability and access to the pump components.

All instruments and controls shall be provided and installed as a group at the pump panel. The central midpoint or centerline of any valve control shall be no more than 72" inches vertically above the ground. The instruments/gauges shall be placed to keep the pump operator as far as practical from all the discharge and intake connections and in a location where they are readily visible and operationally functional while the operator remains stationary.

FULLY HINGED PUMP PANEL, RIGHT SIDE: One (1) vertically hinged pump panel with push latch shall be installed and constructed of the same materials as stated in the pump module. The hinged panel replaces the current right hand lower removable panel for ease of access to the pump compartment during routine maintenance.

PUMP COMPARTMENT ACCESSS PANEL, FRONT: A removable maintenance panel shall be installed at the front of the compartment manufactured from 3/16" aluminum tread plate. The removable panel shall be as large as possible to allow for access.

PUMP PANEL LIGHT, LEFT SIDE: Three (3) On Scene Access LED pump panel lights with on/off switch shall be mounted under the light shield left side. The light shall be mounted as high as possible.

PUMP PANEL LIGHT, RIGHT SIDE: Three (3) On Scene Access LED pump panel lights with on/off switch shall be mounted under the light shield right side.

LIGHTS, PUMP COMPARTMENT: One (1) compartment light shall be installed in the pump compartment for inspection or routine maintenance wired to the pump panel light switch.

RUNNING BOARD W/HOSE TRAY, LEFT SIDE: A running board shall be provided on the left side of the pump module constructed of 3/16" aluminum tread plate. The running board will be bolted to the modules substructure to facilitate removal.

A hose tray shall be in the running board constructed from 1/8" smooth aluminum plate approximately 9" wide X 23"long X 10" deep with drain holes provided in each corner for drainage. A restraining strap shall be provided to secure the contents of the hose well.

The running board stepping surface shall comply with the latest version of NFPA 1901.

RUNNING BOARD, RIGHT SIDE: A running board shall be provided on the right side of the pump module constructed of 3/16” aluminum tread plate. The running board will be bolted to the modules substructure to facilitate removal. The running board stepping surface shall comply with the latest version of NFPA 1901.

HANDRAILS, ABOVE THE PUMP PANEL: One (1) pair of 12” handrails shall be installed above the pump panel, one (1) each side. The handrails shall be constructed from 1-1/4” knurled aluminum. The handrails shall be mounted with chrome plated end stanchions. The handrails shall meet or exceed NFPA 1901 requirements.

AIR OUTLET(S), PUMP PANEL: One (1) air outlet complete with shutoff valve, shall be mounted on the right side pump panel. The outlet shall come with a type “C” female connection and plumbed to the chassis air system.

PRESSURE GOVERNOR AND ENGINE MONITORING DISPLAY: A Fire Research PumpBoss series PBA400-A00 pressure governor and monitoring display kit shall be installed. The Kit shall include a control module, intake pressure sensor, discharge pressure sensor, and cables. The control module case shall be waterproof and have dimensions not exceeding 6 ¾” high by 4 5/8”. The control knob shall be 2” in diameter with no mechanical stops, have a serrated grip, and a red idle push button in the center. It shall not extend more than 1 ¾” from the front of the control module. Inputs for monitored engine information shall be from a J1939 databus or independent sensors. Outputs for the engine controls shall be on the J1939 databus or engine specific wiring. Inputs from the pump discharge and intake pressure sensors shall be electrical.

The following continuous display shall be provided:

- Engine RPM; shown with four daylight bright LED digits
- Check engine and stop engine warning LEDs
- Engine oil pressure; shown on a dual color green/red LED bar graph display
- Engine coolant temperature; shown on a dual color green/red LED bar graph
- Transmission temperature; shown on a dual color green/red LED bar graph
- Battery voltage; dual color display green/red LED
- Pressure and RPM operating mode LED
- Pressure/ RPM setting; on a matrix display
- Throttle ready LED

The program shall store the accumulated operating hours for the pump and engine to be displayed with the push of a button. It shall monitor inputs and support audible and visual warning alarms for the following conditions

- High Battery Voltage
- Low Battery Voltage (engine off)

- Low Battery Voltage (engine running)
- High Transmission Temperature
- Low Oil Pressure
- High Engine Coolant Temperature
- Out of Water (visual alarm only)
- No Engine Response (visual alarm only)

The program features shall be accessed via push button located on the front of the control module. There shall be a USB port located at the rear of the control module to upload future firmware enhancements.

MASTER GAUGES, 4-1/2": There shall be two (2) 4-1/2" master gauges provided and installed on the pump operator's a panel. The intake and discharge gauges are liquid filled with a solution to assure visual reading and reduce inner lens condensation. The body of the gauges shall be constructed of Zytel nylon with chrome plated bezels. The face of the gauges shall be Spun Metal with black background and white markings accurate within 1%.

The pressure gauge shall maintain performance of all features and be free from defects in material and workmanship which includes fluid fill leakage and discoloration for seven years.

PRESSURE GAUGES, 2-1/2": The discharges shall be provided with 2-1/2 pressure gauges. The discharge gauges shall be liquid filled with a solution to assure visual reading and reduce inner lens condensation. The body of the gauges shall be constructed of Zytel nylon with chrome plated bezels. The face of the gauges shall be Spun metal with black background and white marking reading from zero to 400 PSI.

The gauges shall be installed at each discharge control on the pump operator's panel. On side mount pump applications with push pull handles, each gauge shall incorporate a Thuemling Instrument Group 1-piece module assembly consisting of the gauge, push-pull and trim bezel. The pressure gauges shall maintain performance of all features and be free from defects in material and workmanship which includes fluid fill leakage and discoloration for seven years.

PRESSURE GAUGES, 2-1/2" CAB MOUNTED: A 2-1/2" liquid filled pressure gauge shall be mounted in the cab in view of the driver. The gauge shall read the auxiliary fire pump pressure. The body of the gauge shall be constructed of Zytel nylon with chrome plated bezel. The face of the gauge shall be Spun Metal with black background and white marking reading zero to 600 PSI. The gauge shall also be backlit for night operations.

GAUGES BEZELS, COLOR CODED: The pump panel master and pressure gauges bezels shall be color coded per NFPA requirements.

ENGINE THROTTLE: There shall be a Vernier engine throttle with quick release at the center of the controller. The throttle shall be mounted on the pump panel.

PUMP PANEL TAGS: All discharges, gauges, and controls will be properly indentified by color coded metal tags. The tags will be affixed with 3M industrial adhesive.

PUMP HOUR METER, PUMP PANEL: A 2” pump hour meter (indicating accumulative hours during pump operation) shall be located on the pump panel.

PUMP SYSTEM, HALE QMAX SINGLE STAGE 1500 GPM: A Hale QMAX 1500 GPM pump shall be installed in the apparatus. The pump shall be of the highest quality to include all components, parts and assembly. The manufacture shall provide full warranty. The pump shall be tested at the manufacture’s factory to the performance spec as outlined be the latest NFPA Pamphlet 1901. The pump shall be free from objectionable pulsation and vibration.

The pump shall be driven by a driveline from the truck transmission.

DRIVE UNIT: The drive unit shall be cast and completely manufactured and tested at the pump manufacturer’s factory. The drive unit shall be of sufficient size to withstand up to 16,000 ft lbs torque of the engine and both road and pump operations conditions. The drive unit shall be designed with ample capacity for lubrication reserve to maintain proper operating temperature. The pump ratio shall be selected by the apparatus manufacture to give maximum performance with the engine and transmission selection. If the drive unit is equipped with power shift, the shifting mechanism shall be heat-treated, hard-anodized aluminum power cylinder, with stainless steel shaft. An in-cab control for rapid shift shall be provided that locks in road or pump. Three (3) warning lights with plates shall be provided to alert the operator when the drive unit has fully shifted from road to pump position. Two (2) lights shall be located in the cab next to the pump shift and one (1) on the pump panel next to the throttle.

PUMP PTO AP25 HALE: The pump shall be power take off driven Hale AP25 single stage centrifugal booster pump. PTO controls shall be located at the driver’s position inside the cab. The pump shall be capable of producing a capacity of 250 GPM at 150-PSI net pump pressure. The system shall incorporate the use of a steel suction manifold with 4” chrome adapter. A 3” clapper check valve shall be installed between the suction manifold and the tank-to-pump valve to prevent pressure surge expanding the tank. The system shall also contain a steel discharge manifold system that allows for a direct flow to all discharge valves.

PUMP PACKING GLANDS: The pump shaft shall have only one packing gland located on the inlet side of the pump. It shall be of split design for ease of repacking. The packing gland must be a full circle threaded design to exert uniform pressure on the packing and to prevent “cocking” and uneven packing load when it is tightened. It shall be easily adjusted by hand with no special tools or wrenches required. The packing rings shall be of a unique, permanently lubricated, long life graphite composition and have sacrificial zinc foil separator to protect the pump shaft from galvanic corrosion.

PUMP SHIFT: An air operated pump shift shall be installed in the chassis cab to engage the fire pump. Provisions shall be made for placing the pump drive system in operation using controls switches that are clearly identified and within convenient reach of the driver while in the cab. A green indicator light shall be installed in the cab labeled “PUMP ENGAGED”. A green indicator light in the cab and a green indicator light located at the pump panel position shall be provided and shall be energized when both the pump shift has been complete and the chassis transmission is engaged in pump gear.

The light in the driver compartment shall be labeled “OK TO PUMP”. The light on the pump panel shall be positioned adjacent to and preferably above the throttle control and shall be labeled “WARNING: DO NOT OPEN THROTTLE UNLESS LIGHT IS ON”. The green light on the pump panel shall be energized when the pump is engaged, the transmission is in drive, and the parking brake is set.

LIGHT PUMP PTO INDICATOR: A green light to indicate that the PTO is in gear shall be mounted in the cab and on the pump panel.

PTO, FIRE PUMP: A clutch driven 10-bolt engine driven PTO (Power take Off Unit) installed on the EVS transmission to run the fire pump. The output side of the PTO shall have a pad or keyed 1.25” shaft. A switch located in the cab shall be furnished to activate the PTO. A neutral switch interlock shall be provided preventing accidental engagement of the PTO unless the transmission is in neutral position.

PUMP PRIMING SYSTEM: A Hale model ESP 12 volt positive displacement vane primer shall be installed. The primer shall be electrically driven and conform to the current NFPA Pamphlet. The system shall be oil-less and environmentally safe. It shall contain an electric rotary vane type positive displacement primer that operates off a 12 Volt power. The primer motor shall be totally enclosed to prevent dust, dirt and water from penetrating. The control shall be pump panel mounted to operate the priming valve and start the priming motor.

PUMP ANODE(S): Three (3) anodes shall be installed on the pump for corrosion protection. These anodes shall be constructed with alloy meeting specification MIL-A-24779. The pump shall have one anode on each intake section and one anode on the discharge section of the fire pump. The anode shall have a central stainless steel core to prevent anode breakage that can lead to clogged nozzles (no exceptions).

Each anode shall have an internal probe that detects when the anode has worn to the point the anode no longer provides adequate protection for the pump. The internal probe shall be connected to a monitoring box via a single wire and a sealed weatherpak connection. Each anode shall have an NPT thread to allow replacement and proper sealing and removal.

MASTER DRAIN, VALVE: There shall be a master drain valve recessed mounted below the pump module under the side running board, connecting all drain lines with the capacity to discharge water simultaneously from all locations to below the chassis frame rails.

U.L. TEST POINTS: An underwriters Laboratories approved engine speed counter shall be located on the pump panel to provide a means to certify the tachometer. In addition, two (2) U.L. test plugs shall be pump panel mounted for testing of vacuum and pressures.

U.L. CERTIFICATION, 1500 GPM: The vehicle shall be third party tested and certified by Underwriters Laboratories.

The pump shall meet and perform the following test to receive a U.L. Certification.

- 100% of rated capacity at 150 PSI net pump pressure
- 100% of rated capacity at 165 PSI net pump pressure
- 70% of rating capacity at 200 PSI net pump pressure
- 50% of rated capacity at 250 PSI net pump pressure

PUMP TEST CERTIFICATION PLATE: A permanently affixed plate shall be installed at the pump panel. It shall provide the rated discharge and pressure together with the speed of the engine as determined by the certification test for each unit. It shall also provide the position of the parallel/series pump used and the no load governed speed of the engine as stated by the engine manufacture on a certified brake horsepower curve.

A NFPA WARNING label shall be provided on the pump panel.

PUMP MOUNTING, AUXILIARY PUMP: Extra heavy-duty mounting brackets shall be bolted to the chassis frame rails for the installation of the auxiliary fire pump. The mounting brackets shall be positioned aligning the pump to insure the angular velocity of the driveline joints are the same at each end allowing for full capacity performance with minimal to no vibration.

SUCTION HEADERS (2): A short 6” NST gated suction header with removable screen and long handled cap shall be provided on the left and right sides of the pump.

There shall be a Hale Model MIV-Electrically operated intake valve with indicator light packages on the suction of the pump. The valve shall have a bronze body with sealed gear drive and built in pressure relief valve. A bleeder valve shall be provided.

INTAKE RELIEF VALVE: There shall be an Akron model 59 suction side relief valve provided in the pump system. The relief valve is adjustable from 50-175 psi and set at the factory at 125 psi.

PRESSURE RELIEF VALVE HALE TOTAL PRESSURE: There shall be a pressure relief valve provided. This automatic pressure control device shall be a single bronze variable pressure setting relief valve of ample capacity to prevent an undue reassure rise as per NFPA Pamphlet # 1901. An increase in pump pressure shall open the normally closed valve. A control light on the pump panel shall be installed to signal when open. In event of relief control failure, the pump is to remain operable for the complete range of the pump’s rated capacity, without requiring the closing of any emergency or “in case of failure” (off/on) valves.

TANK TO PUMP: One (1) 3” ball valve shall be installed between the pump and the water tank. The tank to pump valve shall be a quarter turn fixed pivot design constructed from bronze. The valve shall be controlled by a chrome push/pull locking “T” handle installed at the left pump panel.

This tank to pump valve shall be for the main pump.

A 3” clapper check valve shall be installed between the suction side of the pump and the tank-to-pump valve. This 3” clapper valve shall remove the possibility of a water surge expanding the booster tank.

The pump system shall have an integral discharge manifold system that allows a direct flow of water to all discharges.

TANK TO PUMP: One (1) ball valve shall be installed between the pump and the water tank. The tank to pump valve shall be a quarter turn fixed pivot design constructed from bronze. The valve shall be electrically controlled from the pump panel.

This tank to pump valve shall be for the auxiliary pump.

TANK FILL: There shall be 2” pump to tank fill line installed with a 2” inline bronze valve and high-pressure flexible hose tested to 1200 PSI. The valve shall be (locking T handle) push-pull controlled at the pump panel.

FILL SUBSURFACE/RETURN LINE: There shall be one (1) subsurface/return line installed in the tank. The line shall prevent aeration of the water in the booster tank under low water conditions. The lines piping shall be the same size as the Tank Fill plumping.

ENGINE COOLER: The engine cooler shall be installed in-line from the discharge side of the pump, and installed in the cooling system. There shall be a ½” quarter turn valve installed thru the pump and shall be clearly labeled.

PUMP COOLER: The pump shall have a 3/8”line installed from the pump discharge, to the water tank to cool the pump during long periods of pumping when water is not being discharged. The pump cooler shall be controlled from the pump panel by a 3/8” valve consisting of a cast bronze body with ¼ turn chrome plated bronze ball, reinforced Teflon seals, and blow-out-proof stem rated to 600 pounds.

The valve shall be installed thru the pump panel and clearly labeled.

PLUMBING SYSTEM: All suction and discharge lines 2” or larger shall be constructed of a minimum of Schedule 40 galvanized steel pipe where vibration or chassis flexing may damage or loosen threaded pipes, Victaulic or Roustabout coupling shall be used. All suction and discharge outlets shall have National Standard Threads (NST) and designed for 500 PSIG including valves, drain cocks, lines, intake, and outlet closures, excluding the tank fill and tank to pump lines (tank side of the valves).

STAINLESS STEEL FOAM MANIFOLD: The foam manifold shall be constructed of stainless steel.

PUMP/PLUMBING PAINT: The pumps and all intakes, discharges, manifolds, and associated valves shall be painted black.

AKRON PUSH-PULL CONTROL VALVE PACKAGE: All discharge valves shall be Akron Heavy-Duty Swing-Out push-pull valves controlled from the pump panel. All valve packages shall meet current NFPA 1910 Standards for valve operating speeds when controlled by gear, electric actuator, or slow close device.

SUCTION, 2-1/2" LEFT FRONT PANEL: One (1) 2-1/2" swing operated ball valve shall be installed at the pump panel, left front plumbed to the suction side of the pump with 2-1/2" piping, 2-1/2" FNST chrome inlet swivel, brass inlet strainer, chrome plug with chain, and ¾" drain valve. Appropriate WARNING plate information shall be affixed.

SUCTION, 2-1/2" RIGHT FRONT PANEL: One (1) 2-1/2" swing operated ball valve shall be installed at the pump panel, right front plumbed to the suction side of the pump with 2-1/2" piping, 2-1/2" FNST chrome inlet swivel, brass inlet strainer, chrome plug with chain, and ¾" drain valve. Appropriate WARNING plate information shall be suffixed.

INTEGRAL DROOP ELBOWS: All 2-1/2" side discharge outlets shall terminate with chrome-plated 30-Degree elbows with 2-1/2" MNST threads and chrome cap and chain.

FRONT BUMPER DISCHARGE: There shall be one (1) front discharge installed thru the gravelshield, driver's side outboard of the frame rail. The front bumper discharge shall terminate with 2"NPT X 1-1/2" NST with a 90 degree swivel. One (1) 2" brass valve with ¾" drain shall be installed on the discharge side of the pump plumbed to the front swivel with flexible high-pressure hose and Victaulic stainless steel coupling tested to 1200 PSI. The front discharge shall be push/pull controlled with gauge at the pump panel. A tread plate stop shall be provided preventing the front bumper discharge swivel from contacting the cab.

BOOSTER REEL: One (1) Hannay aluminum booster reel with aluminum discs shall be installed over the pump compartment. The reel shall be plumbed with 1-1/2" high-pressure flexible hose, tested to 1200 PSI, with stainless steel coupling. The reel shall be constructed utilizing an aluminum-welded base. A 12-volt electric rewind motor shall control the chain driven reel. The booster reel shall have an automatic brake to prevent the booster hose from unwinding. The reel shall have a capacity for 200" of 1" booster hose. A rewind switch shall be provided at the pump panel. All electric switch connections shall be coated to protect against moisture. A gear driven manual rewind shall be included.

200' feet of hard booster hose shall be provided. Also, chrome rollers and guides shall be provided on each side of the pumper. The reel shall be located on the driver's side of the dunnage area and nozzle holder shall be installed at a location designated by the customer.

NO. 1 CROSSLAY, 1-3/4" DOUBLE LAY: One (1) pre-connected crosslay compartment shall be provided above the side mount pump panel accommodating 200' of 1-3/4" double jacket hose. Stainless steel nylon guided rollers shall be installed at each end with stainless steel scuff plates around the perimeter to protect the painted surface.

One (1) 2" ball valve with mechanical swivel shall be installed. The valve shall be plumbed to the crosslay with 2" high-pressure flexible hose and stainless steel couplings. The high pressure hose shall be tested to 1200 PSI. The crosslay valve shall be push-pull controlled with a gauge at the pump panel. Each discharge shall be equipped with a ¾ quarter-turn drain valve.

NO. 2 CROSSLAY, 1-3/4" DOUBLE LAY: One (1) pre-connected crosslay compartment shall be provided above the side mount pump panel accommodating 200" of 1-3/4" double jacket hose. Stainless steel nylon guided rollers shall be installed at each end with stainless steel scuff plates around the perimeter to protect the painted surface.

One (1) 2" ball valve with mechanical swivel shall be installed. The valve shall be plumbed to the crosslay with 2" high-pressure flexible hose and stainless steel coupling. The high pressure hose shall be tested to 1200 PSI. The crosslay valve shall be push-pull controlled with a gauge at the pump panel. Each discharge shall be equipped with ¾ quarter-turn drain valve.

CROSSLAY DIVIDER: One (1) crosslay hose bed divider shall be provided manufactured from ¼" (.250") smooth aluminum plate. Extruded aluminum base mounted in an extruded track for horizontal adjustment with radius corners and DA sanded to prevent damage to the hose. A gloved hand hold at each end may be required per customer.

ALUMINUM/HYPALON CROSSLAY COVER: There shall be one (1) double crosslay cover provided, constructed of 1/8" aluminum tread plate with stainless steel piano hinge, chrome lifts handles, and two (2) hook latches. Note: the cover shall be strong enough to hold the weight of a 250 pound fire fighter.

The Hypalon end flaps shall be secured using footman loops and shall meet current NFPA requirements for inadvertently deploying hose. The end laps shall be black in color.

DISCHARGE, 2-1/2" LEFT FRONT PUMP PANEL: One (1) Akron 2-1/2" Heavy Duty ball valve with ¾" drain shall be installed at the pump panel left front plumbed to the discharge side of the pump and controlled with a push-pull handle from the pump panel.

DISCHARGE, 2-1/2" LEFT REAR PUMP PANEL: One (1) Akron 2-1/2" Heavy Duty valve with ¾" drain shall be installed at the pump panel, left rear, plumbed to the discharge side of the pump controlled with a push-pull handle from the pump panel.

DISCHARGE, 3" RIGHT REAR PUMP PANEL: One (1) Akron 3" Heavy Duty (Sol-Close) ball valve with ¾" drain shall be installed at the pump panel, right rear plumbed to the discharge side of the pump equipped with a 3" NST threaded chrome cap and chain, push-pull controlled at the pump panel. The discharge shall also be equipped with an Elbow 3" FNST X 5" Storz, 30 Degree, Kochek SKE53R.

DISCHARGE, 2-1/2" RIGHT FRONT PANEL: One (1) Akron 2-1/2" Heavy Duty ball valve with ¾" drain shall be installed at the pump panel, right front, plumbed to the discharge side of the pump controlled with a push-pull handle from the pump panel.

DECK GUN PLUMBING, 3": One (1) Akron 3" Heavy Duty (Slo-Close) inline valve with ¾' drain shall be plumbed to the Deck Gun discharge outlet with 3" pipe terminating 3" FNPT X four (4) bolt flange electrically controlled at the pump panel. A second electric valve control for the deck gun discharge shall be provided in the dunnage area, near the monitor.

REMOTE CONTROL TELESCOPING MONITOR PIPE: A Task Force Tips Model XGA38PL-RL 3” electrically telescoping waterway shall be installed. The waterway shall be capable of being lowered to the deck level (or into a monitor well) for storage and transportation, it shall be capable of being raised to an extended height of 18” using Auxiliary 1 push button and retract after the monitor has been parked by pressing the park button on the Task Force Tips RC monitor control stations or from optional panel mounted push buttons. The unit shall include a 12 volt motor cable for moving the waterway to either the raised or lower position while maintaining the ability to horizontally rotate the monitor device 360 degrees. The motor shall be weatherproof in design and have an accessible manual override control for use in the event power failure occurs. An interface box with cables and waterproof plugs shall be provided for the connection of the power, monitor, Extend-A-Gun RC and optional push button controls.

A sensor shall be located on the waterway that signals a 12 volt indicator light installed in the cab to illuminate indicating the monitor is raised.

The aluminum riser shall have a 3” waterway hard coat anodized finish, furnished with a 3” male NPT inlet coupling and a TFT Code RLM male connection for a TFT remote control monitor with TFT code RLF female inlet. The unit shall be covered by a five year warranty.

ELECTRIC MONITOR: A Task Force Tips Hurricane RC, model XFIH-E11A remote controlled monitor shall be installed. The monitor shall be controlled by a monitor mounted membrane switch panel with functions that control rotation, elevation, and nozzle patterns, oscillate, park, auxiliary 1 and 2.

The monitor shall have the following travel capabilities: Full 450 degrees of horizontal rotation with travel 225 degrees left and right of center, full 135 degrees of vertical travel with stops at 90 degrees above and 45 degrees below horizontal, field changeable rotation stops shall be provided at 45, 90 and 135 degrees left and /or right of center, flow capability of 1250 GPM with maximum operating pressure of 200 PSI.

The monitor shall be configured with a 3” ANSI 150 Flange inlet and 2-1/2” male NH outlet. The unit shall be covered by a five year warranty.

A Task Force Tips Master Stream 1250, model M-ERP1250NJ automatic nozzle with electrically operated pattern control shall be provided. The nozzle design shall allow for straight stream through dense wide fog patterns. The nozzle shall have a 2-1/2” female NH swivel rocker lug coupling.

A Task Force Tips model Y4E-CT-30 Tethered Monitor operator station shall be supplied. The operator station allows the electric monitor to be controlled from a handheld pendant. The pendent shall plug into a panel mounted receptacle.

A Task Force Tips Model Y4E-TXRX wireless monitor operator station shall be supplied. All connection, interface equipment needed to make the wireless unit work shall be supplied.

A Task Force Tips Model MST-4NJ- 4 stacked tips 2-1/2” NH shall be supplied, items shall be shipped lose for fire department installation.

A Task Force Tips Model XF-SS10- Stream straighter 10” long 2-1/2” NH shall be supplied, item shall be shipped lose for fire department installation.

PRECONNECT, 1-1/2” LEFT REAR HOSEBED: One (1) 1-1/2” pre-connect shall be installed in the left rear of the apparatus terminating with a 1-1/2” FNPT X 1-1/2” MNST plumbed with an Akron 2” Heavy Duty ball valve with 3/4“ drain, chrome cap, chain and controlled from the pump panel. The controls shall be push-pull.

DISCHARGE, 2-1/2” LEFT REAR: One (1) Akron 2-1/2” Heavy Duty ball valve with ¾ “ drain shall be plumbed to the left rear of the apparatus terminating with 2-1/2” FNPT X 2-1/2” MNST with chrome cap and chain and controlled at the pump panel. The controls shall be push-pull.

FOAM SYSTEM: There shall be a Foam Pro 2001 fully automatic electronic direct injection foam proportioning system provide and installed on the apparatus. The system shall be capable of dispensing Class A foam concentrates and Class B foam concentrates. The system shall be equipped with a digital electronic control display and shall be installed on the pump panel. The proportioning system shall meet NFPA standards appropriate for the application. Full details on the system shall be supplied by the apparatus manufacture.

GUAGES, FOAM LEVELS: Fire Research Tank Vision Model WLA260-B00 tank indicator shall be installed. The indicator shall show the volume of Class A foam concentrate in the tank on (9) easy to see super bright LED’s. A wide view lens over the LED’s shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of aluminum, and be mounted on the pump panel.

Fire Research Tank Vision Model WLA270-A00 tank indicator shall be installed. The indicator shall show the volume of Class B foam concentrate in the tank on (9) easy to see super bright LED’s. A wide view lens over the LED’s shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of aluminum, and be mounted on the pump panel.

MANUAL DUAL TANK SYSTEM: A Foam Pro manual dual tank system shall be provided for switching from foam tank A to foam tank B via a manual valve located on the pump panel. The dual tank valve shall also provide a clean water flush of the foam concentrate pump upon foam tank change over. The system shall automatically read the selected foam concentrate tank low-level sensor and display.

FLOWMETER, 2-1/2” TEE MOUNT W/COUPLING KIT: There shall be a paddle wheel style flow meter mounted in a 2-1/2” NPT pipe tee for mounting in a 2-1/2” discharge line. A groove less Victaulic coupling shall be provided for installation of the flow meter. A water check valve shall be installed before the flow meter and between the water pump and the foam injection point.

OPERATING SYSTEMS INSTRUCTION PLACARD, DUAL TANK: There shall be a placard installed on the pump panel, a schematic of the Foam Pro dual tank operating system.

FOAM PROPORTIONING SYSTEM TEST: NFPA 1901 PERFORMANCE REQUIREMENTS: The proportioning system shall be capable of proportioning foam concentrate in accordance with the foam concentrate manufactures recommendation of the type of foam concentrate used in the system over the systems

design range of flow and pressure. The foam proportioning system water flow characteristics and the range of proportioning ratios shall be specified. The foam system shall comply with NFPA 1901 Chapter 17.0 as it relates to the specified system.

FOAM TANK PIPING: The foam supply line shall be non-collapsible. There shall be a means provided to prevent water backflow in to the foam proportioning system and storage tanks. Either a filter or strainer shall be provided on the foam concentrate supply side of the foam proportioning to prevent any debris that may affect the operation of the foam system. The strainer assembly shall consist of a removable straining element, housing, and retainer. The assembly shall allow full flow capacity of the foam supply line.

FLUSHING: Foam system flush lines shall be provided as required by the foam system manufacturer. The design shall incorporate a means to prevent water backflow into the concentrate tanks or water tank during flushing operations. Provisions shall be made to flush all common lines to prevent contamination of dissimilar foam concentrates.

CONTROLS FOR FOAM SYSTEM: The foam proportioning system operation controls shall be located on the pump panel and shall be clearly labeled. All foam proportioning systems that require flushing shall provide controls, which enable the operator to flush the system.

NAME PLATE, LABELS, and INSTRUCTION SPECIFICATIONS: There shall be a nameplate provided on the pump panel that is clearly marked with the identification and function of each control gauge and indicator related to the foam proportioning system. There shall be a label provided on the pump panel that identifies the type of foam concentrate the system is designed to use. The label shall state the minimum/maximum foam proportioning rated system flow and pressure. Foam proportioning system instruction plate shall be provided.

FOAM PROPORTIONING SYSTEM TESTING: The apparatus manufacture shall test the accuracy of the foam proportioning system prior to delivery of the apparatus.

FOAM TANKS TWO (2): There shall be two (2) 20 gallon foam tanks, designed as an integral part of the water tank and shall have manual fill tower. The fill tower shall be constructed of ½" PT3tm polypropylene and shall be a minimum dimension of 8" X 8" outer perimeter. Each foam fill tower shall be constructed of a colored material (yellow, green, and black) indicating which tower is to receive each type of foam utilized. The capacity of the tank shall be engraved on the top of the fill tower lid. The tower shall be located in the right front corner of the tank unless otherwise specified. The tower shall have a ¼" thick removable polypropylene screen and a stainless steel hinged type cover. Inside the fill tower, approximately 1.5" down from the top, there shall be an anti-foam fill tube that extends down to the bottom of the tank. A pressure vacuum vent shall be provided in the lid of the fill tower.

FOAM OUTLETS: Foam shall be plumbed to the following outlets.

- Front Bumper discharge
- No. 1 Crosslay

- No.2 Crosslay
- Rear per-connected 1-1/2” Left Side
- Hose Reel

WATER TANK: The tank shall have a capacity of 750 U.S. gallons and shall be constructed of PT3tm polypropylene materials. This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. The tank shell thickness may vary depending on the application. The tank shall be internally baffled per manufactures and NFPA requirements.

ISO CERTIFICATION: The tank manufacturer shall be ISO 9001:2008 certified. The ISO certification must be to the current standard in effect at the time of design and fabrication of the tank.

DESIGN, TANK: The tank manufacture shall provide design, specification, and drawing submittals for customer approval.

TANK CONSTRUCTION: The booster and foam tanks shall be of a specific configuration and is designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include Poly Pro Seal “tm” technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method shall provide a liquid barrier differing leak protection in the event of a weld compromise. The top of the tank is fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8” PT3tm polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow.

All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength as part of the tank’s unique full floor design. Tolerances in the design allow for maximum variation of 1/8” on all dimensions.

WATER FILL TOWER AND COVER: The tank shall have a combination vent and manual fill tower cover. The fill tower shall be constructed of ½” PT3 “tm” polypropylene and shall be a minimum dimension of 8” X 8” outer perimeter. The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower and cover shall be located in the left front corner of the tank. The tower shall have a ¼” thick removable polypropylene screen and a PT3 “tm” poly hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the tower there shall be a combination vent/overflow pipe. The vent/overflow shall be a minimum of schedule 40 ploy pipe with a minimum I.D. of 4” that is designed to run through the tank and shall be piped to discharge water behind the rear wheels as required by NFPA 1901.

SUMP: There shall be one (1) sump standard per tank. The sump shall be constructed of a minimum of ½” PT3 “tm” polypropylene and be located in the left front quarter of the tank. On all tanks that require a front suction, a 3” schedule 40 polypropylene pipe shall be installed that shall incorporate a dip tube

from the front of the tank to the sump location. The sump shall have a minimum 3” NPT threaded outlet on the bottom for a drain plug per NFPA. All tanks shall have an anti-swirl plate located approximately 3” above the inside floor.

OUTLETS: There shall be two (2) standard tank outlets: one for the tank-to-pump suction line, which shall be sized to provide adequate water flow to the pump and one for tank to fill line, which shall be sized according to the NFPA minimum size chart for booster tanks. All tank fill coupling shall be backed with flow deflectors to break up the stream of water entering the tank and be capable of withstanding sustained fill rates of up to 1000 GPM. All auxiliary outlets and inlets shall meet all NFPA guidelines in effect at the time of manufacture.

MOUNTING: The UPF Poly-Tank shall be installed in the apparatus per the tanks manufactures requirements/specifications. The apparatus manufacture shall provide complete details for tank installation.

CAPACITY CERTIFICATION: All water and foam tanks shall be tested and certified as to capacity on a calibrated and certified tiling scale. Each Ploy-tank shall be delivered with a certification of capacity delineating the weight empty and full and the resultant capacity based on weight.

TANKNOLOGY tm Tag: A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QA code readable by commercially available smart phone.

WATER TANK SIZE CERTIFICATION: The manufacture shall certify the capacity of the water tank prior to the delivery of the apparatus. This capacity shall be recorded on the manufacture’s record of construction and certification

FILL TOWER PARTITION: There shall be one (1) partition installed around the fill tower in the front of the hose bed constructed of aluminum smooth plate.

GAUGE, WATER LEVEL: A Fire Research Tank Vision Model WLA200-A00 tank indicator kit shall be installed. The kit shall include an electronic indicator module, a pressure sensor, and 10” of sensor cable. The indicator shall show the volume of water in the tank on nine (9) super bright LED’s. A wide view lens over the LED’s shall provide a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of aluminum, and have a distinctive blue label. The program shall support self-diagnostics capabilities, self-calibration, and a data link to connect remote indicators. Low water warning shall include flashing LED’s at ¼ tank, down chasing LED’s when the tank is almost empty. The water indicator shall be mounted on the pump panel.

The indicator shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the water tank near the bottom.

GAUGE, MINI WATER LEVEL: A Fire Research Tank Vision Model WLA205-A00 miniature tank indicator shall be installed in the cab. The indicator shall show the volume of the water tank on five (5) easy to see bright LED’s. A wide view lens over the LED’s shall provide viewing angle of 180 degrees. The miniature

indicator shall receive input information from the primary tank indicator. The indicator shall be mounted in the cab within plane view of the driver.

GAUGE, AUXILAIRY WATER LEVEL: There shall be a pair of Whelen "PS Tank" water level lights, with 96 steady burn green, blue, amber, and red LED's. The light shall provide bright, easy indication of water status. The unit is surface mounted, has low current consumption, fully encapsulated, and carries a five (5) year warranty from Whelen. The lights shall be mounted per customer requirements, typically one each side on or near the cab. The unit shall activate with the application of the parking brake.

APPARATUS BODY: The apparatus body constructions and types of materials used in the construction shall be proposed by the manufacture. In the bid/specifications the manufacture shall provide complete details and drawing of the proposed body build –up. The manufacture shall use best practices, modern engineering, and excellent workmanship. The manufacture shall construct and design the body for the extreme use, conditions, and duty the fire service demands of it vehicles.

Sub-frame details and specification shall be supplied with the bid.

BODY TYPE: Shall be rescue type with "H" back design.

HOSE BED HEIGHT: The hose bed approximate height from the ground to the floor of the hose bed shall be approximately 72".

The hose bed shall be capable of carrying:

- 200' of 1-3/4" double jacket fire hose left side (lower)
- 200' of 1-3/4" double jacket fire hose left side upper (pre-connect)
- 800' of 2-1/2" double jacket fire hose
- 600' of 5" large diameter supply hose

CROSSLAY BED HEIGHT: The hose bed approximate height from the ground to the floor of the hose bed shall be approximately 67".

COMPARTMENTATION:

LEFTSIDE: There shall be one (1) left front compartment installed ahead of the rear axle. This compartment shall have a roll-up door. The interior compartment dimensions shall be approximately 36"W X 71"H X 28"D in the lower section and approximately 15"D in the upper section. The compartment shall have a useable door opening of approximately 33"W X 60.5"H.

There shall be one (1) compartment installed over the wheel well. This compartment shall have one (1) roll-up door. The compartment shall be approximately 50"W X 38.25H X 15"D. The compartment shall have a useable door opening of approximately 47"W X 28"H.

There shall be one (1) left rear compartment installed behind the rear axle. This compartment shall have one (1) roll-up door. The interior dimensions shall be approximately 44"W X 71"H X 15"D in the upper

section and transverse in the lower section. The compartment shall have a useable door opening of approximately 33”W X 60.25”H.

RIGHT SIDE: There shall be one (1) right front compartment installed ahead of the rear axle. This compartment shall have one (1) roll-up door. The interior compartment dimensions shall be approximately 36”W X 71”H X 28”D in the lower section and 15”D in the upper section. The compartment shall have a useable door opening of approximately 33”W X 60.25H.

There shall be one (1) compartment installed over the wheel well. This compartment shall have one (1) roll-up door. The compartment shall be approximately 50”W X 38.25”H X 15”D. The compartment shall have a useable door opening of approximately 47” X 28”H.

There shall be one (1) right rear compartment installed behind the rear axle. This compartment shall have one (1) roll-up door. The interior dimensions shall be approximately 44”W X 71”H X 15”D in the upper section and transverse in the lower section. The compartment shall have a useable door opening of approximately 41”W X 60.25”H.

CENTER REAR: There shall be one (1) compartment installed at the center rear of the apparatus. This compartment shall have one (1) roll-up door. The compartment shall be approximately 46”W X 28”H X 30”D. The compartment shall have a useable door opening of approximately 46”W X 28”H.

Note: The above dimensions are approximate and will depend on final build.

Note: It is the desire of the department that the hose bed sides are even with the top of the cab.

BODY 102” WIDE BODY: The apparatus body shall be 102” wide.

COMPARTMENT DOORS, ROLL-UP: ROM roll-up doors shall be installed on all compartments of the apparatus.

The slats are double-wall (box Frame) Aluminum extrusion. Exterior surfaces are to be flat. Interior surfaces are to be concave to prevent loose equipment from jamming doors. The slats must be anodized to eliminate oxidation. The slats are to have inner-locking end shoes on every slat secured by a Punch-Dimple process. The slats are to have interlocking joints with a folding locking flange. Between each slat shall be a PVC/vinyl inner seal to prevent any metal-to-metal contact.

The track shall be a one piece aluminum, which has an attaching flange and finishing flange incorporated into its design which provides a finished look to installation without additional trim of caulking. The track is to have a replaceable side seal. The side seal shall prevent water and dust intrusion into the compartment.

A full width lift bar, operable by one hand, shall be used as a positive latch for securing compartment doors. The compartment roll-up doors slats and door frame extrusions shall have a finish paint to match the body.

COMPARTMENT, LADDER STORAGE: There shall be one (1) equipment storage compartment installed beside the tank on the right side constructed of 1/8” smooth aluminum plate for the storage of NFPA required equipment. Individual internal compartments shall house one (1) 24’ extension ladder, one (1) 14’ roof ladder, one (1) 10’ folding ladder, and two (2) pike poles with silencing pads made from polypropylene installed on each compartment floor to assist in the loading and unloading of the required equipment.

The compartment shall have a vertically hinged door constructed from 1/8” smooth aluminum plate with stainless steel piano hinge and paddle latch door open mechanism. The door shall be installed utilizing stainless steel nuts and bolts.

STORAGE TUBES, PIKE POLS: Two (2) aluminum tubes shall be installed in the ladder storage tunnel for pike pole storage. The end shall be notched to allow the poles to be locked in place.

STORAGE SLOT, BACKBOARD: There shall be two (2) compartments with the capacity to hold one (1) long backboard. The location shall be one on each side underneath the hose bed cover.

WHEEL WELL AIR BOTTLE COMPARTMENT, LEFT FRONT: There shall be an air bottle compartment located in the rear wheel well left front to house two (2) spare SCBA cylinders. The bottom of the tubes shall be supported to eliminate breakage. The tubes are vented to facilitate moisture drainage. The compartment door shall be a cast aluminum door with a positive latch.

WHEEL WELL AIR BOTTLE COMPARTMENT, RIGHT FRONT: There shall be an air bottle compartment located in the rear wheel well right front to house two (2) spare SCBA cylinders. The bottom of the tubes shall be supported to eliminate breakage. The tubes are vented to facilitate moisture drainage. The compartment door shall be a cast aluminum door with a positive latch.

BODY TRIM: There shall be drip rails installed over the compartment doors openings.

The vertical rear face of the body shall be covered with smooth aluminum plate.

Two (2) handrails shall be located on the rear of the apparatus, one (1) each side. Each handrail shall be constructed of 1-1/4” knurled aluminum. The handrails shall be of sufficient length to meet all standard requirements.

I-ZONE BRACKETS: A pair of I-Zone brackets shall be installed on the rear of the apparatus, one (1) each side. The brackets shall be removable. The mounting base shall be integral with the top handrail stanchion.

FUEL FILL, RECESSED WITH DOOR: There shall be a cast aluminum recessed fuel fill assembly with a non-locking door mounted on the left side of the apparatus body. The fuel fill assembly shall be equipped with a fuel fill cap., retention ring and hinged door. The assembly shall be properly labeled “DIESEL FUEL ONLY”.

MUD FLAPS, REAR: The rear axle mud flaps shall be constructed from hard black rubber and installed at the rear of the body fenders.

RUBRAIL: There shall be an aluminum rub rail installed on the both sides of the lower body compartments.

CHROME FOLDING STEPS, FRONT BODY: There shall be six (6) large chrome folding steps with a minimum surface area of thirty five (35) square inches. The steps shall be mounted on the front face of the forward compartment as directed by the customer.

CHROME FOLDING STEPS, REAR OF BODY: There shall be four (4) rear chrome folding steps installed on the rear of the body. Each step shall have a minimum of thirty five (35) square inches of surface area. Location two (2) each side on the rear of the apparatus.

TOW EYES, REAR: Two (2) ¾" thick rear tow eyes constructed of A-36 steel shall be mounted below the frame at the rear of the vehicle. The tow eyes shall be attached to steel weldments that are mounted to the apparatus. The eyes shall have a minimum dimension of three (3) inches.

HANDRAIL, BELOW HOSE BED: There shall be an intermediate handrail installed on the apparatus below the hose bed. The handrail shall be constructed of 1-1/4" Knurled aluminum. The handrail shall be mounted with chrome plated end stanchions.

HOSE BED DIVEIDERS, HORIZONTALLY HINGED: There shall be one (1) horizontally hinged hose bed divider installed on the apparatus constructed from ¼" smooth aluminum plate, and installed using a stainless steel hinge bolted the length of the hose bed to allow for two (2) independent 1-3/4" hose loads. The location shall be on the driver side of the hose bed.

HOSE BED DIVIDERS: There shall be three (3) hose bed dividers manufactured from ¼" smooth plate with an extruded aluminum base welded to the bottom. The divider shall have an extruded track to slide into allow the hose bed to adjust for different hose capacities. The rear of the divider shall have a 3" radius corner.

HOSE BED COVER: A 1/8" aluminum tread plate hose bed cover shall be provided. The cover shall be Two (2) door types with continuous stainless steel hinges along each side. The hose bed cover shall have four (4) aluminum assist handles and door hold open spring. An open door indicator switch shall be provided and wired to the door open indicator system in the cab.

Two (2) Hypalon end flaps shall be provided at the rear of the hose bed cover. The flaps shall be constructed of 16oz. heavy duty, fire retardant Hypalon. The color of the flaps shall be black.

The end flaps shall be secured using footman loops. The cover shall completely protect the hose load and prevent the hose from inadvertently deploying during normal operation. The hose covers shall be wired to the door ajar system.

The cover shall meet the TIA 03-1 NFPA requirement

SHELF, ADJUSTABLE: There shall be two (2) adjustable shelf (shelves) constructed form 3/16” smooth aluminum. The shelf shall be approximately 29-36”W X 24-28”D. The adjustable track shall be made from aluminum extrusions. Each self shall have a 2” lip on all sides for additional strength. The shelves shall be located in the upper section of compartments L1 and R1.

SHELF, ADJUSTABLE: There shall be one (1) adjustable shelf (shelves) constructed from 3/16” smooth aluminum. The shelf shall be approximately 29-36”W X 24-28”D. The adjustable track shall be made from aluminum extrusions. Each shelf shall have a 2” lip on all sides for additional strength. The shelf shall be located in the lower section of compartment R1 above the rollout tray.

SHELF, ADJUSTABLE: There shall be three (3) adjustable shelf (shelves) constructed from 3/16” smooth aluminum. The shelf shall be approximately 37-48”W X 24-28”D. The adjustable track shall be made from aluminum extrusions. Each shelf shall have a 2” lip on all sides for additional strength. The shelves shall be located in compartments R3 lower section and two (2) in B1.

TRAYS, 250 POUND ROLL OUT: There shall be four (4) roll-out trays supplied, constructed from 3/16” smooth aluminum plate. The tray shall be approximately 19-36”W X 24-28”D. The trays shall have a 3” lip on all sides for additional strength. The trays shall be mounted on heavy duty slides with the combined capacity of 250 pounds. The trays shall be mounted on the floors of compartments L1 and R1. Two (2) trays shall also be mounted in the lower section of compartment R1, the trays shall be adjustable.

TRAYS, 250 POUND ROLL OUT: There shall be two (2) roll-out trays supplied, constructed from 3/16” smooth aluminum plate. The trays shall be approximately 37-48”W X 24-28”D. The trays shall have a 3” lip on all sides for additional strength. The trays shall be mounted on heavy duty slides with a combined capacity of 250 pounds. The trays shall be mounted on the floors of compartments L3 and B1

TOOL BOARD, HINGED ALUMINUM: One (1) 3/16” thick aluminum tool board shall be installed in compartment L2. The board shall be welded to a 2” X 2’” perimeter aluminum extrusion for strength to form a hinged tool board. The tool board shall be secured to a stainless steel piano style hinge bolted to a reinforcing extrusion welded to the front wall of the compartment left side. The resulting hinge mounting shall space the tool board away from the compartment wall sufficiently so that tools may be mounted on both sides of the board. The tool board shall be held in the open position by a gas shock and in the closed position by a non-locking lever latch with 2-point catch.

BODY ELECTRICAL SYSTEM, WELDON VMUX: All body electrical equipment installed shall conform to current automotive electrical system standard, the latest Federal DOT standards, and the requirements of the applicable NFPA Apparatus Standard. Twisted pair shielded wire shall be provided within the electrical system for noise reduction.

The wiring harness shall conform to SAEJ-1128 with GXL temperature properties. All exposed wiring shall be run in loom with a minimum 289F rating. All wiring looms shall be properly supported and attached to body members along the entire run. All wiring shall be mounted to provide protection from water and heat. All connections shall be crimp type with heat shrink tubing with insulated shanks to

resist moisture and foreign debris such as grease and road grime. Weather resistant connector shall be provided throughout to ensure the integrity of the electrical system. Gold contacts shall be used when required for superior connectivity and improved performance. All wiring looms shall be properly supported and attached along the entire run. At any point where wire or looms must pass through metal, rubber grommets shall be installed to protect the wire from abrasion.

Wiring shall be individually and permanently numbered, function and color-coded using an indexing numbering system in which all circuits are categorized by function and shall be permanently marked every three (3) inches on the insulation to allow for easy identification.

The body shall have an in-vehicle networking system, also known as multiplexing, to provide real time or current state diagnostic capability and reduce troubleshooting or down time when compared to a standard point to point wiring scheme, due to the unique features and capabilities of a multiplexed electrical system.

There shall not be an electrical system distribution panel due to the use of electrical system multiplexing. An electrical harness quick disconnect shall be provided to facilitate removal of the body in the future. All circuit breakers located in the body main harnessing and distribution system.

The system shall have the capability of delivering multiple signals via a data bus.

The body includes 3 Hercules nodes acting as peers to each other located at strategic point within the body. Right hand front area of the front body and pump box lighting and controls, left rear of the body area for left side rear lighting controls, and finally in the right rear body area for right side and rear lighting and controls.

The multiplex system shall consist of all solid-state components contained inside sealed aluminum extrusions and/or weatherproof Deutsch enclosures referred to as nodes. Each extruded node shall consist of (24) outputs channels and (19) input channels. Each extruded node is to have a set of diagnostic LED indicators. The system shall also incorporate, as needed, miniature nodes. The mini nodes shall have (12) digital output and (5) inputs. Each mini node must have a set of diagnostic multiple switch signals to be available to the electronics system. All inputs and outputs shall be configured into a scalable electrical harness utilizing Deutsch connectors. The nodes shall not have special mounting requirements.

The system, at a minimum, shall be capable of performing the following functions.

- Load management and sequencing
- Switch Loads
- Receive digital and analog signals
- Perform and report diagnostics
- Continuously report vehicle status
- System is expandable

CAN GATEWAY MODULE: The chassis shall be equipped within optional Gateway Node and shall report "Real Time" drive train data such as engine oil pressure, engine coolant temperature, fuel level, transmission temperature along with many other parameters that is broadcast by the drive train components over the J1939 drive train data link.

12-VOLT TESTING: The apparatus low voltage system shall be tested and certified. A copy of certification shall be provided to the customer with the apparatus.

Reserve Capacity Testing: The unit shall be run until all engines, engine compartment temperatures are stabilized and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load be activated for ten (10) minutes. All electrical loads shall be shut off after ten (10) minutes and the battery system shall then be capable of restarting the engine.

Alternator Performance Test at Idle: Minimum continuous electrical loads shall be activated while the unit is at idle speed.

Alternator Performance Test at Full Load: The total continuous electrical load shall be activated with the engine running up to the manufacture's governed speed. The test duration shall be a minimum of two (2) hours. Activation of the load management system shall be permitted during the test. If however, an alarm is sounded by excessive battery discharge as detected by the system or a system voltage of less than 11.8 volts DC for a 12-volt nominal system for more than 120 seconds, shall be considered a test failure.

Low Voltage Alarm Test: The engine shall be shut off and the total continuous electrical load shall be activated and continue to be applied until the excessive battery discharge alarm activates. The test shall be considered a failure if the alarm has not sounded with 140 seconds after the voltage drop to 11.8 volts.

EMI/RFI PROTECTION: The apparatus shall be manufactured to incorporate the latest designs in the electrical system with components that are state of the art to insure electromagnetic interference (EMI) and radio frequency (RFI) emissions are suppressed at the source. The apparatus shall have the ability to operate in typical fire and rescue situations with no adverse effects from EMI and RFI.

CAB BUZZER WITH DUAL BUTTONS: There shall be a buzzer mounted in the cab that shall alert the driver. The buttons that control the buzzer shall be weatherproof and mounted on the rear of the apparatus body, one on each side.

LIGHTS, 26" LED COMPARTMENT: Three (3) On Scene Solutions Access Series 26" LED lights shall be provided with 15 HB, surface mount LED's per 10" light section and produce a minimum of 200 lumens pre 10" length. Each Access Series shall be capable of operating at a voltage of 9VDC to 14VDC. Each Access Series shall be cuttable in 2" increments and feature a high quality, impact resistant Lexan enclosure.

The light stick shall be waterproof and rated at 100,000 hours of service. The light sticks shall be located in compartments L2, R2, and B1

LIGHTS 58" LED COMPARTMENT: Four (4) On Scene Solutions Access Series 58" LED lights shall be provided with 15 HB, surface mount LED's per 10" light section and produce a minimum of 200 lumens per 10" length. Each Access Series shall be capable of operating at a voltage of 9VDC to 14VDC. Each Access Series shall be cuttable in 2" increments and feature a high quality, impact resistant Lexan enclosure.

The light stick shall be waterproof and rated at 100,000 hours of service. The light sticks shall be located in compartments L1, L3, R1, and R3.

DOOR AJAR SWITCHES: All apparatus body doors shall be provided with an auto door switch. These switches shall operate the compartment interior lights and activate the door ajar indicator on each side of apparatus body when the door is opened. There shall be a red door ajar light mounted in the cab, in view of the engineer to indicate an unsecured door. There shall be a buzzer mounted in the cab that shall alert the driver.

LIGHTS ZONE B/D UPPER REAR BODY: Two (2) Code 3 45 Series Super LED model 45BZR shall be installed, one (1) each side of the upper rear corner of the body. The warning light shall incorporate red LEDs and a red optic hard coated polycarbonate lens. The surface mount module includes a chrome flange and hardware for horizontal mounting.

LIGHTS ZONE C UPPER OUTBOARD: Two (2) Code 3 45 Series Super LED model 45 BZ shall be installed, one (1) each side on the upper rear of the apparatus in the outboard position. The warning light shall incorporate LEDs and an optic hard coated polycarbonate lens. The surface mounts module a chrome flange and hardware for horizontal mounting. The driver's side shall be amber and the officer's side shall be red.

LIGHTS ZONE B/D MIDSHIP LOWER: Two (2) Whelen 700 Series Super LED model 70R02FRR lights shall be installed with one (1) each side midship of the apparatus. The warning lights shall incorporate red Liner Super LED's, a red optic hard coated polycarbonate lens, and utilize a metalized reflector with integrated TIR hybrid optics for maximum output. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated lens/reflector assembly and conformal coated PC board shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant. The self-contained flashing light shall have 14 Scan-Lock flash patterns including synchronize feature and steady burn. The warning light is covered by a five year factory warranty. The surface mount module includes a chrome flange and hardware for horizontal mounting. The lights shall be mounted with one (1) on each side in the body wheel well area.

LIGHTS, ZONE B/D REAR LOWER: Two (2) Whelen 700 Series Super LED models 70R02FRR lights shall be installed, one (1) each side midship of the apparatus. The warning lights shall meet the specifications of the lights listed above. The warning lights shall be located one (1) on each side below compartments L3 and R3.

LIGHTS, ZONE C LOWER: Two (2)0 Whelen 600 Series Super LED model 60R02FRR lights shall be installed, one (1) each side on the lower rear of the apparatus body. The warning lights shall meet the

specifications of the lights listed above. The warning lights shall be part of a cluster of lights mounted within one chrome frame; the light shall be the lower light within the frame.

STOP, TURNAND BACK-UP LIGHTS: The Stop, Turn, and backup lights shall be a Whelen 6000 Series, individual fixtures. Fixtures shall be mounted on each rear face of the body recessed in a model TH64, highly polished, aluminum trim ring. The red stop (LED) light shall be model 60R00BRR, turn light shall be a model 60A00TAR amber LED type with directional arrow, and the backup light shall be model 60J000CU clear halogen light type.

LIGHT, REAR DIRECTIONAL: A Whelen Traffic Advisor model TAL65 shall be provided. The traffic advisor shall incorporate a rectangular extruded black aluminum chassis with six (6) amber 500 Series LED lights. The 500 series lights shall be installed with a clear optic hard coated polycarbonate lens. The 500 series lights shall incorporate 40 amber 5mm LEDs. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The encapsulated coated PC board and foam in place gasket shall provide additional protection against environmental elements.

The solid state traffic advisor shall be vibration resistant. The TAL65 shall include model TACTLD1 control head that includes remote flasher control. The TACTLD1 includes an auxiliary flash option when attached to a +12V DC to flash the traffic advisor. The LED display on the control head shall replicate the TAL65 directional sequence. The traffic advisor control head shall have a rear panel dip switch for the ability to set eight additional Scan-Lock flash patterns. The TAL65 will contain a 17’ interconnecting cable with quick disconnect feature. The LED modules are covered by a five year warranty. The TAL65 shall have four mounting rear PEM nuts/thu-bolt end caps with hardware. The rear directional light shall be surface/recess mounted to the rear body as high as possible.

LIGHTS, HALOGEN SCENE: There shall be Three (3) pairs of Whelen Model 60K000XR 26 degrees scene lights provided and installed on the apparatus body. Each scene light shall have a snap-in 35 watt halogen lamp and chrome plated trim ring flange.

There shall be two (2) scene lights installed, one (1) on each side of the body in the upper corner and two (2) scene lights installed one (1) on each side of the body upper rear corner. The side body mounted scene light shall be controlled be individual scene light switches located in the cab labeled LEFT SCENE and RIGHT SCENE.

There shall be two (2) scene lights installed, one (1) each side of the upper rear outboard corners of the body. The rear scene lights shall be controlled be a light switch in the cab labeled REAR SCENE, and when the transmission is placed into reverse.

CLEARANCE LIGHTS AND REFLECTORS: Clearance lights and reflectors shall be LED lights, which include (2) red markers lights, (4) red rectangular reflectors, (2) amber rectangular reflector and (1) red three light cluster recessed in the rear step.

PARKING LIGHTS, BODY WHEEL WELL: Two (2) Zico ZQL-SS-H7614 parking lights with stainless steel housing and neoprene gaskets shall be installed with one (1) on each side of the body in the wheel well. The lights shall activate when the vehicle is placed in reverse.

LIGHTS, UNDERBODY: There shall be five (5) underbody "Ground Effect" lights shall be installed at a location to be determined during pre-construction. The lights shall illuminate the ground beneath the apparatus, the lights shall have clear lens. The lights shall come on when the apparatus is place in the pump mode.

LIGHT, LICENSE PLATE: A Whelen OS Series LED model 0SC0EDCR shall be provided at the rear of the apparatus to illuminate the license plate.

LIGHTS, LED PERIMETER ILLUMINATION: There shall be four (4) Whelen 3" Round Super LED model 3SC0DCR perimeter illumination lights provided. The perimeter lights shall be mounted under the hose bed cover two (2) on each side, the lights shall automatically activate when the hose bed covers are open.

GENERATOR, ABOVE THE PUMP: There shall be one (1) hydraulic generator mounted above the pump (Dunnage area)

HYDRAULIC GENERATOR: There shall be one (1) Harrison Hydraulic Driven Generator Model Number 8.0LPG-16R/5A rated at 8000 watts, 34/68 amps, 120/240VAC, 60hz, 1 phase utilizing a 10CC bent axis piston drive motor. The system shall be tested prior to shipping and be accompanied with a test report. The system must be capable of producing the rated full power when driven from the vehicle PTO from idle to maximum engine speed. The generator system must be able to operate on a Hot Shift PTO. The generator shall be able to be used while the vehicle is either stationary or in motion. The generator shall be able to remotely turn systems full KW on or off without regard to engine RPM by using a 12VDC switch engaging or disengaging the hydraulic circuit. The switch shall be mounted in the cab. A digital meter containing the volt, amps, and frequency is to be provided and installed in a location, which is away from the weather and water over spray. Compartment R3. The generator shall come with all necessary components to install a completed unit.

GENERATOR METER PANEL: There shall be one (1) Harrison Generator quad meter panel provided and installed. The meter shall provide frequency, line voltage, and ampere for each line. The meter shall be installed in compartment R3.

PTO, GENERATOR: A clutch driven 10-bolt Heavy Duty engine driven PTO shall be installed on the EVS transmission to run the generator. The output side of the PTO shall have a SAE "B" pad or keyed 1.25" shaft. A switch located in the cab shall be furnished to activate the PTO. A neutral switch interlock shall be provided preventing accidental engagement of the PTO unless the transmission is in the neutral position.

LIGHT, GENERATOR PTO INDICATOR: A green light shall be used to indicate that the PTO is in gear, one (1) mounted in the cab and one (1) on the pump panel shall be clearly marked.

BREAKER PANEL: A General Electric breaker box with 240 main breaker and six (6) 120 volt circuit breakers shall be installed. The breaker box shall include a master breaker sized according to the generator output. The breaker box shall be located in a compartment as specified by the engineering department to meet the current NFPA specifications.

120-VOLT ELECTRICAL SYSTEM TESTING: The following 120 volt electrical wiring and associated equipment tests shall be performed.

- Dielectric voltage: A dielectric voltage withstand test 900 volts in one (1) minute.
- Electrical Polarity Verification: There shall be an electrical polarity verification to determine that connections have been properly made.

OPERATIONAL TEST: There shall be the following operational test conducted

- CRANKING TIME: The cranking time until prime mover (generator) starts and runs.
- VOLTAGE, FREQUENCY, AMPERES: the voltage, frequency, and amperes tested at continuous full rated load.
- OPERATIONAL INDICATORS: The prime mover oil pressure, water temperature, transmission temperature, hydraulic temperature, and the battery charge rate, as applicable, the ambient temperature and altitude.
- OPERATIONS TEST: The power source shall be operated at 100% of its nameplate voltage for a minimum of two (2) hours.

RECEPTACLES, 15 AMP/120 VOLT TWIST LOCK: There shall be two (2) NEMA L5-15 120 volt 15 amp twist-lock receptacles installed and wired to the breaker panel. A weatherproof spring loaded cover shall be installed over the receptacles. The location shall be one each side rear of body. The receptacles shall be switched from the pump panel, right side, left side. Two removable tripods light will be plugged in to the receptacles.

4 WAY JUNCTION BOX: There shall be one (1) Akron Brass electrical junction box Model EJB-L15-15 provided. The electrical junction box shall be constructed of heavy duty, cast aluminum. A carrying handle shall be an integral part of the Junction Box's casting and be large enough to fit a fully gloved hand. The Junction Box shall be internally lite. The faceplates shall be backlit so that plug orientation to the receptacle is quick and easy to align. The electrical junction box shall be equipped with four (4) receptacles with spring loaded snap covers. Three (3) receptacles shall be L5-15 amp twist-locks and one (1) 120 volt 20 amp standard receptacle. The Electrical Junction Box shall be attached to the cord reel.

LIGHT'S TELESCOPING: Two (2) Fire Research Focus Model FCA530-S75 side mount push up telescoping lights shall be installed, wired to the breaker panel and switched from the pump panel. The light pole shall be anodized aluminum and have a knurled twist lock mechanism to secure the extension pole in position. The extension pole shall rotate 360 degrees. The outer pole shall be a grooved aluminum extrusion and qualify as a NFPA compliant handrail. The pole mounting brackets shall have 3-1/2" offset. Wiring shall extend from the bottom with a 4' retractile cord.

The lamphead shall have one (1) quartz halogen 750 watt 120 volt bulb. The bulb will draw 6.3 amps and generate 19,600 lumens. The bulb shall be accessible through the front. The lamphead direct 50 percent of the light onto the action area while providing 50 percent to illuminate the work area. The lamphead angle of elevation shall be adjustable at a pivot in the mounting arm and the position locked with a round knurled locking knob. The lamphead shall incorporate heat-dissipating fins and be no more than 5” deep by 3-3/8” high by 10” wide. Lamphead and mounting arm shall be powder coated. The floodlight shall be UL listed as a light for fire service use.

There shall be two (2) telescoping lights installed on the rear of the cab. The lights shall be controlled by switches located on the pump panel.

LIGHTS TRIPODS: Two (2) Fire Research Focus Model FCA600-S75 Tripod telescopic lights shall be provided. The light poles shall be anodized aluminum and have a knurled twist lock mechanism to secure the extension pole in position. The extension pole shall be a grooved aluminum extrusion. The folding legs shall be aluminum tubing with plastic end caps. The fully extended tripod system shall exceed a height of 11’. Wiring shall extend from the pole bottom with a 4’ retractile cord.

The lamp head shall have one (1) quartz halogen 750 watt 120 volt bulb. The bulb shall draw 6.3 amps and generate 19,000 lumens. The bulb shall be accessible through the front. The lamp head shall direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. The lamp head angle of elevation shall be adjustable at a pivot in the mounting arm and the position locked with a round knurled locking knob. The lamp head shall incorporate heat-dissipating fins and be no more than 5” deep by 3-3/8 high by 10” wide. A wire guard shall protect the lamp head glass. Lamp head and mounting arm shall be powder coated white. The floodlight shall be UL listed as a scene light for the fire service use.

The lights shall be switched from the pump panel; one switch shall activate both lights. The light shall be mounted on the rear of the body.

REEL, ELECTRIC CORD: There shall be one (1) Hannay Model ECR1616-17-18 electric rewind electric cord reel provided. The cord reel shall have 200” of 12-3 wire cord. The reel shall be mounted in compartment R3 upper section and shall be controlled by a 12-volt switch. The cord reel shall be wired to the breaker panel. The electrical cord provided on the reel shall be yellow in color.

CORD ROLLER: There shall be one (1) 4-way roller assembly installed to guide the cord on and off the spool to prevent chafing. A Hannay Model HS-3 cord stop shall be attached to the cord.

PLATE, POWER REWIND REEL: A permanently affixed plate shall be installed in a readily visible location adjacent to the cord reel indicating the following information

- Current Rating
- Current Type
- Phase
- Voltage

- Total Cable Length

BODY PAINT FINISH, SINGLE COLOR/COLOR CODE RED N6916N: The body exterior shall have no mounted components prior to painting to assure full coverage of metal treatments. Roll up doors shall be painted separately to assure proper paint coverage on body, door jambs, and door edges.

All painted surfaces shall follow the following procedure to insure a lasting finish.

- Metal surfaces shall be sanded to remove all burr and imperfections, before etching and treatment.
- A wax and grease solvent shall be used to clean and prep the surface. The surface shall then be rinsed with fresh water. This step removes wax, grease and other surface contaminants. Thus leaving a bright, clean, and conditioned surface.
- A self-etching, metal primer shall be applied next. The self-etching primer shall fill all of the minor imperfections, scratches, etc. in the metal. This step produces a corrosion resisting conversion coating that prevents off oxidation and other surface contaminants leaving a surface that gives excellent paint adhesion.
- A sand able primer shall be sprayed on the metal that seals the surface for the polyurethane paint. A minimum coating thickness of 2MIL shall be applied. Primer is then sanded smooth leaving the best surface for topcoat.
- The apparatus body shall then be painted with a minimum of three (3) coats of color.
- Paint DuPont Red color/code N6916N.

INTERIOR COMPARTMENT FINISH: The interior compartment finish shall be proposed by the manufacture and approved by the customer.

SCOTCHLITE REFLECTIVE STRIP: There shall be a 4” wide scotchlite stripe, with an additional 1” wide stripe located above and below with a 1” space between the strips. The stripes shall meet the current NFPA requirements. The reflective striping shall be white in color. The reflective striping shall run straight from the headlights to the rear of the body on each side and front of the apparatus.

STRIPE, REAR CHEVERON: A minimum of fifty percent of the rear vertical surface of the body shall be overlaid with a reflective material, installed in an alternating “CHEVRON” pattern sloping down and away from the centerline at a 45-degree angle. Each strip shall be 6” wide and the colors of the striping shall be in compliance with the current edition of NFPA 1901.

The Chevron striping shall be 3M red and lime green.

LETTERING: There shall be a maximum of sixty six (66) 3” tall Spun Gold letters applied to the apparatus. The lettering shall also have a one color shade applied.

The letters shall be Spun Gold color with black shading

WARRANTY, BODY PARTS AND LABOR: There shall be a two (2) year extended body mechanical and labor warranty provided with the apparatus. The apparatus shall be free of defects in material and workmanship for a warranty period of two (2) years after date of delivery to the original purchaser.

WARRANTY, CAB/CHASSIS PARTSAND LABOR: The manufacture shall provide a limited parts and labor warranty to the purchaser of the cab and chassis for a period of two (2) years or the first 24, 000 miles, whichever occurs first. The warranty period shall commence on the date the vehicle is delivered to the end user (fire department).

WARRANTY, CAB STRUCTURAL: The cab structure shall be warranted for a period of ten (10) years or one hundred thousand (100,000) miles whichever comes first. The warranty period shall commence on the date the vehicle is delivered to the end user (fire department).

WARRANTY, BODY STRUCTURAL: There shall be a ten (10) year body warranty on the apparatus body. The body is to be free of structural failures caused by defective design or workmanship for a warranty period of ten (10) years after the date of delivery to the end user (fire department). To the original purchaser or 100,000 miles, whichever comes first.

WARRANTY, CAB PAINT: The cab and chassis shall be covered by a limited manufacturer paint warranty which shall be in effect for ten (10) years from date of purchase, in service or the first 100,000 actual miles, whichever comes first.

WARRANTY, BODY PAINT/CRROSION: There shall be a five (5) year paint/corrosion warranty provided. This warranty shall cover perforation, blistering, peeling, or any other adhesion defect caused by defective manufacturing methods or materials selection, for a warranty period of five (5) years or 100,000 miles whichever come first after the date the vehicle is delivered to the end user (fire department).

WARRANTY, FRAME RAIL: The chassis frame and cross members shall be provided with a lifetime materials and workmanship limited warranty to the original purchaser. The warranty shall cover the chassis frame and cross members as being free from defects in materials and workmanship that would arise under normal use and service.

Proposals offering warranties for frames not including cross members shall not be considered.

WARRANTY, MERITOR AXLE: Front Axle and Rear Axle shall be warranted by Meritor for two (2) years with unlimited miles under general service application.

WARRANTY, DEISEL ENGINE: The Cummins engine shall be warranted for a period of Five (5) years or 100,000 miles, whichever comes first.

WARRANTY, TRANSMISSION: The Allison EVS series transmission shall be warranted for a period of five (5) years with unlimited mileage. Parts and labor shall be included in the warranty.

WARRANTY, ANTI LOCK BRAKE SYSTEM: The ABS brake system shall be warranted for a period of three (3) years or 300,000 miles.

WARRANTY, HALE PUMP: Hale Products, Incorporated (HALE) herby warrants to the original buyer that products manufactured by Hale are free of defects in material and workmanship for a period of five (5) years from the date the product is first placed into service or five and one-half (5-1/2) years from date of shipment by Hale., whichever period shall be first to expire. Within this warranty period Hale will cover parts and labor for the first two (2) years and parts for years three (3) through five (5).

LIMITATIONS: Hale's obligation is expressly conditioned on the Product being:

- Subjected to normal use and service.
- Properly installed and maintained in accordance with Hale's Instruction Manuel and Industry Standards as to recommended service and procedures.
- Not damaged due to abuse, misuse, negligence, or accidental causes.
- Not altered, modified, serviced non-routine, or repaired other than by an Authorized Service Facility.
- Manufactured per design and specification submitted by the original buyer.
- Used with an appropriate engine as determined by the engine manufactures published data.
- Excluded are normal wear items identified as but not limited to packing, strainers, anodes, filters, light bulbs, intake screens, wear rings, mechanical seals, etc.

WARRANTY, PLUMBING SYSTEM: There shall be a ten (10) year pump plumbing warranty provided. The warranty covers all plumbing components used in construction of the fire apparatus water/foam plumbing system against defects and workmanship, provided the apparatus is used in a normal and reasonable manner. The warranty is extended only to the original user-purchaser for a period for a period of ten (10) years from the date of delivery.

WARRANTY, WATER TANK: The poly tank manufacturer warranties each tank to free from manufacturing defects in material and workmanship for the service life of the original vehicle. The warranty is transferable with written approval of the manufacturer. Each tank is inspected and tested for leaks prior to leaving the manufacturing facility. The tank shall be installed in the vehicle in accordance to the manufacturer.

There are no warranties, expressed or implied, which extend beyond the description of the face hereof. There is no expressed or implied warranty of merchantability or a warranty of fitness for a particular purpose. Additional, this warranty is in lieu of all other obligations or liabilities on the part of the manufacturer.

MANUAL, CHASSIS OPERATION: There shall be two (2) digital copies of the chassis manual provided with the chassis. The digital data shall include a parts list specific to the chassis model.

MANUAL, ENGINE AND TRANSMISSION: There shall be two (2) printed hard copy sets of the engine operation manual and two (2) printed hard copy sets of the transmission operation manual specific to the model ordered included with the chassis.

MANUALS, APPARATUS BODY: The contractor shall supply, at time of delivery, two (2) sets of complete operation and service documentation covering the completed apparatus as delivered and accepted. The documentation shall address at least the inspection, service, and operations of the apparatus and all major components thereof.

MANUALS, FIRE PUMP: There shall be two (2) copies of the pump manuals provided to the department.

WIRING DIAGRAMS, AS BUILT CAB/CHASSIS: There will be a complete digital set of "AS BUILT' electrical schematics provided at the time of delivery. These schematic will have each circuit properly numbered and in color. The schematic will show each connector in the circuitry and the position in which each circuit enters, exits, or terminates. The schematic will be drawn in such a manner as to allow individual circuitry to be followed throughout the apparatus.

WIRING DIAGRAMS, "AS BUILT" APPARATUS BODY: There will be a complete set of "AS BUILT" electrical schematics provided at the time of delivery. These schematics will have each circuit properly numbered and in color.

The schematic will show each connector in the circuitry and the position in which each circuit enters, exits, or terminates. The schematic will be drawn in such a manner as to allow individual circuitry to be followed throughout the apparatus.

These schematics will not have the circuitry condensed into a single line or sets of lines. Multiple sheets will be acceptable so long as each of the harnesses is properly identified to the connecting sheet and harness. There will be a border around the papers, which contain alpha and numeric characters for indexing coordinate reference. There will be an indexing or pat reference document for quick location of items shown on the schematic.

This document will refer the user to the appropriate drawing, page number and to sections of the drawing by the means of letters and numbers coordinates. The schematic will show all harnesses used in the apparatus cab, chassis and body that is supplied by the chassis and body manufacture.

Any modifications to the manufactured standard harnesses are to be documented and properly indexed for quick identification. A complete wire number, color, and function listing will accompany the schematic.

LADDERS, 10' FOLDING: There shall be one (1) Dou-Safety Model 585-A 10' folding ladder provided with the apparatus. The ladder shall be aluminum and meet or exceed the latest NFPA standards.

LADDER, 14' ROOF: There shall be one (1) Dou-Safety Model 775-A 14' roof ladder provided with the apparatus. The ladder shall be aluminum, single-section with folding steel roof hooks on one end and spike at the other. The ladder shall meet or exceed the latest NFPA standards.

LADDER, 24’ 2-SECTION EXTENSION: There shall be one (1) Dou-Safety Model 900-A, 24’ two- section ladder supplied with the apparatus. The ladder shall be aluminum, with steel spurs on one end. The ladder shall meet or exceed the latest NFPA standards.

30 DEGREE ELBOWS 2-1/2” FNST X 2-1/2” MNST: There shall be one (1) Trident Model 01.010.0 2-1/2” FNST X 2-1/2” MNST chrome plated elbow supplied with the apparatus. The elbow shall have a 30 degree turn down. Location left rear discharge.

30 DEGREE ELBOW 3” FNST X 5” STORZ: There shall be one (1) Kochek Model SKE53R 3” FNST rocker lug X 5” Storz adapter supplied with apparatus. The elbow shall have a 30 degree turn down. Location right side 3” discharge elbow.

CAP, 5” STORZ: There shall be one (1) Kochek Model CC507, 5” Storz cap with chain provided with the apparatus. Location is 3” right side discharge elbow.

WHEEL CHOCKS WITH BRACKETS: There shall be one (1) pair of Ziamatic Model SAC-44 folding wheel chocks with SQCH-44-H Horizontal chock holder mounted on the apparatus body as directed by the fire department. Located below compartment L1

HOLDERA ZIAMATIC UHH-1: There shall be six (6) Zico Model Universal helmet holders provided and installed in the cab in compliance with the latest edition of NFPA 1901. Location TBD

BRACKETS, AIR PACK W/STRAP: There shall be one (1) Ziamatic Model ULLH air pack bracket with strap installed on the apparatus as specified by the Fire Department. Location TBD

PIKE POLES: There shall be Two (2) Nupla Pike Poles with butt grip provided. There shall be one (1) pole 6’ in length and one pole 8’ in length.

TURTLE TILE – COMPARTMENT FLOORS/FLOOR MOUNTED: There shall be Turtle Tile in all compartment floors and floor mounted trays. The color of the tile shall be black.

BOOSTER NOZZLE BRACKET: There shall be one (1) PAC Model 1002 rubber coated bracket to hold the booster nozzle.

Los Banos Fire Department

Specification Type 1 Class A Fire Apparatus

Specifications Compliance

The bidder shall note their compliance on each line by placing a checkmark in the box indicating either: compliance in the Yes column, or non-compliance in the No column. Each line item specification requires checking either the Yes or No box**. Any line item specification left blank shall be considered a non-responsive bid and will be rejected**. Any deviations from the specification, or where submitted literature does not fully support the meeting of the specification, must be clearly cited and explained by the Bidder in the comment section following each specification category. The owner will be responsible for determining specification compliance.

Yes ☐	No ☐	General Intent	1
Yes ☐	No ☐	Bidder Qualifications	1
Yes ☐	No ☐	Quality and Workmanship	2
Yes ☐	No ☐	Factory Inspection Trips	3
Yes ☐	No ☐	Delivery Requirements	3
Yes ☐	No ☐	General Specifications	3
Yes ☐	No ☐	Cab Style	3
Yes ☐	No ☐	Cab Dimensions	4
Yes ☐	No ☐	Chassis Wheel Base	4
Yes ☐	No ☐	Chassis Frame Rails	4
Yes ☐	No ☐	Paint, Frame Rails	4
Yes ☐	No ☐	Frame Warranty	4
Yes ☐	No ☐	Front Bumper	4
Yes ☐	No ☐	Front Bumper Extension	5
Yes ☐	No ☐	Gravel Shield	5
Yes ☐	No ☐	Bumper Compartment, Center	5
Yes ☐	No ☐	Straps, Center Front Bumper Compartment	5
Yes ☐	No ☐	Front Tow Eyes	5
Yes ☐	No ☐	Mechanical Siren	5
Yes ☐	No ☐	Siren Foot Switch	5
Yes ☐	No ☐	Siren Dash Switch, Officer Side	5
Yes ☐	No ☐	Air Horns, Passenger's Side/Driver's Side	5

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Air Horn Reservoir	5
Yes ☐	No ☐	Switch, Horn/Air Horn/Siren Selector	6
Yes ☐	No ☐	Air Horn Dash Switch Officer	6
Yes ☐	No ☐	Speaker, Driver's Side	6
Yes ☐	No ☐	Front Axle	6
Yes ☐	No ☐	Front Suspension	6
Yes ☐	No ☐	Front Shock Absorbers	6
Yes ☐	No ☐	Front Brakes	6
Yes ☐	No ☐	Front Axle Cramp Angle	6
Yes ☐	No ☐	Steering System	6
Yes ☐	No ☐	Front Tires	7
Yes ☐	No ☐	Front Wheels	7
Yes ☐	No ☐	Front Wheel Trim	7
Yes ☐	No ☐	Mud Flaps, Front	7
Yes ☐	No ☐	Rear Axle	7
Yes ☐	No ☐	Rear Suspension	7
Yes ☐	No ☐	Driver Controlled Differential Lock-Up	7
Yes ☐	No ☐	Vehicle Top Speed	7
Yes ☐	No ☐	Rear Brakes	7
Yes ☐	No ☐	Rear Tires	7
Yes ☐	No ☐	Rear Wheels	7
Yes ☐	No ☐	Rear Wheel Trim	7
Yes ☐	No ☐	Brake System	7
Yes ☐	No ☐	Anti-Lock Brakes	8
Yes ☐	No ☐	Park Brake Control	8
Yes ☐	No ☐	Air Compressor	8
Yes ☐	No ☐	Air Governor	8
Yes ☐	No ☐	Air Supply Lines	8
Yes ☐	No ☐	Engine	8

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

Yes ☐	No ☐	Engine High Idle Control	9
Yes ☐	No ☐	Engine Compression Brake	9
Yes ☐	No ☐	Engine Cooling System	9
Yes ☐	No ☐	Radiator	9
Yes ☐	No ☐	Charge Air Cooler	9
Yes ☐	No ☐	Cooling System Fan	9
Yes ☐	No ☐	Radiator Coolant, Long Life	9
Yes ☐	No ☐	Coolant Hoses	9
Yes ☐	No ☐	Auxiliary Engine Cooler	10
Yes ☐	No ☐	Engine Air Intake	10
Yes ☐	No ☐	Alternator	10
Yes ☐	No ☐	Battery System	10
Yes ☐	No ☐	Battery Boxes	10
Yes ☐	No ☐	Battery Jumper Studs	10
Yes ☐	No ☐	Master Battery Disconnect Switch	10
Yes ☐	No ☐	Battery Charger	10
Yes ☐	No ☐	Battery Conditioner Display	10
Yes ☐	No ☐	20 AMP Super Auto-Eject	10
Yes ☐	No ☐	Transmission	10
Yes ☐	No ☐	Transmission Shifter, Push-Button	11
Yes ☐	No ☐	Drivelines	1
Yes ☐	No ☐	Fire Pump Mounting	11
Yes ☐	No ☐	Fuel Tank	11
Yes ☐	No ☐	Fuel Lines	11
Yes ☐	No ☐	Fuel Filter	12
Yes ☐	No ☐	Engine Exhaust System	12
Yes ☐	No ☐	Wheel Well Liners	12
Yes ☐	No ☐	Fenderettes	12
Yes ☐	No ☐	Intermittent Windshield Wipers	12

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Electronic Windshield Fluid Level Indicator	12
Yes ☐	No ☐	Exterior Grab Handles	12
Yes ☐	No ☐	Extreme Duty Cab Interior	12
Yes ☐	No ☐	Sun Visors	12
Yes ☐	No ☐	Glove Box	12
Yes ☐	No ☐	Cab Steps	12
Yes ☐	No ☐	Cab Doors	12
Yes ☐	No ☐	Cab Doors	12
Yes ☐	No ☐	Door Hinges	12
Yes ☐	No ☐	Cab Door Locks	12
Yes ☐	No ☐	Window Regulators	13
Yes ☐	No ☐	Fixed Cab Windows, Left and Right Sides	13
Yes ☐	No ☐	Cab Tilt Lock	13
Yes ☐	No ☐	Cab Tilt Pump	13
Yes ☐	No ☐	Cab Paint Finish, Single Color	13
Yes ☐	No ☐	Front Grill	13
Yes ☐	No ☐	Side Air Intake Grills with Ember Separator	13
Yes ☐	No ☐	Cab Mirrors, Heated/Remote Controlled	13
Yes ☐	No ☐	Rear Cab Step Well	13
Yes ☐	No ☐	Tread Plate Back of Cab	13
Yes ☐	No ☐	Interior Cab Finish	14
Yes ☐	No ☐	Floor Mats Engine Tunnel Coverings	14
Yes ☐	No ☐	Cab Grab Handles, Interior	14
Yes ☐	No ☐	Cab Door Panels	14
Yes ☐	No ☐	Reflective Door Striping	14
Yes ☐	No ☐	Instrumentation	14
Yes ☐	No ☐	Chassis Electrical System	14
Yes ☐	No ☐	Vista IV Color Display, Driver/Officer's Side	14
Yes ☐	No ☐	Vehicle Data Recorder	14

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Seat Belt Warning System	14
Yes ☐	No ☐	Climate Control, Heating/Air Conditioning System	15
Yes ☐	No ☐	A/C Compressor	15
Yes ☐	No ☐	Climate Control Activation	15
Yes ☐	No ☐	Seat Material	15
Yes ☐	No ☐	Seat Color	15
Yes ☐	No ☐	Driver's Seat	15
Yes ☐	No ☐	Officer's Seat	15
Yes ☐	No ☐	Crew Seat, Driver's Side Rear Facing	15
Yes ☐	No ☐	Crew Seat, Officer's Side Rear Facing	16
Yes ☐	No ☐	Crew Seats, Inboard Forward Facing	16
Yes ☐	No ☐	Sliding MDT Station	16
Yes ☐	No ☐	Radio AM/FM Weather Band	16
Yes ☐	No ☐	Radio Installation	16
Yes ☐	No ☐	Radio Antenna Mounts	16
Yes ☐	No ☐	Intercom System, Six (6) Positions	16
Yes ☐	No ☐	Power and Ground Studs	16
Yes ☐	No ☐	12-Volt Power Outlets	17
Yes ☐	No ☐	Electronic Siren	17
Yes ☐	No ☐	Electronic Siren Speaker	17
Yes ☐	No ☐	Back Up Alarm	17
Yes ☐	No ☐	Lights, Cab Dome	17
Yes ☐	No ☐	Light (s), Additional Clear Cab Dome	17
Yes ☐	No ☐	Light (s), Additional Red Cab Dome	17
Yes ☐	No ☐	Light, Door Ajar	17
Yes ☐	No ☐	Map Light, Cab	17
Yes ☐	No ☐	Light, Engine Maintenance	17
Yes ☐	No ☐	Standard Front Lighting	18
Yes ☐	No ☐	Headlights	18

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Day Time Running Lights	18
Yes ☐	No ☐	Turn Signals	18
Yes ☐	No ☐	Turn Signal/Marker Lights	18
Yes ☐	No ☐	LED Cornering Lights	18
Yes ☐	No ☐	Dot Lights	18
Yes ☐	No ☐	Remote Controlled Light	18
Yes ☐	No ☐	Lightbar, 69" Forward Facing	18
Yes ☐	No ☐	Lights, Inboard Lower Front Warning	18
Yes ☐	No ☐	Light, Front Bumper Warning	19
Yes ☐	No ☐	Lights, Cab Wheel Well Warning	19
Yes ☐	No ☐	Cab Ground Lights	19
Yes ☐	No ☐	Light, Cab Scene	19
Yes ☐	No ☐	Back Up Camera System	19
Yes ☐	No ☐	Carrying Capacity Plate	19
Yes ☐	No ☐	Seating Capacity Plate	19
Yes ☐	No ☐	Occupancy/Seat Belt Plate	19
Yes ☐	No ☐	Do Not Wear Helmet Plate	19
Yes ☐	No ☐	Overall Height/Length/Weight Plate	20
Yes ☐	No ☐	Fluid Capacity Plate	20
Yes ☐	No ☐	Movement Warning Plate	20
Yes ☐	No ☐	Do Not Ride Plate	20
Yes ☐	No ☐	Pump Enclosure, Side Control	20
Yes ☐	No ☐	Pump Panels	21
Yes ☐	No ☐	Fully Hinged Pump Panel, Right Side	21
Yes ☐	No ☐	Pump Compartment Access Panel, Front	21
Yes ☐	No ☐	Pump Panel Light, Left Side	21
Yes ☐	No ☐	Pump Panel Light, Right Side	21
Yes ☐	No ☐	Lights, Pump Compartment	21
Yes ☐	No ☐	Running Board W/Hose Tray, Left Side	21

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Running Board, Right Side	22
Yes ☐	No ☐	Handrails, Above the Pump Panel	22
Yes ☐	No ☐	Air Outlet(s), Pump Panel	22
Yes ☐	No ☐	Pressure Governor and Engine Monitoring Display	22
Yes ☐	No ☐	Master Gauges, 4 1/2"	23
Yes ☐	No ☐	Pressure Gauges, 2 1/2"	23
Yes ☐	No ☐	Pressure Gauges, 2 1/2" Cab Mounted	23
Yes ☐	No ☐	Gauges Bezels, Color Coded	23
Yes ☐	No ☐	Engine Throttle	23
Yes ☐	No ☐	Pump Panel Tags	23
Yes ☐	No ☐	Pump Hour Meter, Pump Panel	24
Yes ☐	No ☐	Pump System, Hale Qmax Single Stage 1500 GPM	24
Yes ☐	No ☐	Drive Unit	24
Yes ☐	No ☐	Pump PO AP25 Hale	24
Yes ☐	No ☐	Pump Packing Glands	24
Yes ☐	No ☐	Pump Shift	24
Yes ☐	No ☐	Light Pump PTO Indicator	25
Yes ☐	No ☐	PTO, Fire Pump	25
Yes ☐	No ☐	Pump Priming System	25
Yes ☐	No ☐	Pump Anode(S)	25
Yes ☐	No ☐	Master Drain, Valve	25
Yes ☐	No ☐	U.L. Test Points	25
Yes ☐	No ☐	U.L. Certification, 1500 GPM	25
Yes ☐	No ☐	Pump Test Certification Plate	26
Yes ☐	No ☐	Pump Mounting, Auxiliary Pump	26
Yes ☐	No ☐	Suction Headers (2)	26
Yes ☐	No ☐	Intake Relief Valve	26
Yes ☐	No ☐	Pressure Relief Valve Hale Total Pressure	26
Yes ☐	No ☐	Tank to Pump	26

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Tank to Pump	27
Yes ☐	No ☐	Tank Fill	27
Yes ☐	No ☐	Fill Subsurface/Return Line	27
Yes ☐	No ☐	Engine Cooler	27
Yes ☐	No ☐	Pump Cooler	27
Yes ☐	No ☐	Plumbing System	27
Yes ☐	No ☐	Stainless Steel Foam Manifold	27
Yes ☐	No ☐	Pump/Plumbing Paint	27
Yes ☐	No ☐	Akron Push-Pull Control Valve Package	27
Yes ☐	No ☐	Suction, 2 1/2" Left Front Panel	28
Yes ☐	No ☐	Suction, 2 1/2" Right Front Panel	28
Yes ☐	No ☐	Integral Droop Elbows	28
Yes ☐	No ☐	Front Bumper Discharge	28
Yes ☐	No ☐	Booster Reel	28
Yes ☐	No ☐	No. 1 Crosslay, 1 3/4" Double Lay	28
Yes ☐	No ☐	No. 2 Crosslay, 1 3/4" Double Lay	29
Yes ☐	No ☐	Crosslay Divider	29
Yes ☐	No ☐	Aluminum/Hypalon Crosslay Cover	29
Yes ☐	No ☐	Discharge, 2 1/2" Left Front Pump Panel	29
Yes ☐	No ☐	Discharge, 2 1/2" Left Rear Pump Panel	29
Yes ☐	No ☐	Discharge, 3" Right Rear Pump Panel	29
Yes ☐	No ☐	Discharge, 2 1/2" Right Front Panel	29
Yes ☐	No ☐	Deck Gun Plumbing, 3"	29
Yes ☐	No ☐	Remote Control Telescoping Monitor Pipe	30
Yes ☐	No ☐	Electric Monitor	30
Yes ☐	No ☐	Preconnect, 1 1/2" Left Rear Hosebed	31
Yes ☐	No ☐	Discharge, 2 1/2" Left Rear	31
Yes ☐	No ☐	Foam System	31
Yes ☐	No ☐	Gauges, Foam Levels	31

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Manual Dual Tank System	31
Yes ☐	No ☐	Flowmeter, 2 1/2" Tee Mount W/Coupling Kit	31
Yes ☐	No ☐	Operating Systems Instruction Placard, Dual Tank	31
Yes ☐	No ☐	Foam Proportioning System Test	31
Yes ☐	No ☐	Foam Tank Piping	32
Yes ☐	No ☐	Flushing	32
Yes ☐	No ☐	Controls for Foam System	32
Yes ☐	No ☐	Name Plate, Labels, and Instruction Specifications	32
Yes ☐	No ☐	Foam Proportioning System Testing	32
Yes ☐	No ☐	Foam Tank Two (2)	32
Yes ☐	No ☐	Foam Outlets	32
Yes ☐	No ☐	Water Tank	33
Yes ☐	No ☐	ISO Certification	33
Yes ☐	No ☐	Design, Tank	33
Yes ☐	No ☐	Tank Construction	33
Yes ☐	No ☐	Water Fill Tower and Cover	33
Yes ☐	No ☐	Sump	33
Yes ☐	No ☐	Outlets	34
Yes ☐	No ☐	Mounting	34
Yes ☐	No ☐	Capacity Cortication	34
Yes ☐	No ☐	Tanknology tm Tag	34
Yes ☐	No ☐	Water Tank Size Certification	34
Yes ☐	No ☐	Fill Tower Partition	34
Yes ☐	No ☐	Gauge, Water Level	34
Yes ☐	No ☐	Gauge, Mini Water Level	34
Yes ☐	No ☐	Gauge, Auxiliary Water Level	35
Yes ☐	No ☐	Apparatus Body	35
Yes ☐	No ☐	Body Type	35
Yes ☐	No ☐	Hose Bed Height	35

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Crosslay Bed Height	35
Yes ☐	No ☐	Compartmentation	35
Yes ☐	No ☐	Leftside	35
Yes ☐	No ☐	Right Side	36
Yes ☐	No ☐	Center Rear	36
Yes ☐	No ☐	Body 102" Wide Body	36
Yes ☐	No ☐	Compartment Doors, Roll-Up	36
Yes ☐	No ☐	Compartment, Ladder Storage	37
Yes ☐	No ☐	Storage Tubes, Pike Polls	37
Yes ☐	No ☐	Storage Slot, Backboard	37
Yes ☐	No ☐	Wheel Well Air Bottle Compartment, Left Front	37
Yes ☐	No ☐	Wheel Well Air Bottle Compartment, Right Front	37
Yes ☐	No ☐	Body Trim	37
Yes ☐	No ☐	I-Zone Brackets	37
Yes ☐	No ☐	Fuel Fill, Recessed with Door	37
Yes ☐	No ☐	Mud Flaps, Rear	38
Yes ☐	No ☐	Rubrail	38
Yes ☐	No ☐	Chrome Folding Steps, Front Body	38
Yes ☐	No ☐	Chrome Folding Steps, Rear of Body	38
Yes ☐	No ☐	Tow Eyes, Rear	38
Yes ☐	No ☐	Handrail, Below Hose Bed	38
Yes ☐	No ☐	Hose Bed Dividers, Horizontally Hinged	38
Yes ☐	No ☐	Hose Bed Dividers	38
Yes ☐	No ☐	Hose Bed Cover	38
Yes ☐	No ☐	Shelf, Adjustable	39
Yes ☐	No ☐	Shelf, Adjustable	39
Yes ☐	No ☐	Shelf, Adjustable	39
Yes ☐	No ☐	Trays, 250 Pound Roll Out	39
Yes ☐	No ☐	Trays, 250 Pound Roll Out	39

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Tool Board, Hinged Aluminum	39
Yes ☐	No ☐	Body Electrical System, Weldon VMUX	39
Yes ☐	No ☐	Can Gateway Module	41
Yes ☐	No ☐	12-Volt Testing	41
Yes ☐	No ☐	EMI/RFI Protection	41
Yes ☐	No ☐	Cab Buzzer with Dual Buttons	41
Yes ☐	No ☐	Lights, 26" LED Compartment	41
Yes ☐	No ☐	Lights 58" LED Compartment	42
Yes ☐	No ☐	Door Ajar Switches	42
Yes ☐	No ☐	Lights Zone B/D Upper Rear Body	42
Yes ☐	No ☐	Lights Zone C Upper Outboard	42
Yes ☐	No ☐	Lights Zone B/D Midship Lower	42
Yes ☐	No ☐	Lights, Zone B/D Rear Lower	42
Yes ☐	No ☐	Lights, Zone C Lower	42
Yes ☐	No ☐	Stop, Turn and Back-up Lights	43
Yes ☐	No ☐	Light, Rear Directional	43
Yes ☐	No ☐	Lights, Halogen Scene	43
Yes ☐	No ☐	Clearance Lights and Reflectors	43
Yes ☐	No ☐	Parking Lights, Body Wheel Well	44
Yes ☐	No ☐	Lights, Underbody	44
Yes ☐	No ☐	Light, License Plate	44
Yes ☐	No ☐	Lights, LED Perimeter Illumination	44
Yes ☐	No ☐	Generator, Above the Pump	44
Yes ☐	No ☐	Hydraulic Generator	44
Yes ☐	No ☐	Generator Meter Panel	44
Yes ☐	No ☐	PTO, Generator	44
Yes ☐	No ☐	Light, Generator PTO Indicator	44
Yes ☐	No ☐	Breaker Panel	45
Yes ☐	No ☐	120-Volt Electrical System Testing	45

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Operational Test	45
Yes ☐	No ☐	Receptacles, 15 AMP/120 Volt Twist Lock	45
Yes ☐	No ☐	4 Way Junction Box	45
Yes ☐	No ☐	Light's Telescoping	45
Yes ☐	No ☐	Lights Tripods	46
Yes ☐	No ☐	Reel, Electric Cord	46
Yes ☐	No ☐	Cord Roller	46
Yes ☐	No ☐	Plate, Power Rewind Reel	46
Yes ☐	No ☐	Body Paint Finish, Single Color/Color Code Red N6916N	47
Yes ☐	No ☐	Interior Compartment Finish	47
Yes ☐	No ☐	Scotchlite Reflective Strip	47
Yes ☐	No ☐	Stripe, Rear Chevron	47
Yes ☐	No ☐	Lettering	47
Yes ☐	No ☐	Warranty, Body Parts and Labor	48
Yes ☐	No ☐	Warranty, Cab/Chassis Partstand Labor	48
Yes ☐	No ☐	Warranty, Cab Structural	48
Yes ☐	No ☐	Warranty, Body Structural	48
Yes ☐	No ☐	Warranty, Cab Paint	48
Yes ☐	No ☐	Warranty, Body Paint/Corrosion	48
Yes ☐	No ☐	Warranty, Frame Rail	48
Yes ☐	No ☐	Warranty, Meritor Axle	48
Yes ☐	No ☐	Warranty, Diesel Engine	48
Yes ☐	No ☐	Warranty, Transmission	48
Yes ☐	No ☐	Warranty, Anti Lock Brake System	49
Yes ☐	No ☐	Warranty, Hale Pump	49
Yes ☐	No ☐	Limitations	49
Yes ☐	No ☐	Warranty, Plumbing System	49
Yes ☐	No ☐	Warranty, Water Tank	49
Yes ☐	No ☐	Manual, Chassis Operation	49

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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Yes ☐	No ☐	Manual, Engine and Transmission	50
Yes ☐	No ☐	Manuals, Apparatus Body	50
Yes ☐	No ☐	Manuals, Fire Pump	50
Yes ☐	No ☐	Wiring Diagrams, as Built Cab/Chassis	50
Yes ☐	No ☐	Wiring Diagrams, "As Built" Apparatus Body	50
Yes ☐	No ☐	Ladders, 10' Folding	50
Yes ☐	No ☐	Ladder, 14' Roof	50
Yes ☐	No ☐	Ladder, 24' 2-Section Extensions	51
Yes ☐	No ☐	30 Degree Elbows 2 1/2" FNST x 2 1/2" MNST	51
Yes ☐	No ☐	30 Degree Elbow 3" FNST x 5" Storz	51
Yes ☐	No ☐	CAP, 5" Storz	51
Yes ☐	No ☐	Wheel Chocks with Brackets	51
Yes ☐	No ☐	Holdera Ziamatic UHH-1	51
Yes ☐	No ☐	Brackets, Air Packet W/Strap	51
Yes ☐	No ☐	Pike Poles	51
Yes ☐	No ☐	Turtle Tile - Compartment Floors/Floor Mounted	51
Yes ☐	No ☐	Booster Nozzle Bracket	51

Comments:
Bidder shall fully describe every variance, exception, and/or deviation. If none, please enter "NONE"

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