

**WEBSTER CITY FIRE  
DEPARTMENT  
919 SUPERIOR ST.  
WEBSTER CITY, IA 50595**



**WEBSTER CITY FIRE DEPARTMENT  
REQUEST FOR BIDS AND SPECIFICATIONS**

**PUMPER/ TANKER FIRE APPARATUS**

**ISSUED: October 6, 2020**

**RESPONSE DUE: November 6th, 5 p.m. CST**

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**CITY OF WEBSTER CITY,  
Fire Department**

**GENERAL TERMS AND CONDITIONS:**

**1. Summary Description of Purpose of Proposal:**

The City of Webster City, Iowa Fire Department (hereinafter, the "City"), is soliciting bids regarding the manufacture, construction, fabrication, equipping, supplying, and delivery of one new Tanker/Pumper fire apparatus (fire engine pumping vehicle) (hereinafter, the "Apparatus") in accordance with the specifications contained in this Request for Bids and Specifications. Bids, in accordance with this Request for Bids and Specifications must be submitted to the Fire Chief of the Webster City Fire Department no later than **October 23rd ,2020 by 5:00 p.m. CST.**

**2. Limitations:**

*Notwithstanding anything to the contrary contained in this Request for Bids and Specifications, nothing herein shall be deemed, construed or interpreted as requiring the City to award any contract to or enter into any agreement (hereinafter, "Contract") with any person who submits a bid in response hereto (hereinafter, "Bidder"). The City reserves and shall have the sole and exclusive right and discretion to assess the qualifications, acceptability or unacceptability of any Bidder and/or to reject any or all bids, or to negotiate the means of performance, additional and/or altered specifications if necessary, and costs of any bid prior to entering into a final decision on the awarding of any Contract. In the event that the City determines that no bid meets this Request for Bids and Specifications, the City shall have the sole and exclusive right and discretion to issue new or different specifications and to re-open the bidding process or to refrain from undertaking any further bidding process or solicitation of new or additional bids.*

**3. Offer and Acceptance:**

This Request for Bids and Specifications shall be deemed, construed and interpreted as a solicitation to any and all interested persons to make an offer to deliver one new Apparatus which meets or exceeds the specifications contained herein. Each Bidder's response to this Request for Bids and Specifications shall be deemed, construed and interpreted as that Bidder's offer to deliver such Apparatus in accordance with the general terms, conditions and specifications contained herein. Nothing in this Request for Bids and Specifications shall be deemed, construed or interpreted as prohibiting the City from negotiating with the successful Bidder, if any, any changes, modifications, alterations, deletions, and/or amendments to that Bidder's response to this Request for Bids and Specifications. In the event a Bidder is selected by the City as the successful Bidder, neither that Bidder nor the City shall be deemed to have entered into a binding or enforceable agreement until that Bidder and the City, through their duly authorized officers, execute a written Contract. Such Contract shall either directly refer to and incorporate these General Terms and Conditions as if set forth in said Contract along with the specifications ultimately agreed to by and between the parties. In the alternative, such Contract may become binding and enforceable upon the parties if this Request for Bids and Specifications, as may be modified, altered or amended is executed by their duly authorized officers.

#### **4. Capacity and Competency to Perform:**

Each Bidder must supply satisfactory evidence of its ability to manufacture, construct, fabricate, equip, supply, and deliver the Apparatus specified in this Request for Bids and Specifications. Further, each Bidder must supply satisfactory evidence of its ability to properly and timely service the Apparatus it proposes to deliver. The City reserves the right to determine the competence and financial and operational capacity of any Bidder. Upon request of the City, each such Bidder shall furnish information in order for the City to evaluate each Bidder's ability and resources to deliver and service the Apparatus it proposes to deliver.

As a qualification to bid in response to this Request for Bids and Specifications, the Bidder must have twenty (20) years of continuous business in designing, constructing, fabricating, equipping, supplying, delivering, and servicing fire apparatuses of the type and nature called for in this Request for Bids and Specifications. Any Bidder which has had a performance bond claim paid in the last ten (10) or which has a performance bond claim pending at the time when the bids shall be opened shall be automatically disqualified from bidding in response to this Request for Bids and Specifications. In the event that the City has selected a successful Bidder or awarded a Contract and, thereafter, discovers that the successful Bidder has paid a performance bond claim in the past ten (10) years or that a performance bond claim was pending at the time the bids were open, such fact shall be grounds for automatic disqualification of the successful Bidder or termination of the Contract by the City, as the case may be.

The City shall unequivocally be the sole and final judge of each Bidder's competency, qualifications and ability to deliver the Apparatus as described in this Request for Bids and Specifications and the City's decision regarding the same shall be final and not subject to objection or challenge.

#### **5. References:**

Each Bidder shall provide a list of six (6) municipal fire departments which respond to incidents each year with fire apparatuses of the general type and nature described in this Request for Bids and Specifications. Such information shall include the name of the municipality, its address, and the name of the person directly responsible for that municipality's fire department. To the extent necessary, each Bidder shall authorize each reference to respond truthfully to any and all questions which the City poses to the reference regarding the Bidder. Any refusal by any of the Bidder's references shall be grounds for disqualifying the Bidder.

#### **6. Contact Person at City:**

Any questions regarding this Request for Bids and Specifications should be directed to:

Chuck Stansfield  
Fire Chief  
City of Webster City Fire  
Department Webster City Iowa  
919 Superior Street  
Webster City, IA  
50595  
(515)832-9131  
Fax: (515)832-9133  
E-Mail: [cstansfield@webstercity.com](mailto:cstansfield@webstercity.com)

## **7. Scope of Work:**

The successful Bidder shall be solely responsible for the all design, manufacture, construction, fabrication, assembly, equipment, sales, materials, labor, and all other means necessary to supply the Apparatus described in this Request for Bids and Specifications. However, nothing herein shall be deemed, construed or interpreted as prohibiting a Bidder from including component parts, equipment, sub-assemblies and other materials which are sourced from third persons so long as such third-person sources are clearly identified. Each Bidder must also demonstrate that it has the ongoing capacity, knowledge, equipment, parts availability, and ability to fully and promptly service and/or repair the proposed Apparatus.

## **8. Investigation by Potential Bidder:**

It shall be the responsibility of each Bidder to thoroughly read and understand the information, instructions, and specifications contained in this Request for Bids and Specifications. Each Bidder is expected to fully inform itself as to the conditions and requirements under which the Apparatus will be operated by the City. Failure to do so is at each Bidder's own risk. No plea of error or of ignorance by any Bidder of the instructions, conditions, and/or requirements contained in this Request for Bids and Specifications will be accepted. Submission of a bid constitutes an affirmative representation and warranty that the Bidder (i) has familiarized itself with the conditions, requirements and specifications contained in this Request for Bids and Specifications, and (ii) intends to comply with them unless specifically noted otherwise. Bidders may direct their questions to the contact person identified in this Request for Bids and Specifications.

## **9. Meeting Specifications:**

The terms, conditions and specifications included in this Request for Bid and Specifications describe the Apparatus which the City seeks to purchase. The specifications and performance standards included herein are the minimum standards acceptable. However, nothing herein shall be deemed, construed or interpreted as prohibiting any Bidder from substituting component parts, equipment, sub-assemblies, and/or other materials for those specifically specified herein so long as each and every substitution shall be of equal or superior grade and quality. **To the extent a Bidder's response to this Request for Bids and Specifications includes any substitution for a specification contained herein, such Bidder, as to each specification for which a substitution is proposed, shall (a) identify by number the specification proposed to be substituted; (b) describe the proposed substitute; and (c) provide sufficient information so that the City can reasonably evaluate whether the substitute is of equal or better grade and quality than the specified specification contained herein. If any bid fails to include any of the immediate foregoing information for any substitution sought to be made, the same shall be grounds to disqualify the bid at the sole discretion of the City.**

In evaluating the responses to this Request for Bids and Specifications and in awarding the Contract, if any, the City shall have the sole and exclusive right to take into consideration the number, nature and equivalency of any and all proposed substitutions contained in each Bidder's response.

The City reserves the right to determine whether any proposed substitution is of equal or superior grade and quality to the specification contained in this Request for Bids and Specifications and the City's determination shall be final. The City further reserves the right to reject any bid response based on the number and nature of substitutions proposed by a Bidder.

## 10.Format for Bid Submissions:

Each Bidder's response to this Request for Bids and Specifications shall include the following and, where specified, be in the following format:

- a. Each bid shall include a cover letter which is prepared on the Bidder's official letterhead and which is signed by a duly authorized officer of the Bidder. The cover letter shall state the total bid price for designing, manufacturing, constructing, fabricating, equipping, supplying, and delivering the Apparatus to the City at the location designated in this Request for Bids and Specifications.
- b. The Bidder shall use and include this Request for Bids and Specifications as its bid. To the extent the Bidder proposes a substitution for any specification contained herein, such substitution shall be either noted adjacent to the specification contained herein or included on an addendum which is appended to this Request for Bids and Specifications. *To the extent a Bidder does not propose a substitution for any particular specification, the Bidder shall be deemed to have accepted that particular specification as contained herein and have represented that it will comply with that particular specification in the event a Contract is awarded to that Bidder.*
- c. To the extent a Bidder proposes any substitution for a particular specification contained in this Request for Bids and Specifications, the Bidder shall –
  - i. provide a sufficiently detailed description of the substitution in sufficient manner so that the City may reasonably determine whether the substitution is equal to or exceeds the grade and quality of the particular specification for which the substitution is proposed;
  - ii. identify the manufacturer/vendor of the substitute; and
  - iii. provide model number or another identifying characteristic if the substitute if such substitute is not purchased by the Bidder as a custom-made item.
- d. In the event a substitution increases the total price which the Bidder would otherwise quote, the Bidder shall, for each such substitution identify the increased amount which has been included in the total price contained in the aforesaid cover letter.
- e. To the extent that the Bidder includes a charge for delivery in its bid, such charge shall be specifically and separately noted.
- f. Each bid shall be executed by a duly authorized officer of the Bidder. The said officer's signature shall be considered a binding representation and warranty that the Bidder can design, manufacture, construct, fabricate, equip, supply, and deliver the Apparatus for the price quoted in the Bidder's cover letter, absent any changes or change orders to which the successful Bidder and the City may agree following the awarding of the Contract, if any.

The purpose for the City using the aforesaid bid submission format is to facilitate the efficient review and comparison of the bid submissions so that the City can make a reasonable determination whether to award the Contract and, if so, to which Bidder.

The City shall have the sole and exclusive right to determine whether a Bidder's proposed substitution is of equal or superior grade and quality to the specification contained in this Request for Bids and Specifications.

**11. Drawings and Schematics:**

Each Bidder shall be responsible for the cost of and for preparing any and all drawings, plans and schematics required to prepare and submit its bid. Each bid shall include a set of large "D" size drawings and schematics (i.e., minimum size of 24" x 36") which depict the overall dimensions, wheelbase, overall length, and overall height of the Apparatus offered to be delivered.

**12. Bid Proposal Delivery Procedures:**

Each bid shall be delivered to:

City of Webster City  
City Clerk  
400 Second Street  
PO Box 217  
Webster City, IA 50595

If a Bidder intends to hand deliver its bid to the address above, the said bid shall be placed in a sealed addressed to the "City Clerk, Webster City" and shall be labeled "*Bid for Apparatus.*" The Bidder's full official name and address shall also appear on the envelope. If a Bidder elects to submit its bid by U.S. Postal Service or in any manner other than by hand delivery, such bid shall be placed in the aforesaid envelope which envelope shall be placed in another envelope which is addressed to:

City Clerk  
*Bid for Apparatus*  
400 Second Street  
PO Box 217  
Webster City, IA 50595

***Bids must be in the hands of the City by no later than 5:00 p.m. CST on October 23rd, 2020.*** The City shall reject any bid which is not received by it on or before the immediate aforesaid time and date unless the City, at its sole discretion, chooses to extend the time and/or date for receipt of bids. If any bid arrives after the immediate aforesaid time or date, the City, within its sole discretion and election, shall either reject delivery of the bid or return the bid in its unopened envelope bearing the indication that it was "Not Accepted."

***The City will not accept any bid which is transmitted via facsimile machine or email.***

**13. Completeness of Bids:**

No bid shall be considered unless it is complete in all respects and contains the information required by this Request for Bids and Specifications. All bids must be complete in all respects by the time and date when such bids shall be opened. If a bid is not complete at the time and date when bids are scheduled to be opened as provided in this Request for Bids and Specifications, the Bidder shall be disqualified. The City will not consider any information supplied by a Bidder after the time and date for opening bids unless the City chooses to extend the time and/or date for all Bidders to submit complete bids.

#### **14. Withdrawals; Declinations:**

A written request to withdraw a bid will be granted if the request is received by the Fire Chief of the Webster City Fire Department prior to the specified time of opening bids. However, after a proposal is opened, it will become binding upon the Bidder for a period of thirty (30) calendar days and subject to acceptance as the City may determine.

#### **15. Automatic Rejection of Bids:**

No bid shall be accepted from, or Contract awarded to, any person that is in arrears or is in default on any obligation due and owing to the City or is in breach of any contract to which the City is a party. Further, no bid shall be accepted from, or Contract awarded to, any person whose bid fails to comply with the instructions and specifications contained in this Request for Bids and Specifications.

#### **16. Bid Opening Procedures:**

*The opening of all bids shall occur following the date when the bid submissions are due to be received by the City.*

The bid opening shall occur in Council Chambers, Webster City City Hall at 8:00 a.m., CST on October 26th, 2020. At such bid opening, the names of all Bidders and their total bid prices, as contained in their respective cover letters, shall be publicly read. The City, at its sole discretion, may read aloud one or more components of a bid but if it chooses to do so, the City must also read aloud the same component or components of all the other bids.

All Bidders and the public shall have the right to attend the bid opening.

Following the public opening of the bids, the City shall then take all bids under review and consideration. The City will render a decision whether or not to identify a successful Bidder within sixty (60) calendar days after the opening of the bids. Nothing herein shall be deemed, construed or interpreted as requiring the City to accept any particular bid or award any Contract. The City reserves the right to reject all bids at its sole discretion.

#### **17. Equal Employment Opportunity:**

If a Contract is awarded, the successful Bidder shall comply in all respects with the Equal Employment Opportunity Act throughout the performance of its obligations under such Contract. The successful Bidder shall have a written equal employment opportunity policy statement declaring that it does not discriminate on the basis of race, color, religion, sex, national origin, disability, or age. Findings of non-compliance with applicable State or Federal equal employment opportunity laws and regulations may be sufficient reason for revocation, termination or cancellation of such Contract if one is awarded and such revocation, termination or cancellation shall not be deemed, construed or interpreted as an improper or unlawful breach of the same.

### **18. Compliance with Applicable Laws, Ordinances, and Regulations:**

The successful Bidder shall comply with all applicable federal, state and municipal laws, ordinances, rules, and regulations insofar as they relate or may relate to the performance contemplated by the Contract awarded to said successful Bidder, if any.

### **19. Taxes, Licenses, Permits, and Certificates:**

By law, the City is exempt from paying federal excise tax, state and local retailers' occupation tax, state and local service occupation tax, use tax, service use tax, and sales tax. The City's tax- exempt number shall be furnished upon request of the successful Bidder.

Where necessary and appropriate, within three (3) business days of executing a Contract, if any is awarded, the successful Bidder shall (i) secure and pay for, at its own expense, all necessary permits, licenses, and certificates of authority required to complete the work contemplated herein; (ii) comply with all requirements of such permits, licenses, and certificates; and (iii) keep and maintain all such licenses, permits, and certificates in full force and effect throughout the term of the Contract.

### **20. Indemnification:**

g. In the event that a Contract is entered into by and between the City and a successful Bidder, the successful Bidder shall indemnify, defend, save, and hold harmless the City, its elected officers, appointed officers, employees, and volunteers from any and all actions, causes, causes of action, judgments, decrees, orders, liability, loss, costs and expenses (including but not necessarily limited to attorneys' fees actually incurred), demands, taxes, damages, or penalties of whatever nature, whether in law or in equity, whether through judicial or administrative proceeding, that the aforesaid or any of them may suffer, incur, sustain, or become liable for, on account of any negligent, willful, wanton, or intentional act or omission on the part of the successful Bidder or any of its directors, officers, managers, employees, agents, representatives, or assigns in connection with the manufacture, construction, fabrication, equipping, supplying, and/or delivery of the Apparatus contemplated in this Request for Bids and Specifications or which occurs because of, arises out of, or is directly or proximately caused by the failure of the Apparatus or any component part or sub-assembly thereof. Notwithstanding the immediate foregoing and without waiving the same, the successful Bidder, if any, shall have no obligation to indemnify, defend, save, or hold harmless any of the aforesaid persons if any such action, cause, cause of action, judgment, decree, order, liability, loss, cost or expense (including but not necessarily limited to attorneys' fees actually incurred), demand, tax, damage, or penalty occurs because of, arises out of, or is directly or proximately caused by any negligent, willful, wanton, or intentional act of the City or any of its elected officer, appointed officers, employees, or volunteers.

## **21.Non-Collusion; Non-Bid-Rigging:**

By submitting a bid in response to this Request for Bids and Specifications, the Bidder represents and warrants that it (i) is the only person which will have a direct interest in any Contract, if any, awarded pursuant to this Request for Bids and Specifications; (ii) has not engaged in any form of collusion with any other person in the submission of its bid or any other Bidder's bid; (iii) has not engaged and will not engage in any form of unlawful price-fixing, group boycott, market allocation, price discrimination, or any other form of federal or state antitrust violation in the submission of its bid in response to this Request for Bids and Specifications; (iv) has not engaged in any effort to coerce or bribe any City elected or appointed official or employee to accept the Bidder's bid; and (v) has not been convicted, found liable, fined, or otherwise penalized in connection with the unlawful sale of equipment or components thereof to a foreign country to which such sales are prohibited by law or administrative regulation. If the Bidder is found to have been or be in violations of any of the immediate foregoing, that Bidder shall automatically be disqualified from becoming the successful Bidder.

## **22.Security Interest in Any Deposit:**

In the event that the City awards a Contract pursuant to this Request for Bids and Specifications and such Contract requires the City to provide one or more security deposits to assure any payment to the successful Bidder, such Bidder shall place any such security deposit in an insured or collateralized interest-bearing account. Upon successful performance by the successful Bidder of any and all obligations required of it pursuant to the Contract, if any, the said Bidder shall be entitled to the security deposit and all interest earned thereon and the sum of such security deposit and interest shall be deducted from the amount then due and owing by the City to the Bidder. Until such time as the successful Bidder, if any, fully performs its obligations under the awarded Contract, the City shall retain a first-in-right and first-in-time lien and security interest in the security deposit and all interest earned thereon.

## **23.Interim Payments:**

In the event that the City awards a Contract pursuant to this Request for Bids and Specifications and such Contract requires the City to make periodic payments to the successful Bidder, all such payments shall be credited by the said Bidder toward the agreed-upon Contract price.

## **24.Bankruptcy and Insolvency:**

In the event that the successful Bidder seeks protection under the United States Bankruptcy Code (11 U.S.C. § 101, et seq.) following the awarding of any Contract pursuant to this Request for Bids and Specifications, the Contract shall become immediately, irrevocably and automatically void *ab initio* and of no further legal effect the same not being deemed by the successful Bidder as an asset of that successful Bidder. Further, to the extent the successful Bidder includes on any bankruptcy schedule any reference to any Contract it has been awarded pursuant to this Request For Bids and Specifications, such inclusion shall include a note or statement that the Contract automatically, by its express terms, became null, void, unenforceable, and of no legal effect upon the said Bidder's filing of its initial bankruptcy petition and that the City has a first-in-time first-in-right security interest in any deposit and interest earned thereon which the City provided to the said successful Bidder.

If the successful Bidder shall become insolvent, or fail to meet its financial obligations, at any time prior to completing full performance of the Contract, then the Contract may be terminated at the sole

option of the City upon five (5) days written notice to said successful Bidder and in no event shall this Contract be, or be treated as, an asset of the successful Bidder in any liquidation by the said successful Bidder.

**25.No Assignment of Contract:**

Any Contract awarded, if any, pursuant to this Request for Bids and Specifications shall not:

- a. be assignable, whether voluntarily, involuntary or by any process of law, by the successful Bidder without the express advance written permission of the City; or
- b. come under the control of any creditor, receiver, administrator, executor, or trustee, including but not necessarily limited to a bankruptcy trustee, of the successful Bidder without the express advance written permission of the City.

In the event of any effort to assign the Contract or should the Contract come under the control of any one or more of the persons identified in Sub-Paragraph “b.” of this Paragraph, the said Contract shall become automatically, immediately and irrevocably void and of no further legal force or effect.

**26.Inspection of Apparatus:**

In the event a Contract is awarded to a successful Bidder, the City shall have the right to fully inspect and test the Apparatus and all equipment included thereon and therewith prior to accepting delivery of the Apparatus. The City shall have the right to reject delivery of the Apparatus in total or any piece of equipment, component, or sub-assembly thereof if it fails to conform to the specifications contained in the Contract and/or if it fails to perform as reasonably required for the purpose for which the City sought to acquire such a severe service fire apparatus.

**27.Delivery of Apparatus:**

At such time as the Apparatus is completely ready for delivery to the City, such delivery shall be made to the following address:

City of Webster City  
Webster City  
Fire Department  
919 Superior St.  
Webster City, IA 50595

Or, the City will make other arrangements per written agreement. Bidder shall be responsible for any and all damage or loss caused to the Apparatus during the transportation and/or delivery of said Apparatus.

**28.Payment to Successful Bidder:**

Upon full performance of the Contract, if any, and upon full and complete acceptance by the City of the Apparatus and all components, equipment, and sub-assemblies thereof or thereon, as the case may be, the City shall pay to the successful Bidder the full agreed-upon Contract price less the security deposit, all interest earned on the security deposit, and any and all interim payments which the City made to the successful Bidder. If

the parties to the Contract, if any, agree upon the City's right to hold back a portion of the agreed- upon purchase price for the Apparatus, then the City shall have a right to hold back that said portion in the manner and for the time period provided in the Contract. Upon expiration of such time period and in the absence of any claim of breach of the Contract or claim under any warranty provided for in the Contract, the City shall within a reasonable time disburse such hold-back amount to the successful Bidder.

### **29.Defaults and Cure:**

In the event a Contract is awarded pursuant to this Request for Bids and Specifications and a party thereto defaults on its performance under such Contract, the other party shall provide written notice to the allegedly defaulting party which describes in reasonable detail the nature of each default alleged and which identifies the paragraph(s) or subparagraph(s) of the Contract which is or are alleged to be in default. The recipient of the default notice shall respond in writing to the said notice of default within fourteen (14) business days of such notice and shall (i) acknowledge the default and provide a specific reasonable date by which each such noted default shall be cured and the means of doing so, or (ii) state that the recipient believes that no such default has occurred and provide a reasonable description or explanation for the recipient's assertion that no such default(s) has or have occurred. In the event that the recipient of the default notice acknowledges that one or more defaults have occurred but that the party giving notice of default rejects the timetable or means by which the recipient of such notice shall cure such default, the parties shall confer in an effort to agree on a reasonable timeframe and/or means, as the case may be, for curing each such default.

### **30.Disputes:**

i. Any dispute regarding interpretation and/or construction of this Request for Bids and Specifications which arises prior to the submission of any bids shall be resolved in a manner at the sole discretion of the Fire Chief of the Webster City Fire Department and the said Fire Chief's resolution shall be deemed final.

ii. Any dispute regarding the interpretation, construction, performance, or breach of any Contract awarded, if any, shall be first submitted to mediation between the successful Bidder and the City. The parties to any such Contract shall cooperate in the selection of a mutually acceptable mediator. If the parties fail to agree on a mediator, then each party shall designate a third person and those third persons shall select a mediator. Any fees required to be paid to the mediator shall be paid on an equal basis by the parties to the Contract. The mediator shall have the authority and discretion to establish the rules of procedure governing the mediation.

iii. In the event that the parties' efforts to mediate a dispute arising under Sub-Paragraph "b." of this Paragraph fail to result in a mutually acceptable settlement of the dispute, then either may initiate and maintain an action in the Court system. Each party shall bear its own costs and expenses, including but not necessarily limited to its attorneys' fees.

### **31.Notices:**

Written notices shall be given in any one or more of the following ways and any such notice shall be deemed effective as hereinafter provided:

iv. If by First Class U.S. Mail – Certified or Registered Mail – Return Receipt Request, such notice shall be deemed effective on the fourth day following the date when the notice is placed with the U.S. Postal Service if placed in a properly addressed envelope bearing proper postage.

- v.If by personal delivery, such notice shall be deemed effective on the date when such personal delivery is made if made prior to 4:00 p.m. in the time zone where the intended recipient of such notice is located and if delivered after 4:00 p.m., then such notice shall be deemed effective on the following day.
- vi.If by overnight courier, such notice shall be deemed effective on the date when such personal delivery is made if made prior to 4:00 p.m. in the time zone where the intended recipient of such notice is located and if delivered after 4:00 p.m., then such notice shall be deemed effective on the following day.

No other form of notice shall be deemed effective.

### **32.Subcontractors:**

Any subcontractor or component supplier that the successful Bidder, if any, may use when submitting its bid must be identified by name, address, telephone number, and contact person along with the part or component which is being proposed as part of the Bidder's bid. The City shall have the right to accept or reject that subcontractor or component supplier but such right shall be exercisable only for reasonable cause.

### **33.Training on Apparatus:**

Each Bidder shall include with its bid a representation that it shall provide training in the driving and use of the Apparatus and each component part and sub-assembly thereof and equipment supplied therewith. If the Bidder intends to be compensated for such training then the amount of such compensation must be specifically stated in the Bidder's bid. The City, in its sole and exclusive discretion, shall retain the right to refrain from having its employees participate in any such training should the Fire Chief of the Webster City Fire Department determine that no such training shall be needed. In the event that the said Fire Chief elects not to train or have any of its employee's train on the Apparatus or any component part or sub-assembly thereof or equipment supplied therewith, the City shall not be obligated to pay the amount provided for training in the successful Bidder's bid.

### **34.Warranties:**

To the extent a Bidder provides any warranty or warranties regarding the Apparatus, any component part and/or sub-assembly thereof, or any equipment supplied therewith, copies of any and all such warranties shall be included with the Bidder's bid at the time such bid is submitted to the City.

### **35.Servicing Apparatus:**

To the extent that any Bidder's response to this Request for Bids and Specifications includes or proposes a service contract for the Apparatus, and/or any component part and/or sub-assembly thereof, and/or equipment supplied therewith, a copy of any such service contract shall be included with the Bidder's bid at the time such bid is submitted to the City. If the Bidder's bid includes any charge, fee, or payment for any such service contract, the bid shall specifically and clearly note the charge, fee, and our payment.

### **36.Inclusion of Intellectual Property:**

To the extent that any trade secret, patent-protected, copyrighted, software license, or other legally protected property right is proposed to be incorporated into the Apparatus which the Bidder offers to deliver pursuant to its bid, the Bidder shall represent and warrant that it has the right to incorporate into such Apparatus any and all such trade secrets, patent-protected devices, copyrighted items, software licenses, and other legally protected property rights.

### **37.Acceptance of Bid:**

In the event that the City chooses to award a Contract, all the general terms and conditions herein stated shall be deemed accepted by the successful Bidder and shall be deemed incorporated into any agreement entered into by and between the City and said successful Bidder, if any. Notwithstanding the forgoing, the City and the successful Bidder, if any, may amend, modify, alter, or otherwise change any one or more of these general terms and conditions but only by a writing which is executed by their respective duly authorized officers.

In the event that the City chooses to award a Contract, all the specifications contained in this Request for Bids and Specifications shall be deemed incorporated into any agreement entered into by and between the City and said successful Bidder, if any, unless otherwise amended, modified, altered, or otherwise changed by a writing which is executed by the City's and successful Bidder's duly authorized officers.

### **38.Execution of Contract:**

In the event that the City chooses to identify a successful Bidder and if such successful Bidder and the City mutually agree to the general terms and conditions contained in this Request for Bids and Specifications and if the said parties mutually agree on the specifications contained herein and any substitution for, amendment to, modification of, alteration of, or other change, the respective duly authorized officers of the City and the successful Bidder shall execute a copy of this Request for Bids and Specifications which shall include any such substitution, amendment, modification, alteration, or other change to which the parties agree. The aforesaid shall also include copies of any and all documents required to be provided as described in this Request for Bids and Specifications.

**[DETAILED SPECIFICATIONS FOLLOW]**

**B. PERFORMANCE TESTS/REGULATION SPECIFICATIONS:**

**1. Quality and Workmanship:**

- a. The design of the Apparatus shall embody the latest approved automotive engineering practices. The workmanship must be of the highest quality in its respective field. Special consideration will be given to the following points:
- b. Accessibility of the various units, which require periodic maintenance; and ease of operation (including both pumping and driving); and symmetrical proportions. Construction shall be rugged and ample safety factors shall be provided to carry loads as specified and to meet both on and off-road requirements and to speed conditions as set forth under Performance tests and requirements. Welding shall be employed in the assembly of the apparatus in a manner that will not prevent the ready removal of any component part for service or repair.
- c. All steel welding shall follow (American Welding Society) requirements for AWS D1.1:2012 Structural Welding Code for welding steel structural assemblies. All aluminum welding shall follow (American Welding Society) requirements for AWS D1.2/D1.2M:2003 Structural Welding Code for any type structure made from aluminum structural alloys. All sheet metal welding shall follow (American Welding Society) AWS D9.1M/D9.1:2006 Structural Welding code for Arc/Braze requirements of non-structural materials.
- d. All pressure pipe welding shall follow (American Society of Mechanical Engineers) ASME IX/ ASME B31:2010 requirements to the qualification of procedures in welding and brazing, in accordance with the ASME Boiler and Pressure Vessel Code and the ASME B31 Code for Pressure Piping. Flux core arc welding to use alloy rods, type 7000, (American Welding Society) AWS standards A5.20-E70T1. The manufacturer shall be required to have an American Welding Society certified welding inspector in plant during testing operations within working hours to monitor weld quality.
- e. Employees classified as welders shall be tested and certified to meet American Welding Society and American Society of Mechanical Engineers welding codes.

**Does your bid comply?                      YES \_\_\_\_\_ NO \_\_\_\_\_**

**2. General Construction:**

- a. The apparatus shall be designed with due consideration to distribution of load between the front and rear axles, so that all specified equipment, including filled water tank, a full complement of personnel and fire hose will be carried without injury to the apparatus. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Agency.
- b. The apparatus shall be designed so that the operator could perform all recommended daily maintenance checks easily without the need for hand tools. Apparatus components that interfere with repair or removal of other major components must be attached with fasteners (cap, screws,

nuts, etc.) so that the components can be removed and installed with normal hand tools. These components must not be welded or otherwise permanently secured into place.

- c. The GAWR and GVWR of the chassis shall be adequate to carry the fully equipped apparatus including all tanks filled, the specified hose load, unequipped personnel weight, ground ladders and a miscellaneous equipment allowance per NFPA 1901 criteria. It shall be the responsibility of the purchaser to provide the contractor with the weight of equipment to be carried if it is in excess of the allowance as set forth by NFPA.
- d. The unequipped personnel weight shall be calculated at 250 lbs. per person times the maximum number of persons to ride on the apparatus. The height of the fully loaded vehicle's center of gravity shall not exceed the chassis manufacturer's maximum limit.
- e. The apparatus shall be configured to accommodate a fifteen percent compartment and weight "cushion" for future growth. The design of the chassis and suspension system shall also factor this cushion.
- f. The front to rear weight distribution of the fully loaded vehicle shall not exceed 95 percent of its GVWR.
- g. The difference in weight on the end of each axle, from side to side, when the vehicle is fully loaded and equipped shall not exceed 7 percent.
- h. The apparatus shall be so designed that the various parts are readily accessible for lubrication, inspection, adjustment and repair.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

### 3. Delivery:

- a. To ensure proper break-in of all components while still under warranty, the apparatus **shall be delivered under its own power**, rail or truck freight shall not be acceptable. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care, and maintenance of the equipment delivered.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

### 4. Performance Tests and Requirements:

- a. A road test shall be conducted with the apparatus fully loaded to its estimated in-service weight and shall be capable of the following performance while on dry paved roads that are in good condition and for a continuous run of ten (10) miles or more, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. The successful Bidder shall provide a Weight Certificate showing weights on front axle, rear axles and total weight for the completed apparatus at time of delivery.

- b. The apparatus shall be capable of accelerating to 35 MPH (55 km/hr.) from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed RPM of the engine.
- c. The apparatus, fully loaded, shall be capable of obtaining a minimum top speed of 50 MPH (80 km/hr.) on a level dry concrete highway with the engine not exceeding its governed RPM (fully loaded).
- d. The service brakes shall be capable of stopping a fully loaded vehicle in 35ft (10.7 m) at 20 mph (32.2 km/hr.) on a level concrete highway. The air brake system shall conform to Federal Motor Vehicle Safety Standards (FMVSS) 121.
- e. The apparatus, when fully loaded, shall have not less than 25 percent or more than 50 percent of the weight on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle.
- f. The apparatus shall be tested and approved by the Underwriter's Laboratories Incorporated in accordance with their standard practices for pumping engines. The contractor shall provide copies of the Pump Manufacturer's Certification of hydrostatic test, the Engine Manufacturer current certified brake horsepower curve, and the Manufacturer's record of pumper construction details, when delivered. The vendor, at their expense, shall have the Underwriter's Laboratories Incorporated conduct the tests required by the Underwriter Laboratories Incorporated (Guide for the Certification of Fire Department Pumper subject 822 dated 1995 or latest). A copy of all tests shall accompany the apparatus. (For apparatus sold within Canadian ULC S515 / latest revision.)

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**5. Failure to Meet Test:**

- a. In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the Bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the Bidder of such changes, shall also be cause for rejection of the apparatus.
- b. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use by the purchaser during the above-specified period with the permission of the Bidder shall not constitute acceptance.

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**6. Dealership Service and Warranty Support:**

- a. To ensure full service after delivery, the selling Bidder/dealership must be capable of providing service when required.

- b. The Bidder/dealership shall show that the company is in position to render prompt service and to furnish replacement parts.
- c. Each Bidder/dealership must be able to display that they are actively in the fire apparatus service business by operating in conjunction with a factory authorized service center and parts repository capable of satisfying the warranty service requirements and parts requirements of the vehicle(s) being purchased.
- d. The Bidder/dealership must state the location of this authorized service center. This service center must have a staff of factory-trained mechanics, well versed in all aspects of service for all major components of the apparatus.
- e. The Bidder must provide the actual distance, in road miles, of the service center to the Fire Department.
- f. The distance shall be no greater than 150 road miles.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**7. Manufacturer Service and Warranty Support:**

- a. The manufacturer shall stock an adequate inventory dedicated to service and replacement parts to ensure quick response and minimize down time. Furthermore, the manufacturer shall house the inventory in a dedicated facility, with a dedicated shipping area that ensures service parts are given priority. The Bidder shall provide detailed documentation of service and replacement part resources.
- b. Parts identification shall be provided to both the dealer and the Fire Department through an on line web based application for the specific truck reflected in this specification. Access will be granted using the specific VIN number of the vehicle. The online web application will provide the ability to view complete bills of materials, digital photographs, parts drawings, assembly drawings, and access to all current operation, maintenance and service publications.
- c. The manufacturer shall employ a staff of adequate size specifically dedicated to providing customer support and parts for the fielded fleet of vehicles it has produced.
- d. The manufacturer must be capable of providing both in-house and on-site service for the apparatus.
- e. The manufacturer shall offer regional factory hands-on repair and maintenance training classes.
- f. The manufacturer shall employ a minimum of four certified EVT technicians on staff, not only providing technical expertise in the repair of fire apparatus, but also demonstrating the commitment to service after the sale.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**8. Liability:**

- a. The successful Bidder shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract. To ensure this will occur, the Bidder shall carry the following minimum insurance.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**9. Commercial General Liability Insurance:**

- a. The successful Bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

- i. Each Occurrence: \$1,000,000
- ii. Products/Completed Operations Aggregate: \$1,000,000
- iii. Personal and Advertising Injury: \$1,000,000
- iv. General Aggregate: \$5,000,000

- b. Coverage shall be written on a Commercial General Liability form. The policy shall be written on an occurrence form and shall include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy.
- c. The policy shall include Owner as an additional insured when required by written contract.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**10. Commercial Automobile Liability Insurance:**

- a. The successful Bidder shall, during the performance of the contract keep in force at least the following minimum limits of commercial automobile liability insurance:

- i. Each Accident Combined Single Limit: \$1,000,000

- b. Coverage shall be written on a Commercial Automobile liability form.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**11. Umbrella/Excess Liability Insurance:**

- a. The successful Bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

- i. Aggregate: \$10,000,000
- ii. Each Occurrence: \$10,000,000

- b. The umbrella policy shall be written on an occurrence basis and at a minimum provide excess to the Bidder's General Liability, Automobile Liability and Employer's Liability policies.
- c. The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.
- d. Coverage shall be provided by a carrier(s) rated A- or better by A.M. Bests.
- e. All policies shall provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance shall provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, notice shall be delivered in accordance with the policy provisions.
- f. Bidder agrees to furnish owner with a current Certificate of Insurance with the coverage's listed above along with its bid. The certificate shall show the purchaser as certificate holder.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**12. Information Required:**

- a. The manufacturer shall supply at time of delivery, a complete operation and maintenance manual covering the completed apparatus as delivered. A permanent plate shall be mounted in the driver's compartment to specify the quantity and type of the following fluids used in the vehicle: Engine oil, engine coolant, and chassis transmission fluid, pump transmission lubrication fluid, pump primer fluid (if used) and drive axle lubrication fluid.
- b. The manufacturer shall supply the final certification of GVWR and GAWR on a nameplate affixed to the vehicle.
- c. A permanent plate in the driver's compartment shall be installed, specifying the seating capacity of the enclosed cab.
- d. Signs that state "OCCUPANTS MUST BE SEATED AND BELTED WHEN APPARATUS IS IN MOTION" shall be provided and will be visible from each seated position. An accident prevention sign shall be located at the rear step area of the apparatus. It shall warn all personnel that standing on the step while apparatus is in motion shall be prohibited.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**13. NFPA 2009 Standards:**

- a. This unit shall comply with the NFPA standards effective January 2016, except for fire department directed exceptions. These exceptions shall be set forth in the Statement of Exceptions.
- b. Certification of slip resistance of all stepping, standing and walking surfaces shall be supplied with delivery of the apparatus.
- c. A plate that is highly visible to the driver while seated shall be provided. This plate shall show the overall height, length, and gross vehicle weight rating.
- d. The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications.
- e. An official of the company shall designate in writing who is qualified to witness and certify test results.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**14. NFPA Compliancy:**

- a. Apparatus proposed by the Bidder shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications shall be indicated in the proposal as "non-NFPA".

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**15. Vehicle Inspection Program Certification:**

- a. To assure the vehicle is built to current NFPA standards, the apparatus, in its entirety, shall be third-party, independent, audit-certified through a third party, that it is built and complies to all applicable standards in the current edition of NFPA 1901. The certification includes: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus. (No exception)

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**16. Pump Test:**

- a. The pump shall be tested, approved, and certified at the manufacturer's expense. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacture's certified brake horsepower curve; and the manufacture's record of pump construction details shall be forwarded to the Fire Department.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**17. Generator Test:**

- a. If the unit has a generator, the generator shall be tested, approved, and certified at the manufacturer's expense. The test results shall be provided to the Fire Department at the time of delivery.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**18. Bid Bond:**

- a. All Bidders shall provide a bid bond as security for the bid in the form of a 10% bid bond to accompany their bid. This bid bond shall be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond shall be issued by an authorized representative of the Surety Company and shall be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond shall include language, which assures that the Bidder/principal shall give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.
- b. Proposals received from Bidders who do not manufacture the chassis shall provide a warranty that shall be issued jointly and severally by, and signed by, both the Bidder and the chassis manufacturer.
- c. If the successful Bidder does not manufacture the chassis, the Bidder shall supply a warranty bond, in addition to their performance bond, along with their signed contract. This warranty bond shall guarantee all terms and conditions of the Basic One (1) Year Limited Warranty and names both the Bidder and chassis manufacturer as co-principals. This warranty bond shall be issued for the contract amount and shall remain in force for a term which is consistent with the term of the Basic One (1) Year Limited Warranty. Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle shall apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle shall not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision shall prevail.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**19. 1 Year Performance Bond:**

- a. The successful Bidder shall furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond shall be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event

of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.

- b. Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Basic One (1) Year Limited Warranty period included within this proposal. Owner agrees that the penal amount of this bond shall be simultaneously amended to 100% percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type shall not exceed one (1) year from the date of such satisfactory acceptance and delivery, or the actual Basic One (1) Year Limited Warranty period, whichever is shorter.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**20. Bid/Proposal Drawings:**

- a. For purposes of evaluation, the Bidder shall provide a drawing illustrating, but not limited to, the overall dimensions, wheelbase, and overall length of the proposed apparatus and other specified equipment, shall be required to be included with the Bidder's proposal package.
- b. The drawings shall be large "D" size (minimum 24" x 36"). Smaller size drawings, "similar to" drawings or general sales drawings, shall not be acceptable.
- c. Failure to provide a bid evaluation drawing in accordance with these specifications shall be cause for rejection of the bid proposal.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**21. Approval/Pre-Construction Drawings:**

- a. After the award of the bid, the contractor shall provide detailed colored engineering drawings including, but not limited to, the overall dimensions, wheelbase, and overall length of the proposed apparatus for use of pre-construction conference. The drawings shall include, but shall not be limited to the right, left, top, front and rear views of the apparatus.
- b. **In addition, a detailed engineering drawing of the pump operator's panel & interior switch panel layouts will be provided following the preconstruction meeting.**
- c. The Customer will sign the final approval drawings.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**22. Factory Pre-Construction Conference:**

- a. The factory authorized distributor shall be required, prior to manufacturing, to host at their cost, a preconstruction conference with a factory representative

present and four (4) individuals from the Webster City Fire Department Tanker/ Pumper committee to finalize all construction details. Based on City needs, this may be approved to be in person or via media meeting, per the Fire Chief's discretion.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**23. Final Inspection Conference:**

- a. The factory authorized Distributor shall be required, during manufacturing, to have a final completion inspection conference at the site of the manufacturing facility at their cost, with four (4) individuals from the Webster City Fire Department Tanker/ Pumper committee to inspect the apparatus after construction, but prior to final approval and acceptance.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**24. On-Line Customer Interaction:**

- a. The manufacturer shall provide the capability for online access through the manufacture's website. The customer shall be able to view digital photos of their apparatus in the specified phases of construction. The following phases will be captured and displayed on the manufacture's website:

- i. Chassis
- ii. Body – Prior to Paint
- iii. Body – Painted
- iv. Pump and Plumbing
- v. Assembly – 80% Complete

- b. Due to the complex nature of fire apparatus and the importance of communication between the manufacture and customer, this line item is considered a critical requirement.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**25. Electrical Wiring Diagrams:**

- a. Two (2) written electrical wiring diagrams, prepared for the model of the chassis and body, shall be provided.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**26. Model Year:**

- a. The chassis shall have a vehicle identification number that reflects a 2021 or newer model year.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**C. CHASSIS & DRIVELINE SPECIFICATIONS**

**1. General Specifications:**

- a. The chassis provided shall be a 2021, Kenworth T370, 2 Door, tandem axle Commercial chassis.
- b. The chassis shall be designed and manufactured for medium-duty service, with adequate strength and capacity for the intended load to be sustained and the type of service required.
- c. The Webster City Fire Department will provide the Bidder with an equipment list of what is expected to be carried and a desired location.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**2. GVWR Rating:**

- a. The gross vehicle weight rating shall be a minimum of 54,600lbs.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**3. Occupant Protection:**

- a. The vehicle shall include an occupant protection system which shall secure belted occupants
- b. and increase the survivable space within the cab. The system shall selectively deploy integrated systems to protect against injuries in qualifying frontal impact, side impact, and rollover events. The increase in survivable space and security of the APS shall also provide ejection mitigation protection.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**4. Frame:**

- a. The frame shall consist of double rails running parallel to each other with cross members forming a ladder style frame. The frame rails shall be formed in the shape of a "C" channel, with a minimum 120,000 psi minimum yield high strength low alloy steel each rail. Each double rail section shall be rated by a Resistance Bending Moment (RBM). The frame shall measure 35.00 inches in width.
- b. Proposals calculating the frame strength using the "box method" or heat-treated rails shall not be considered.
- c. A minimum of seven (7) fully gusseted 0.25-inch-thick, or equivalent, cross members shall be installed. The inclusion of the body mounting, or bumper mounting shall not be considered as a cross member. The cross members shall be attached using zinc coated grade 8 fasteners or equivalent. The bolt heads shall be flanged type, held in place by distorted thread flanged lock nuts or equivalent. Each cross member shall be mounted to the frame

rails utilizing a minimum of 0.25-inch-thick gusset reinforcement plates at all corners balancing the area of force throughout the entire frame.

- d. Any proposals not including additional reinforcement for each cross member shall not be considered.
- e. All relief areas shall be cut in with a minimum 2.00-inch radius at intersection points with the edges ground to a smooth finish to prevent a stress concentration point.
- f. The frame and cross members shall carry a fifty-year warranty to the original purchaser. A copy of the frame warranty shall be made available upon request.
- g. Proposals offering warranties for frames not including cross members shall not be considered.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**5. Frame Paint:**

- a. The frame shall be powder coated black or E-coated prior to any attachment of components.
- b. All powder coatings, primers and paint shall be compatible with all metals, pretreatments and primers used.
- c. The cross-hatch adhesion test per ASTM D3359 shall not have a fail of more than ten (10) squares. The pencil hardness test per ASTM D3363 shall have a final post-curved pencil hardness of H-2H. The direct impact resistance test per ASTM D2794 shall have an impact resistance of 120.00 inches per pound at 2 mils.
- d. Any proposals offering painted frame with variations from the above process shall not be accepted. The film thickness of vendor supplied parts shall also be sufficient to meet the performance standards as stated above.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**6. Chassis Alignment:**

- a. The chassis frame rails shall be measured to ensure the length is correct and cross checked to make sure they run parallel and are square to each other.
- b. The front and rear axles shall be laser aligned.
- c. The front tires and wheels shall be aligned and toe-in set on the front tires by the manufacturer.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

7. **Axle configuration**-The chassis shall feature a tandem axle configuration consisting of a dual rear drive axle with a single front steer axle.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

8. **Front Axle:**

- a. Dana Spicer E-14621, 14,600lb., KW T370/ T440, 6x4
- b. The front axle shall include an independent front suspension (IFS).
- c. The IFS front axle shall have a minimum rating of 14,600 pounds.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

9. **Gross Axle Weight Ratings Front:**

- a. The front gross axle weight rating (GAWR) of the chassis shall be a minimum of 14,600 pounds.
- b. The front gross axle weight rating shall be adequate to carry the weight of the completed apparatus including all equipment and personnel.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

10. **Front Axle Warranty:**

- a. The front axle shall be warranted for three (3) years or 150,000 miles, whichever comes first. Details of the warranty shall be provided.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

11. **Front Shock Absorbers:**

- a. Two (2) Bilstein inert, or equivalent, nitrogen gas filled shock absorbers shall be provided and installed as part of the front suspension system.
- b. The shocks shall be a mono-tubular 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 mono-tubular design shall provide superior strength while maximizing heat dissipation and shock life.
- c. The front shocks shall include a digressive working piston assembly allowing independent tuning of the compression and rebound damping forces to provide optimum ride and comfort without compromise.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**12. Front Wheel Bearing Lubrication:**

- a. The front axle wheel bearings shall be lubricated with oil. The oil level can be visually checked via clear inspection windows in the front axle hubs.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**13. Front Tires:**

- a. The front tires shall be two (2) Michelin Emergency vehicle brand (or equivalent per approval from Fire Chief) tires with a tread pattern suitable for the steering axle position, properly sized, and mounted to the front wheels. These tires shall be made for 7-year warranty, on and off-road use, with good use in mud and snow.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**14. Front Wheel:**

- a. Wheels for the front axle shall be 22.50" x 8.25" aluminum disc.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**15. Rear Axle:**

- a. The rear axle shall be a Dana Spicer, 40K Dual, KW T370/ T440
- b. The axle shall include a fire service rated capacity of 40,000 pounds.
- c. The rear axle weight rating shall be adequate to carry the weight of the completed apparatus including all equipment and personnel.
- d. The rear tandem axle spacing shall be 52" with walking beam, flat spring suspension.
- e. The rear axle shall be warranted under the general service application.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**16. Vehicle Top Speed:**

- a. A rear axle ratio shall be furnished to allow the vehicle to reach a top speed of 60 MPH at governed engine RPM through the use of an electronic governor. This shall be capable to be changed at a later time if so desired.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**17. Rear Suspension:**

- a. The single rear axle shall have a driver controlled differential lock on the tandem axles.
- b. The suspension shall include two optimized walking beam springs mounted for increased roll stability and two heavy duty shock absorbers. Axle alignment is maintained using two eccentric bushings at each frame bracket.
- c. Shock absorbers shall be supplied by the suspension manufacturer and installed on the rear axle suspension, along with walking beam suspension.
- d. The rear suspension capacity shall be rated at a minimum 40,000 pounds.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**18. Rear Axle Differential & Wheel Bearing Lubrication:**

- a. The rear axle differential & rear wheel bearings shall be lubricated with oil.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**19. Rear Tires:**

- a. There shall be four (4) rear tires, Emergency Michelin brand (or equivalent per approval from Fire Chief) tires 11R22.50 all-weather tread, properly sized, and mounted to the rear wheels. These tires shall be designed for on and off-road use with mud and snow traction.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**20. Rear Wheels:**

- a. All rear wheels shall be polished aluminum wheels. The hub piloted mounting system shall provide easy installation and shall include two-piece flange nuts. Outer w/steel inner, 22.50"x 8.25".

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**21. Tire Balance:**

- a. All tires shall be balanced with Counteract balancing beads. The beads shall be inserted into the tire and eliminate the need for wheel weights.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**22. Tire Pressure Indicator:**

- a. There shall be Real Wheels Tire Watch, or approved equal, polished stainless steel electronic LED valve caps that shall illuminate a red LED when tire pressure drops 8 psi, on each wheel. The valve caps shall be self-calibrating and set to the pressure of the tire upon installation.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**23. Wheel Trim:**

- a. The front wheels shall include stainless steel lug nut covers and stainless-steel baby moons. The baby moons shall have cutouts for oil seal viewing where applicable.
- b. The rear wheels shall include stainless steel lug nut covers and band mounted spring clip stainless steel high hats.
- c. The lug nut covers, baby moons, and high hats shall be RealWheels® brand, or approved equal, constructed of 304L grade, non-corrosive stainless steel with a mirror finish. Each wheel trim component shall meet D.O.T. certification.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**24. Mud Flaps:**

- a. Mud flaps shall be installed behind the front and rear wheels of the apparatus.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**25. Brake System:**

- a. A rapid build-up air brake system shall be provided. The air brakes shall include a two (2) air tank reservoir system. It shall also include an air compressor Kussmaul 091-9 12V Brake system (18.7 CFM), and air dryer, with heater, and an air outlet with shut off valve.
- b. The rear axle spring brakes shall automatically apply in any situation when the air pressure falls below 25 PSI and shall include a mechanical means for releasing the spring brakes when necessary. An audible alarm shall designate when the system air pressure is below 60 PSI.
- c. A four (4) sensor, four (4) modulator anti-lock braking system (ABS) shall be installed on the front and rear axles in order to prevent the brakes from locking or skidding while braking during hard stops or on icy or wet surfaces. The electronic monitoring system shall incorporate diagonal circuitry which shall monitor wheel speed during braking through a sensor and tone ring on each wheel. A dash mounted ABS lamp shall be provided to notify the driver of a system malfunction. The ABS system shall automatically disengage the

auxiliary braking system device when required. The speedometer screen shall be capable of reporting all active defaults.

- d. Additional safety shall be accommodated through Automatic Traction Control (ATC) which shall be installed on the tandem rear axle. The ATC system shall apply the ABS when the drive wheels lose traction. The system shall scale the electronic engine throttle back to prevent wheel spin while accelerating on ice or wet surfaces.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**26. Front Brakes:**

- a. The front brakes shall be S-Cam, 16.50" x 5.00". The front brakes shall be provided with automatic slack adjusters.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**27. Rear Brakes:**

- a. Rear axle brakes shall be 16.50" x 7.00", S-Cam drum type brakes. Automatic slack adjusters shall be provided.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**28. Park Brake:**

- a. A manual hand control push-pull style valve shall operate the parking brake system. The control shall be yellow in color and located within easy reach of the driver.
- b. Upon application of the push-pull valve in the cab, the rear brakes will engage via mechanical spring force.
- c. This is accomplished by dual chamber rear brakes, satisfying the FMVSS parking brake requirements.
- d. In addition to the mechanical rear brake engagement, the front service brakes will also engage via air pressure, providing additional braking capability.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**29. Air Dryer**

An air dryer with a heater shall be provided. Other features of this air dryer include:

- Desiccant style filter
- In-line filtration system

- Automatic purge valve

**30. Air Outlet**

One (1) air outlet shall be installed with a female coupling and shut off valve, located on the driver side pump panel. This system shall tie into the "wet" tank of the brake system and include an 85-psi pressure protection valve in the outlet line to prevent the brake system from losing all air.

A mating male fitting shall be provided with the loose equipment.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**31. AIR TANK, ADDITIONAL**

One (1) additional air tanks with total of 1452 cubic inch displacement shall be provided to increase the capacity of the main air brake system. This tank shall be plumbed into the rear half of the brake system. The air tank shall be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tanks shall be mounted with stainless steel brackets (no exception).

The output flow of the engine air compressor shall vary with engine rpm. Full compressor output shall only be achieved at governed engine speed. Engine speed shall be limited by generators, pumps and other PTO driven options.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**32. AIR COMPRESSOR - BRAKE SYSTEM MAINTENANCE**

A Kussmaul, Model 091-9, air compressor shall be provided. It shall be electric motor driven by the 12-volt chassis electrical system and shall be located Mounted in the front DS compartment mounted with the battery charger. The compressor shall maintain the air pressure in the chassis air brake system while the vehicle is not in use. A pressure switch shall sense when the system pressure drops and automatically start the compressor, which then shall run until pressure is restored.

There shall be an auto pump timer installed between the pressure switch and the pump that shall allow the pump to run for 1 hour than shut down for 1 hour.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**33. ENGINE**

- Model: Paccar PX-9 Kenworth
- Number of Cylinders: Six (6)
- Bore and Stroke: 4.49" x 5.69"
- Displacement: 543 cubic inches (8.9 Liter)
- Rated Brake Horsepower: 350 at 2000 rpm
- Peak Torque: 1000 at 1400 rpm
- Governed rpm: 2200
- Turbocharger
- Charge Air Cooled
- Fuel System: Hydraulically Actuated, Electronically Controlled Unit Injectors (HEUI)

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**34. ENGINE ACCESSORIES**

- Air Cleaner: Dry type, with restriction indicator in cab
- Fuel Filters: Dual, with check valve
- Governor: Limiting speed type
- Lube Oil Cooler
- Lube Oil Filter: Full flow
- Starting Motor: 12-volt
- Oil Fill and Level Gauge

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**35. RADIATOR**

- Pressurized System, Tube and Fin
- Deaeration Tank and Sight Glass
- Anti-Freeze Protection -30 Degrees Fahrenheit

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**36. HIGH IDLE**

A high idle switch shall be provided on the instrument panel inside the cab. Activating the switch shall cause the vehicle to automatically maintain a preset engine rpm.

The high idle switch shall be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light shall be provided adjacent to the switch. The light shall be labeled "OK To Engage High Idle."

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**37. ENGINE EXHAUST BRAKE**

An exhaust brake with an integral variable geometry turbo charger (VGT) shall be provided. The control shall be located on the instrument panel within easy reach of the driver.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**38. AIR INTAKE, W/EMBER SEPARATOR**

The air inlet shall be equipped with a stainless-steel mesh to separate water and burning embers from the air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element.

This shall comply with NFPA 1901 and 1906 standards.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**39. EXHAUST SYSTEM**

The exhaust system shall include a diesel particulate filter (DPF) and a selective catalytic reduction (SCR) device to meet current EPA standards. The DPF and SCR shall be mounted horizontally outside of the frame rails in the right-side front step area.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**40. EXHAUST MODIFICATIONS**

The exhaust shall terminate with a horizontal tailpipe and diffuser ahead of the right-side rear wheels.

A heat deflector shield shall be provided where the tail pipe is routed under any side compartmentation.

All modifications shall be approved by the chassis engine manufacturer and/or the chassis OEM. Exhaust treatment devices shall not be altered.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**41. COOLANT LINES**

Gates Blue Stripe rubber hose shall be used for all engine coolant lines installed by the chassis manufacturer.

Hose clamps shall be of a design commonly called constant torque type to prevent coolant leakage. They shall react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**42. FUEL TANK**

At least a 50-gallon fuel tank shall be provided and mounted at the left-hand cab step. The tank shall be constructed of aluminum. **A fuel heater shall accompany the fuel system to ensure in colder weather fuel does not gel.**

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**43. DIESEL EXHAUST FLUID TANK**

A diesel exhaust fluid (DEF) tank shall be provided and mounted on the left side, below the cab.

The tank shall be sized by the chassis manufacturer based on the engine provided. It shall include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**44. AUXILIARY FUEL COOLING SYSTEM**

A supplementary fuel cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the chassis engine fuel. The heat exchanger shall be a cylindrical type and shall be a separate unit. The cooler shall operate any time the pump is discharging water and shall be plumbed to the master drain valve.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**45. TRANSMISSION**

An Allison, model 3000 EVS, electronic torque converting automatic transmission shall be provided. To qualify for the EVS rating, the transmission shall be filled with synthetic transmission fluid.

Two (2) PTO openings shall be located on left and right side of the converter housing (positions 8 o'clock and 4 o'clock).

A transmission temperature gauge or warning light shall be installed on cab instrument panel.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**46. TRANSMISSION SHIFT CONTROL**

A push button shift module shall be mounted to right of driver. Shift position indicator shall be indirectly lit for after dark operation.

The transmission shall be a five (5)-speed.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**47. TRANSMISSION COOLER**

A transmission oil cooler shall be provided in a tank of the radiator.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**48. DRIVELINE**

Drivelines shall be a heavy-duty metal tube equipped with universal joints properly sized for the application. A splined slip joint shall be provided in each driveshaft.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**49. STEERING**

The steering system shall be hydraulically driven. The steering column shall have an adjustable tilt and telescope feature. The turn signals shall be self-cancelling type.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**50. BUMPER**

A one (1) piece, 10.00" high, stainless steel bumper shall be attached to the front of the frame.

A 9.00" channel shall be mounted directly behind the bumper for additional strength.

The bumper shall be extended 16.00" from the front face of the cab.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**51. GRAVEL PAN**

A gravel pan, constructed of bright aluminum treadplate, shall be furnished between the bumper and cab face. The gravel pan shall be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**52. TOW HOOKS**

Two (2) chromed steel tow hooks shall be installed under the bumper and attached to the front frame members. The tow hooks shall be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks shall not be used for lifting of the apparatus. In addition, two (2) chromed steel tow hooks shall be installed under the rear bumper and attached to the rear frame members. These tow hooks shall also be designed and positioned to allow up to a 6,000lb. straight horizontal pull.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**53. CAB**

A 2-door, Kenworth T370 cab shall be provided. The cab and doors shall be of an aluminum composite construction.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**54. EXTERIOR STYLING**

Aerodynamic hood and windshield

Tinted Glass in all Windows

Fiberglass hood with Kenworth chromed grille

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**55. INTERIOR**

Air bag rear cab suspension

Gray vinyl mats

Forward roof mounted console

Two (2) dash-mounted cup holders, right-hand and left-hand

Gray Vinyl Upholstery

Dual Sun visors

Fresh Air Heater and Defroster

- Gray Vinyl Upholstery

Does your bid comply? YES \_\_\_ NO \_\_\_

**56. CAB GRILLE - CHROMED**

The cab grille shall be a chromed high impact plastic with a horizontal rib design. The headlight bezels and air intake grilles shall also have a chromed finish. The grille shall tilt with the hood.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**57. MIRRORS**

West Coast style heated, remote operated mirrors constructed from a molded composite material with a bright finish shall be provided. A heated 8.00" convex mirror shall be included below the primary mirrors. An auxiliary down view mirror shall be included on the passenger side.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**58. CAB ACCESS STEPS**

The cab steps shall be provided by the chassis manufacturer. The stepping surface shall be constructed from polished stainless steel and have a punch formed slip resistant surface.

No modifications of any type shall be required by the apparatus manufacturer.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**59. STEP LIGHTS**

There shall be four (4) white LED step lights provided. There shall be one (1) light installed at each cab door, one (1) light per doorstep.

In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.

The lights shall be activated when the adjacent door is opened.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**60. DELETE REAR CAB WINDOW**

The chassis manufacturer shall provide a metal panel in place of the rear window in the cab.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**61. AIR CONDITIONING**

An air conditioner shall be provided that is integral with heater and defroster system.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**62. ENGINE COMPARTMENT LIGHTS**

Two (2) engine compartment lights shall be installed under the engine hood, of which the switches are an integral part.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**63. SEATING CAPACITY**

The seating capacity in the cab shall be two (2).

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**64. SEATING**

Seating inside the cab shall consist of an air-ride driver seat and passenger seat.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**65. SEATING**

For safety, this seating shall have all applicable seat and seat belt pull testing completed. This installation shall comply with all FMVSS and NFPA requirements.

A third-party certification of the installation and testing is required and documents for this testing shall be provided.

All non-certified installations shall cause immediate rejection of the bid as we shall not compromise the safety of our personnel.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**66. SEAT BELT WEB LENGTH**

NFPA 14.1.3.2 and 14.1.3.3 requires effective seat belt web length for a Type 1 lap belt for pelvic restraint to be a minimum of 60 in., and a Type 2 pelvic and upper torso restraint-style seat belt assembly to be a minimum of 110 in.

Per Fire Department specification of a commercial chassis, this apparatus shall have seat belts of the required length. These belts shall provide sufficient length for large firefighters in bunker gear. This apparatus shall be compliant to NFPA standards effective at time of contract execution.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**67. SEAT BELTS**

All seating positions in the cab shall have seat belts.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**68. HELMET STORAGE PROVIDED BY FIRE DEPARTMENT**

NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided.

There is no helmet storage on the apparatus as manufactured. The fire department shall provide a location for storage of helmets.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**69. PORTABLE HAND LIGHTS, STREAMLIGHT FIRE VULCAN LED**

NFPA 1901, 2016 edition, section 7.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus.

- Two (2) Rechargeable Streamlight Fire Vulcan hand lights mounted with brackets and chargers in front DS compartment.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**70. CAB INSTRUMENTS**

- Engine Temperature Gauge and Warning Buzzer
- Engine Oil Pressure Gauge and Warning Buzzer
- Speedometer with Odometer
- Engine Tachometer
- Engine Hour meter
- Fuel Level Gauge
- DEF Level Gauge and Warning Lamp
- Voltmeter: Low voltage red warning light and audible alarm
- Air Brake Pressure Gauge
- Air Restriction Indicator
- Circuit Breakers: For overload protection of electric circuits
- Ignition Switch: Keyless type

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**71. EMERGENCY SWITCH PANEL**

An emergency switch panel shall be provided in the cab. The switch panel shall be located overhead and on the cab instrument panel.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**72. "DO NOT MOVE APPARATUS" INDICATOR**

A flashing red indicator light (located in the driving compartment) shall be illuminated automatically per the current edition of NFPA. The light shall be labeled "Do Not Move Apparatus If Light Is On".

The same circuit that activates the Do Not Move Apparatus indicator shall activate a steady tone alarm when the parking brake is released.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**73. OPEN DOOR INDICATOR LIGHT**

A red "open door" indicator light shall be provided inside the cab, in clear view of the driver, to warn of an open compartment door.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**74. WIPER CONTROL**

Wiper control shall include an intermittent feature and windshield washer controls.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**75. RADIO WIRING**

There shall be one (1) 12-volt combination wiring leads of which each shall include one (1) direct battery, one (1) ignition and one (1) negative for use with radio equipment.

Each lead shall be 18.00" long and be provided to be determined. The leads shall be clearly marked in a coil and terminate with butt splices.

A breaker rated for 30 amps shall be provided for circuit protection of the direct battery lead with a minimum of 10-gauge wire.

A breaker rated for 7.5 amps shall be provided for circuit protection of the ignition lead.

The wires shall be colored coded as follows:

- red for direct battery
- yellow for ignition
- black for ground

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**76. SPARE CIRCUIT**

There shall be one (1) pair of wires, including a positive and a negative, installed on the apparatus.

The above wires shall have the following features:

- The positive wire shall be connected directly to the battery power.
- The negative wire shall be connected to ground.
- Wires shall be protected to 20 amps at 12 volts DC.
- Power and ground shall terminate to be determined at a later date. .
- Termination shall be to a Blue Sea System, Model 5025, 6 circuit with negative bus bar (or equivalent per approval from Fire Chief). The terminal block shall include a cover with circuit labels.

Wires shall be sized to 125% of the protection.

This circuit may be load managed when the parking brake is set.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**77. SPARE CIRCUIT**

There shall be two (3) pair of wires, including a positive and a negative, installed on the apparatus.

The above wires shall have the following features:

- The positive wire shall be connected directly to the battery power
- The negative wire shall be connected to ground
- Wires shall be protected to 15 amps at 12 volts DC
- Power and ground shall terminate officer side dash area
- Termination shall be with 15-amp, power point plug with rubber cover
- Wires shall be sized to 125 percent of the protection

The circuits may be load managed when the parking brake is set.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**78. RADIO**

An AM/FM/Weather band Bluetooth stereo radio with auxiliary inputs and J1939 connectivity shall be provided. It shall also include two (2) speakers and a clock.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**79. VEHICLE DATA RECORDER**

There shall be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.

The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR shall be available to download on-line.

The vehicle data recorder shall be capable of recording the following data via hardwired and/or CAN inputs:

- Vehicle Speed - MPH
- Acceleration - MPH/sec
- Deceleration - MPH/sec
- Engine Speed - RPM
- Engine Throttle Position - % of Full Throttle
- ABS Event - On/Off
- Seat Occupied Status - Yes/No by Position
- Seat Belt Buckled Status - Yes/No by Position
- Master Optical Warning Device Switch - On/Off
- Time - 24 Hour Time
- Date - Year/Month/Day

The system shall also be capable of no additional functionality required.

An additional input shall be included with this system. When the VDR is active, this input shall not be required.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**80. SEAT BELT MONITORING SYSTEM**

A seat belt monitoring system (SBMS) shall be provided. The SBMS shall be capable of monitoring up to six (6) seating positions indicating the status of each seat position per the following:

- Seat Occupied & Buckled = Green LED indicator illuminated
- Seat Occupied & Unbuckled = Red LED indicator with audible alarm
- No Occupant & Buckled = Red LED indicator with audible alarm
- No Occupant & Unbuckled = No indicator and no alarm

The SBMS shall include an audible alarm that shall warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**81. RADIO INTERFACE STATION**

A Firecom 110 single radio interface capable system with one (1) wireless base station for up to five (1-5) headset users provided.

The wireless base station shall have a 100' to 1100' range, line of sight. Objects between the transmitter and receiver affect range.

The following components shall be provided:

- One (1) Firecom 110 Radio Interface
- One (1) WB505R wireless base station (1-5 wireless positions)
- One speaker on pump panel with volume control

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**82. RADIO / INTERCOM INTERFACE CABLE**

The apparatus manufacturer shall supply and install:

- One (1) radio interface cable before delivery of the vehicle.
- One (1) Motorola High Power, Model number APX 8500 All Band P25 Mobile Radio.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**83. WIRELESS UNDER HELMET, RADIO TRANSMIT ONLY HEADSET**

There shall be two (2) Firecom™, Model UHW-505, wireless under the helmet, radio transmit headsets provided. A heavy duty, coiled 12 volt charging pigtail with plug shall be provided driver's seat and officer seat.

Each headset shall feature:

- Noise cancelling electric microphone
- Flexible microphone boom
- Ear seals with 20 dB noise reduction

- Stereo Listen-Through Ear dome microphones
- Radio Push To Transmit button (Left or Right Side)
- Rechargeable battery operates for 24 hours on a full charge
- IP-66 when worn

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**84. HEADSET HANGERS**

There shall be two (2) headset hangers installed driver's seat and officer's seat. The hangers shall meet NFPA 1901, Section 14.1.11, requirement for equipment mounting.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**85. RADIO ANTENNA MOUNT**

There shall be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the instrument panel area. A weatherproof cap shall be installed on the mount.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**86. VEHICLE CAMERA SYSTEM**

There shall be a color vehicle camera system provided with the following:

- One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse.

The camera image shall be displayed on a 7.00" LCD display located in view of the driver on the overhead panel. The display shall include manual camera activation capability and audio from the active camera.

The following components will be included:

- One (1) MO700136DC, display
- One (1) SV-CW134639CAI, camera
- All necessary cables

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**87. ELECTRICAL**

All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. All wiring shall be high temperature crosslink type. Wiring shall be run in loom or conduit where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers shall be provided which conform to SAE Standards. Wiring shall be color, function and number coded. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment shall be installed utilizing the following guidelines:

(1) All holes made in the roof shall be caulked with silicon. Rope caulk is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof.

(2) Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body.

(3) Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. Also, a coil of wire shall be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.

(4) Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections shall require this compound in the plug to prevent corrosion and for easy separation (of the plug).

(5) All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.

(6) All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal. All emergency light switches shall be mounted on a separate panel installed in the cab. A master warning light switch and individual switches to be provided to allow pre-selection of emergency lights. The light switches shall be "rocker" type with an internal indicator light to show when switch is energized. All switches shall be properly identified and mounted in a removable panel for ease in servicing. Identification of the switches shall be done by either printing or etching on the switch panel. The switches and identification shall be illuminated.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished. Rear identification lights shall be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

The results of the tests shall be recorded and provided to the purchaser at time of delivery.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

### **88. BATTERY SYSTEM**

A battery system shall be provided consisting of from two to four (2-4) 12-volt, maintenance-free batteries. The battery system shall have a total of 2000 CCA. Final amount to be determined based on apparatus needs from the Fire Chief.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

### **89. JUMP START CONNECTIONS**

Positive and negative posts for jump starting shall be provided by the chassis manufacturer. They shall be frame mounted and located under the hood.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

### **90. BATTERY SYSTEM MODIFICATION**

Due to specific apparatus configuration requirements, the batteries shall be relocated to the driver's side, below the extended cab area by the apparatus manufacturer. An enclosure with an access panel shall protect the batteries.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**91. MASTER BATTERY SWITCH**

A master battery switch, to activate the battery system, shall be provided inside the cab within easy reach of the driver.

The master battery disconnect switch shall be wired between the starter solenoid and the remainder of the electrical loads on the apparatus.

A green "battery on" indicator light, visible from the driver's position, shall be provided.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**92. BATTERY CHARGER**

There shall be an IOTA™, Model DSL 75, battery charger with IQ4, controller provided.

The battery charger shall be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.

There shall be a Kussmaul™, Model #091-94-12, remote indicator included.

The battery charger shall be located in the left body compartment mounted on the left wall as high as possible.

The battery charger indicator shall be located on the driver's side pump panel.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**93. SHORELINE INLET**

There shall be one (1) Blue Sea Sure Eject™ part number 7851, 20 amp 120 volt AC shoreline inlet provided to operate the dedicated 120 volt AC circuits on the apparatus.

The shoreline shall be connected to Battery charger and pre-wiring for customer provided inverter .

The shoreline inlet cover color to be red.

The connector body shall be released from the inlet when the apparatus engine start button is activated.

There shall be a mating connector body supplied with the loose equipment.

There shall be a label installed near the inlet that state the following:

- Line Voltage
- Current Rating (amps)
- Phase
- Frequency

The shoreline receptacle shall be located on the driver side of pump panel.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**94. ALTERNATOR**

The alternator shall be a Delco Remy 40SI, 275-amp, Quadra mount, with remote battery voltage sensor.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

## **95. ELECTRONIC LOAD MANAGEMENT**

A Kussmaul Load Manager 2 (or equivalent per approval from Fire Chief) shall be provided on the apparatus. The device is an electronic load management (ELM) system that monitors the vehicles 12-volt electrical system, and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.

The ELM shall monitor the vehicle's voltage while at the scene (parking brake applied). It shall sequentially shut down individual electrical loads when the system voltage drops below a preset value. Two (2) separate electrical loads shall be controlled by the load manager. The ELM shall sequentially re-energize electrical loads as the system voltage recovers.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

## **D. APPARATUS LIGHTING**

### **1. EXTERIOR LIGHTING**

Exterior lighting shall meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements in effect at time of proposal.

Five (5) LED clearance and marker lights shall be installed across the leading edge of the cab.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

### **2. INTERMEDIATE LIGHTING**

There shall be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light shall double as a turn signal and marker light.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

### **3. REAR CLEARANCE/MARKER/ID LIGHTING**

There shall be a three (3) LED light bar used as identification lights located at the rear of the apparatus per the following:

- As close as practical to the vertical centerline
- Centers spaced not less than 6.00" or more than 12.00" apart
- Red in color
- All at the same height

There shall be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:

- To indicate the overall width of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the rear
- All at the same height

There shall be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following:

- To indicate the overall length of the vehicle

- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the side
- All at the same height

There shall be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

There shall be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

Per FMVSS 108 and CMVSS 108 requirements.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**4. REAR FMVSS LIGHTING**

The rear stop/tail and directional lights shall be Truck-Lite®, 4.00" round LED lamp kits. Each lamp kit shall include a lamp, a flange mount and a connector plug. Each light shall be mounted with a Truck-Lite, Model 44705, stainless steel flange cover.

The following light kits shall be provided:

- Two (2) Truck-Lite, Model 44022R, red stop/tail light assemblies.
- Two (2) Truck-Lite, Model 44023Y, amber directional light assemblies.

The lights shall be mounted on the rear face of the rear fender compartment.

Two (2) Truck-Lite, Model 44344C LED backup lamp kits shall be provided. Each kit shall include a Truck-Lite, Model 44350C, 4.00" LED lamp with flange mount and connector plug. Each light shall be mounted with a Truck-Lite, Model 44705 stainless steel mounting cover.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**5. LICENSE PLATE BRACKET**

There shall be one (1) license plate bracket mounted on the rear of the body.

A white LED light shall illuminate the license plate. A stainless steel light shield shall be provided over the light that shall direct illumination downward, preventing white light to the rear.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**6. BACK-UP ALARM**

A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse shall be provided. The device shall sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**7. CAB PERIMETER SCENE LIGHTS**

There shall be two (2) TecNiq, Model T10-LC00-1, 15.00" white LED strip lights provided.

- One (1) under the driver's side cab access step
- One (1) under the passenger's side cab access step

The lights shall be activated when the battery switch is on, when the respective door is open and by the same control selected for the body perimeter lights.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**8. PUMP HOUSE PERIMETER LIGHTS**

There shall be two (2) TecNiq, Model T10-LC00-1, 15.00" white 12 volt DC LED weatherproof strip lights provided under the pump panel running boards, one (1) each side.

The lights shall be controlled by the same means as the body perimeter lights.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**9. BODY PERIMETER SCENE LIGHTS**

There shall be two (2) TecNiq, Model T10-LC00-1, 15.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear.

The perimeter scene lights shall be activated when the parking brake is applied.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**10. STEP LIGHTS**

Four (4) white LED step lights shall be provided. One (1) step light shall be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard.

In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light.

These step lights shall be actuated with the pump panel light switch.

All other steps on the apparatus shall be illuminated per the current edition of NFPA 1901.

**Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_**

**11. SIDE SCENE LIGHTS**

There shall be two (2) Whelen®, Model M9LZC, LED scene lights with Model M9FC, chrome flanges installed on the side of the apparatus, one (1) high and forward on driver's side body and one (1) high and rearward on driver's side body.

A control for the lights selected above shall be the following:

- a switch at the driver's side switch panel

These lights may be load managed when the parking brake is applied.

**Does your bid comply?      YES \_\_\_\_\_ NO \_\_\_\_\_**

**12. SCENE LIGHTS**

There shall be two (2) Whelen, Model M9LZC LED scene lights with chrome flanges installed on the side of the apparatus, one (1) high and forward and one (1) high and rearward on the passenger's side body.

A control for the lights selected above shall be the following:

a switch at the driver's side switch panel

These lights may be load managed when the parking brake is set.

**Does your bid comply?      YES \_\_\_\_\_ NO \_\_\_\_\_**

**13. WALKING SURFACE LIGHT**

There shall be Model FRP, 4" round black 12 volt DC LED floodlight with bolt mount provided to illuminate the entire designated walking surface on top of the body.

The light shall be activated when the body step lights are on.

**Does your bid comply?      YES \_\_\_\_\_ NO \_\_\_\_\_**

**14. HOSE BED LIGHTS**

There shall be white 12-volt DC LED light strips with stainless steel protective cover, provided to light the hose bed area. Hose Bed lights shall meet the photometric levels listed in NFPA 1901 for Hose Bed lighting requirements.

- Light strips shall be installed along the upper edge of the left side of the hose bed.
- Light strips shall be installed along the upper edge of the right side of the hose bed.

The lights shall be activated by a cup switch at the rear of the apparatus no more than 72.00" from the ground.

**Does your bid comply?      YES \_\_\_\_\_ NO \_\_\_\_\_**

**15. REAR SCENE LIGHT(S)**

There shall be two (2) Whelen®, Model M9LZC, LED scene lights with chrome trim bezels installed at the rear of the apparatus, one (1) high on the driver's side rear body bulkhead and one (1) high on the passenger's side rear body bulkhead.

The lights shall be controlled by a switch at the driver's side switch panel.

The lights may be load managed when the parking brake is applied.

**Does your bid comply?      YES \_\_\_\_\_ NO \_\_\_\_\_**

**E. EXTERIOR OF APPARATUS**

**1. WATER TANK, 2000 GALLON POLYPROPYLENE**

The tank shall be built by United Plastic Fabricating, Inc. The booster tank shall have a capacity of 2000 gallons and be constructed of polypropylene plastic.

The joints and seams shall be nitrogen welded inside and out. Tank to be baffled in accordance with NFPA Bulletin 1901 requirements. The baffles shall have vent openings at both the top and bottom to permit movement of air and water between compartments. The longitudinal partitions shall be constructed of 0.38" polypropylene plastic and shall extend from the bottom of the tank through the top cover to allow positive welding. The transverse partitions shall extend from 4.00" off the tank bottom to the underside of the top cover. All partitions shall interlock and shall be welded to the tank bottom and sides.

The tank top shall be constructed of 0.50" polypropylene. It shall be recessed 0.38" from the top of the tank and shall be welded to the tank sides and the longitudinal partitions. Top shall be sufficiently supported to keep it rigid during fast filling conditions. Construction shall include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels shall be drilled and tapped (0.50" diameter, 13.00" deep) to accommodate lifting eyes.

A sump that will be sized dependent on the tank to pump plumbing shall be provided at the bottom of the water tank. The sump shall include a drain plug and the tank outlet.

The tank shall be installed in a fabricated cradle assembly constructed on 3.00" x 3.00" x 0.25" angle iron.

Rubber cushions, 0.50" thick x 3.00" wide, shall be placed on all horizontal surfaces that the tank rests on.

Fill tower shall be constructed of .50" polypropylene and shall be a minimum of 10.00" wide x 16.00" long. The fill tower shall be located in the front of the tank on the left side.

Fill tower shall be furnished with a .25" thick polypropylene screen and a hinged cover.

An overflow pipe, constructed of 6.00" schedule 40 polypropylene, shall be installed approximately halfway down the fill tower and extend through the water tank and dump to the rear of the rear axle. Any changes or differences than above in the water tank must be presented for approval from the Fire Chief.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**2. WATER TANK RESTRAINT**

A heavy-duty water tank restraint shall be provided.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**3. DIRECT TANK FILL**

There shall be one (1) 2.50" Fireman's Friend Inc., Model FFE 2525 CF8M-F semi-automatic tank fill or equivalent approved by Fire Chief, installed and properly labeled at the rear of the water tank, located right side and installed as high as possible.

A 2.50" (F)NST chrome swivel shall be located at the inlet.

A 2.50" chrome plated 30-degree elbow and plug with VLH automatic pressure relieving thread technology shall be provided for the tank fill.

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

**4. TANK DUMP**

A tank dump shall be installed through the rear body panel in the area over the tailboard.

The dump shall be gated with a manually actuated 10.00" square Newton dump valve.

A 180-degree, Newton 6012SW swivel dump chute or equal style and type shall be provided. The chute shall include a Newton 4036 telescopic extension or equal style and type to allow the chute to extend past the body side for dumping.

The water tank design shall include additional support for this chute. In addition, a heavy-duty chute support system shall be provided on the exterior of the body.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**5. HYDRAULIC PORTABLE TANK RACK**

A quantity of one (1) QUIC-LIFT Model PTS-HA hydraulic portable tank rack constructed of stainless-steel tubing shall be installed on the right side of the truck, or a similar approved model approved by the Fire Chief.

The rack shall be hinged to allow the entire rack to fold down to a position adjacent to the side of the body where two (2) people can easily remove the tank. Two (2) heavy-duty latches shall be installed, one (1) on the front and one (1) on the rear, to lock the rack in the stored position. The rack shall be designed to carry a 2500-gallon aluminum framed Husky Folding Tank (closed dimensions of 159" x 8" x 29") Husky brand portable tank.

When the rack is in the lowered position, it shall activate the "Do Not Move Apparatus" light in the cab.

There shall be a switch on passenger side to lower rack.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**6. PAINTED COVER OVER PORTABLE TANK RACK**

A painted cover to match the primary color of the apparatus shall be provided over the outer portion of one (1) portable tank rack.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**7. HOSE BED**

The hose bed shall be fabricated of .125"-5052 aluminum with a nominal 38,000 psi tensile strength.

The sides shall not form any portion of the fender compartments.

Upper and rear edges of side panels shall have a double break for rigidity, a split tube finish shall not be acceptable.

The upper inside area of the beavertails shall be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.

Flooring of the hose bed shall be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats shall be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.

Hose bed shall accommodate 200' of 2.5" ; 700' of 4"; 700' of 2.5", 300' of 1 3/4.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**8. HOSE BED DIVIDER**

Three (3) adjustable hose bed dividers shall be furnished for separating hose.

Each divider shall be constructed of a .25" brushed aluminum sheet. Flat surfaces shall be sanded for uniform appearance, or constructed of brushed aluminum.

Divider shall be fully adjustable by sliding in tracks, located at the front and rear of the hose bed.

Divider shall be held in place by tightening bolts, at each end.

Acorn nuts shall be installed on all bolts in the hose bed which have exposed threads.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**9. HOSEBED HOSE RESTRAINT**

A red hose bed cover shall be furnished with high quality bungee cord and hook fasteners at the front and high quality bungee cord and hook fasteners on the sides. There shall be 2.00" side release fasteners at the bottom of the rear body sheet below the hose bed. The flap at the rear shall be lead shot weighted.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**10. RUNNING BOARDS**

Running boards shall be fabricated of .125" bright aluminum treadplate.

Each running board shall be supported by a welded 2.00" square tubing and channel assembly, which shall be bolted to the pump compartment substructure.

Running boards shall be 12.75" deep and spaced .50" away from the pump panel.

A splash guard shall be provided above the running board treadplate.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**11. TAILBOARD**

The tailboard shall also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.

The tailboard area shall be 16.00" deep and full width of the body. The outboard sides of the tailboard shall be angled at 45 degrees beginning at the point where the body meets the tailboard at the outboard edge angling rearward to the rear edge of the tailboard.

The exterior side shall be flanged down and in for increased rigidity of tailboard structure.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**12. REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL**

The rear facing surfaces of the center rear wall shall be smooth aluminum.

The bulkheads, the surface to the rear of the side body compartments, shall be smooth and the same material as the body.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**13. TOW EYES**

There shall be a total of two (2) painted tow eyes provided and mounted directly to the chassis frame rails at the rear of the apparatus. The inner and outer edges of the tow eyes shall have a radius.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**14. COMPARTMENTATION**

Body and compartments shall be fabricated of .125", 5052-H32 aluminum.

Side compartments shall be an integral assembly with the rear fenders.

Circular fender liners shall be provided for prevention of rust pockets and ease of maintenance.

Side compartment flooring shall be of the sweep out design with the floor higher than the compartment door lip.

The side compartment door opening shall be framed by flanging the edges in 1.75" and bending out again .75" to form an angle.

Drip protection shall be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate or polished stainless steel.

The top of the compartment shall be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers shall have the corners welded.

Side compartment covers shall be separate from the compartment tops.

Front facing compartment walls shall be covered with bright aluminum treadplate.

All screws and bolts which protrude into a compartment shall have acorn nuts on the ends to prevent injury.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**15. UNDERBODY SUPPORT SYSTEM**

Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load shall be provided.

The backbone of the support system shall be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads.

The support system shall include .375" thick steel vertical angle supports bolted to the chassis frame rails with .625" diameter bolts.

Attached to the bottom of the steel vertical angles shall be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.

A steel frame shall be mounted on the top of these supports to create a floating substructure which shall result in a 500 lb equipment support rating per lower front compartments.

The floating substructure shall be separated from the horizontal members with neoprene elastomer isolators. These isolators shall reduce the natural flex stress of the chassis from being transmitted to the body.

Isolators shall have a broad load range, proven viability in vehicular applications, be of a failsafe design and allow for all necessary movement in three (3) transitional and rotational modes.

A design with body compartments hanging on the chassis in an unsupported fashion shall not be acceptable.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

#### 16. AGGRESSIVE WALKING SURFACE

All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

#### 17. LOUVERS

Louvers shall be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they shall be formed into the metal and not added to the compartment as a separate plate.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

#### 18. LEFT SIDE COMPARTMENTATION

The left side compartmentation shall consist of four rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 44.50" wide x 67.00" high x 24.38" deep in the lower 24.75" of the compartment and 11.00" deep in the remaining upper portion. The clear door opening shall be a minimum of 38.75" wide x 57.25" high. **This compartment shall house two (2) Streamlight Fire Vulcan Led Rechargeable lanterns. Along with the lanterns, two charging vehicle mount racks will be installed.**

A rollup door compartment over the forward tandem shall be provided. The interior dimensions of this compartment shall be 54.38" wide x 33.13" high x 11.00" deep. The clear door opening shall be a minimum of 48.75" wide x 23.38" high.

A rollup door compartment over the rear tandem shall be provided. The interior dimensions of this compartment shall be 57.00" wide x 33.13" high x 11.00" deep. The clear door opening shall be a minimum of 48.75" wide x 23.38" high.

A full height, rollup door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 31.75" wide x 68.00" high x 24.38" deep in the lower 25.75" of height and 11.00" deep in the remaining upper section of the compartment. The clear door opening shall be a minimum of 28.75" wide x 58.25" high.

The interior height of the compartments shall be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments shall be measured from the back wall to the inside of the door frame.

Closing of the doors shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.

Compartments should compare to these sizes or be approved by the Fire Chief prior to bid approval.

Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_

**19. RIGHT SIDE COMPARTMENTATION**

The right-side compartmentation shall consist of two rollup door compartments.

A rollup door compartment ahead of the rear wheels shall be provided. The interior dimensions of this compartment shall be 44.50" wide x 32.75" high x 24.38" deep in the lower 24.75" of the compartment and 11.00" deep in the remaining upper portion. The clear door opening shall be a minimum of 38.75" wide x 23.00" high.

A rollup door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 31.75" wide x 33.75" high x 24.38" deep in the lower 25.75" of the compartment and 11.00" deep in the remaining upper portion. The clear door opening shall be a minimum of 28.75" wide x 24.00" high.

The interior height of the compartments shall be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments shall be measured from the back wall to the inside of the door frame.

Closing of the doors shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.

Compartments should compare to these sizes or be approved by the Fire Chief prior to bid approval.

Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_

**20. SIDE COMPARTMENT ROLLUP DOORS**

There shall be six (6) compartment doors installed on the side compartments. The doors shall be double faced aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by Gortite® or other approved by Fire Chief.

Lath sections shall be an interlocking rib design and shall be individually replaceable without complete disassembly of door.

Between each slat at the pivoting joint shall be a PVC inner seal to prevent metal to metal contact and prevent dirt or moisture from entering the compartments. Seals shall allow door to operate in extreme temperatures ranging from 180 to -40 degrees Fahrenheit. Side, top and bottom seals shall be provided to resist ingress of dirt and weather and be made of Santoprene.

All hinges, barrel clips and end pieces shall be nylon 66. All nylon components shall withstand temperatures from 300 to -40 degrees Fahrenheit. Hardened plastic shall not be acceptable.

A polished stainless-steel lift bar to be provided for each roll-up door. Lift bar shall be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge shall be supplied over lift bar for additional area to aid in closing the door.

Doors shall be constructed from an aluminum box section. The exterior surface of each slat shall be flat. The interior surfaces shall be concave to provide strength and prevent loose equipment from jamming the door from inside.

To conserve space in the compartments, the spring roller assembly shall not exceed 3.00" in diameter. A garage style roll door shall not be acceptable.

The header for the rollup door assembly shall not exceed 4.00".

A heavy-duty magnetic switch shall be used for control of open compartment door warning lights.

Compartments should compare to these sizes or be approved by the Fire Chief prior to bid approval.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**21. REAR COMPARTMENTATION**

A tool compartment shall be provided at the rear of the apparatus. The compartment shall be 26.00" wide x 8.00" high x 6.00" deep.

Compartments should compare to these sizes or be approved by the Fire Chief prior to bid approval.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**22. DROP-DOWN REAR COMPARTMENT DOOR**

A drop-down door constructed of smooth aluminum with a pair of lift and turn latches shall be provided.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**23. COMPARTMENT LIGHTING**

There shall be six (6) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips shall be centered vertically along each side of the door framing. There shall be two (2) light strips per compartment. The dual light strips shall be in all body compartment(s).

Any remaining compartments without light strips shall have a 6.00" diameter Truck-Lite, Model: 79384 light. Each light shall have a number 1076 one filament, two wire bulb.

Opening the compartment door shall automatically turn the compartment lighting on.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**24. COMPARTMENT LIGHTING, ADDITIONAL**

There shall be one (1) LED strip light provided in the compartment located there will be one (1) light mounted horizontally above the rear tool compartment door. Each light shall be 9.00" in length.

Opening the compartment door shall automatically turn the compartment lighting on.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**25. MOUNTING TRACKS**

There shall be two (2) sets of tracks for mounting shelves in LS1 and LS4. These tracks shall be installed vertically to support the adjustable shelves, and shall be full height of the compartment. The tracks shall be painted to match the compartment interior.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**26. ADJUSTABLE SHELVES**

There shall be three (3) shelves with a capacity of 500 lb provided.

The shelf construction shall consist of .188" aluminum painted spatter gray with 2.00" sides.

Each shelf shall be infinitely adjustable by means of a threaded fastener, which slides in a track.

The shelves shall be held in place by .12" thick stamped plated brackets and bolts.

The locations shall be determined at a later date.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**27. SLIDE-OUT FLOOR MOUNTED TRAY**

There shall be four (4) floor mounted slide-out trays with 2.00" sides provided LS1; LS4; RS1; RS2. Each tray shall be rated for up to 500lb in the extended position. The trays shall be constructed of a minimum .13" aluminum. The finish shall be painted spatter gray.

The trays shall be designed for maximum compartment width and depth.

There shall be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides shall have a safety factor rating of 2.

To ensure years of dependable service, the slides shall be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.

To ensure years of easy operation, the slides shall require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file shall have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance shall be provided upon request.

Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for the locks shall be located at the front of the tray for ease of use with a gloved hand.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**28. RUB RAIL**

Bottom edge of the side compartments shall be trimmed with a bright aluminum extruded rub rail.

Trim shall be 2.12" high with 1.38" flanges turned outward for rigidity.

The rub rails shall not be an integral part of the body construction, which allows replacement in the event of damage.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**29. BODY FENDER CROWNS**

Stainless steel fender crowns shall be provided around the rear wheel openings. These fender crowns must be wide enough to prevent splashing onto the body from the specified tires.

A rubber welting shall be provided between the body and the crown to seal the seam and restrict moisture from entering.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**30. HARD SUCTION HOSE**

NFPA 1901, 2016 edition, section 7.8.2 requires a minimum of 20 ft of suction hose or 15 ft of supply hose.

Hose is not on the apparatus as manufactured. The dealer shall provide hard suction hose.

There shall be Two (2) lengths of 10' long x 6.00" diameter hose provided and equipped with threaded ends with long handles couplings provided on the ends. The brand shall be Kocheck.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**31. HOSE TROUGHS**

Hard suction hose shall be carried above the compartment in V-shaped troughs and held in place by chrome plated, quarter turn, spring loaded clamps.

Troughs shall be constructed of aluminum and painted to match the truck.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**32. HANDRAILS**

The handrails shall be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface.

Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces.

Drain holes shall be provided in the bottom of all vertically mounted handrails.

Handrails shall be provided to meet NFPA 1901 section 15.8 requirements. The handrails shall be installed as noted on the sales drawing.

One (1) vertical handrail shall be located on each rear beavertail.

- One (1) handrail shall be installed below the hose bed.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**33. AIR BOTTLE STORAGE**

A total of four (4) air bottle compartments shall be provided, two (2) each side of the body. The air bottle compartment shall be in the form of a PVC round tube to accommodate different size air bottles. The inside diameter of the tube shall be approximately 7.63" in diameter x 26.00" deep. Drain holes shall be provided at the bottom of the tubes to prevent water collection.

A Cast Products door with latch shall be provided to contain the air bottle.

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**34. EXTENSION LADDER**

There shall be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**35. ROOF LADDER**

There shall be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**36. FOLDING LADDER**

One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder shall be installed in the pike pole/folding ladder compartment.

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**37. LADDER STORAGE**

Ladder storage shall be between the water tank and the right-side compartments.

This compartment shall not reduce the capacity of the water tank below the 2000 gallons.

A compartment shall be provided for storage of one (1) 2-section 24' ground ladder, one (1) 14' roof ladder and one (1) 10' folding ladder. The ground ladder, roof ladder, and folding ladder shall be stored vertically in separate stainless steel storage troughs.

The ladders shall be as completely enclosed by sheet metal as practical to prevent road dirt from entering the ladder storage area.

Rear of ladder storage area shall have a smooth aluminum door to contain the ladders. This door shall be provided with a D-handle latch.

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**38. PIKE POLE, 10'**

One (1) pike pole 10' long DUO Safety with a fiberglass handle shall be provided and located inside the ladder storage.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**39. PIKE POLE, 8'**

One (1) pike pole, 8' long Duo Safety with a fiberglass handle, shall be provided and located in the ladder storage compartment.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**40. PIKE POLE STORAGE**

Aluminum tubing shall be used for the storage of two (2) pike poles and shall be located in ladder storage compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate shall be provided.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**41. FOLDING STEPS FRONT OF BODY**

Folding steps shall be provided full height on the left side and one (1) step on the right-side body compartments to provide access to the cargo bed. Steps shall be spaced evenly on the sales drawing. Actual quantity may vary due to pump panel interferences but shall meet the NFPA required maximum stepping height.

The Trident steps shall be bright finished, non-skid with a black coating.

The steps shall incorporate an LED light to illuminate the stepping surface.

The steps can be used as a hand hold with two openings wide enough for a gloved hand.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**42. REAR FOLDING STEPS**

Bright finished, non-skid folding steps with a black coating shall be provided at the rear. Each step shall incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**1. PUMP**

Pump shall be a Waterous CXPA, 1250 gpm, single (1) stage, power take off (PTO) driven, midship mounted centrifugal type. **This pump will have pump and roll capabilities.**

Pump shall be the class "A" type.

Pump shall deliver the percentage of rated discharge at pressures indicated below:

- 100% of rated capacity at 150 psi net pump pressure.

-70% of rated capacity at 200 psi net pump pressure.

-50% of rated capacity at 250 psi net pump pressure.

Pump casting shall be a two (2) piece, vertically split design and shall be constructed of high tensile, close grain gray iron.

Impeller shaft shall be stainless steel, heat treated, accurately ground to size, and polished under the shaft seal. It shall be supported by oil lubricated ball bearings.

Bearings shall be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings shall be used.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

## **2. MECHANICAL SEAL ON PUMP**

Pump shall be equipped with a self-adjusting, maintenance-free, mechanical shaft seal.

The mechanical seal shall consist of a flat, highly polished, spring fed carbon ring that rotates with the impeller shaft. The carbon ring shall press against a highly polished stainless-steel stationary ring that is sealed within the pump body.

In addition, a throttling ring shall be pressed into the steel chamber cover, providing a very small clearance around the rotating shaft in the event of a mechanical seal failure. The pump performance shall not deteriorate, nor shall the pump lose prime, while drafting if the seal fails during pump operation.

Wear rings shall be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

## **3. PUMP TRANSMISSION**

The pump transmission shall be made of lightweight aluminum casing. Power transfer to pump shall be through a pressure lubricated, Morse HY-VO drive chain.

Drive shafts shall be a minimum of 1.50" diameter hardened and ground alloy steel. All shafts shall be ball bearing supported. The case shall be designed as to eliminate the need for water cooling.

The water pump shall be driven by a special heavy duty ten (10)-bolt hot shift PTO. It shall be located on the left side of the chassis transmission. This PTO shall be designed specifically for the torque required to drive a 1250 gpm or larger water pump.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

## **4. PUMPING MODE**

An interlock system shall be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system shall be designed to allow stationary pumping and the truck to be in motion while pumping.

A digital pump pressure gauge shall be supplied in the cab.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**5. PUMP SHIFT**

A pump shift shall be provided within easy reach of the driver for engagement of the PTO driven pump. The shift shall include the indicator lights as mandated by NFPA. The pump shift control shall be illuminated to meet NFPA requirements.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**6. AUXILIARY COOLING SYSTEM**

A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water. Heat exchanger shall be cylindrical type and shall be a separate unit. It shall be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger shall be plumbed to the master drain valve.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**7. INTAKE RELIEF VALVE**

There shall be One (1) Trident Air Max intake relief valve installed on the suction side of the pump preset at 125 psig .

The relief valve shall have a working range of 50 PSI to 350 PSI.

The outlet shall terminate below the frame rails with a 2.50" National Standard hose thread adapter and shall have a "do not cap" warning tag.

One adjustable air regulator and pressure indicating gauge shall be located on a common bezel on the left side pump panel to control the intake valve.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**8. PRESSURE CONTROLLER**

A Pressure Governor shall be provided. An electric pressure governor shall be provided which is capable of automatically maintaining a desired preset discharge pressure in the water pump. When operating in the pressure control mode, the system shall automatically maintain the discharge pressure set by the operator (within the discharge capabilities of the pump and water supply) regardless of flow, within the discharge capacities of the water pump and water supply.

A pressure transducer shall be installed in the water discharge of the pump. The transducer continuously monitors pump pressure sending a signal to the Electronic Control Module (ECM).

The governor can be used in two (2) modes of operation, RPM mode and pressure modes.

In the RPM mode, the governor can be activated after vehicle parking brake has been set. When in this mode, the governor shall maintain the set engine speed, regardless of engine load (within engine operation capabilities).

In the pressure mode, the governor system can only operate after the fire pump has been engaged and the vehicle parking brake has been set. When in the pressure mode, the pressure controller monitors the pump pressure and varies engine speed to maintain a precise pump pressure. The pressure controller shall use a quicker reacting J1939 database for engine control.

A preset feature allows a predetermined pressure or rpm to be set.

A pump cavitation protection feature is also provided which shall return the engine to idle should the pump cavitate. Cavitation is sensed by the combination of pump pressure below 30 psi and engine speed above 2000 rpm for more than five (5) seconds.

The throttle shall be a vernier style control, with a large control knob for use with a gloved hand. A throttle ready light shall be provided adjacent to the throttle control. A large 0.75" RPM display shall be provided to be visible at a glance.

Check engine, and stop engine indicator lights shall be provided for easy viewing.

Large 0.75" push buttons shall be provided for menu, mode, preset, and silence selections.

The water tank level indicator shall be incorporated in the pressure governor.

A fuel level indicator shall be incorporated in the pressure controller.

A pump hour meter shall be incorporated in the pressure controller.

The pressure controller shall incorporate monitoring for engine temperature, oil pressure, fuel level alarm, and voltage. Pump monitoring shall include, pump gearcase temperature, error codes, diagnostic data, pump service reminders, and time stamped data logging, to allow for fast accurate trouble shooting. It shall also notify the driver/engineer of any problems with the engine and the apparatus. Complete understandable messages shall be provided in a 20-character display, providing for fewer abbreviations in the messages. An automatic dim feature shall be included for night operations.

The pressure controller shall include a USB port for easy software upgrades, which can be downloaded through a USB memory stick, eliminating the need for a laptop for software installations.

A complete interactive manual shall be provided with the pressure controller.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

## **9. PRIMING PUMP**

The priming pump shall be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901.

All wetted metallic parts of the priming system are to be of brass and stainless-steel construction.

One (1) priming control shall open the priming valve and start the pump primer.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

## **10. PUMP MANUALS**

There shall be a total of three (3) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals shall be provided by the pump manufacturer in the form of two (2) electronic copies and one (1) written. Each manual shall cover pump operation, maintenance, and parts.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**11. PLUMBING, STAINLESS STEEL AND HOSE**

All inlet and outlet lines shall be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's shall be equipped with brass or stainless steel couplings.

All stainless-steel hard plumbing shall be a minimum of a schedule 40 wall thickness.

**Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with Victaulic couplings, unless otherwise approved by the Fire Chief.**

Plumbing manifold bodies shall be ductile cast iron or stainless steel.

All piping lines are to be drained through a master drain valve or shall be equipped with individual drain valves. All drain lines shall be extended with a hose to drain below the chassis frame.

All water carrying gauge lines shall be of flexible polypropylene tubing.

All piping, hose and fittings shall have a minimum of a 500 PSI hydrodynamic pressure rating.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**12. MAIN PUMP INLETS**

A 6.00" pump manifold inlet shall be provided on each side of the vehicle. The suction inlets shall include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**13. INLET VALVES WITH INTAKE RELIEF VALVE**

There shall be Two (2) Task Force Tip (TFT) ABD Series manually operated aluminum ball intake valve(s) provided at there will be one valve located on each RS and LS main pump intake. .

The inlet connection shall be 3SP (4.0" Swivel Storz) with a cap and the outlet connection shall be NX (6.0" Threaded Swivel) .

The ball intake valve shall be controlled with a NFPA compliant slow-close hand wheel. A position indicator shall be provided to allow for a quick visualization of the status of the valve in the open, closed or transition position.

The ball intake valve shall be equipped with an adjustable pressure relief valve. The relief valve shall have a working range of 90 PSI to 300 PSI

A 3/4" TFT bleeder/drain valve shall be provided on the ball intake valve to exhaust excess air or water from the valve.

For corrosion protection the aluminum casting shall have a hard coat anodized finish, with a powder coated internal and external finish. All the components facing the wet side of the valve shall be constructed from stainless steel.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**14. VALVES**

All ball valves shall be Akron® Brass in-line valves. The Akron valves shall be the 8000 series heavy-duty style with a stainless-steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.

Valves shall have a **ten (10) year warranty**. This shall be shown with bid.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**15. LEFT SIDE INLET**

There shall be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.

The auxiliary inlet shall be provided with a strainer, chrome swivel and plug.

The location of the valve for the one (1) inlet shall be recessed behind the pump panel.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**16. ANODE, INLET**

A pair of sacrificial zinc anodes shall be provided in the water pump inlets to protect the pump from corrosion.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**17. INLET CONTROL**

The side auxiliary inlet(s) shall incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism shall indicate the position of the valve.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**18. INLET BLEEDER VALVE**

A 0.75" bleeder valve shall be provided for each side gated inlet. The valves shall be located behind the panel with a swing style handle control extended to the outside of the panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders shall be routed below the chassis frame rails.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**19. TANK TO PUMP**

The booster tank shall be connected to the intake side of the pump with stainless steel schedule 40, 4.00" piping and a quarter turn 3.00" valve with the control remotely located at the operator's panel. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing.

A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**20. TANK REFILL**

A 2.00" combination tank refill and pump re-circulation line shall be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**21. LEFT SIDE DISCHARGE OUTLETS**

There shall be Two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**22. RIGHT SIDE DISCHARGE OUTLETS**

There shall be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

There shall be a 4.00" discharge outlet with a 3.00" valve with a 3.00" ball, installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet shall be actuated with a handwheel control with position indicator at the pump operator's control panel.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**23. FRONT BUMPER TURRET PLUMBING**

Plumbing consisting of 2.00" stainless steel piping and flexible hose from the pump house to the right-side front bumper shall be provided. A fabricated weldment made of stainless-steel pipe shall be used in the plumbing where appropriate.

There shall be automatic drains provided at all low points of the piping.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**24. BUMPER TURRET**

One (1) Elkhart Sidewinder 8494-01 electrically controlled monitor shall be provided on the right side of the front bumper extension. The monitor shall be provided with quick disconnect. The monitor shall be provided with an Elkhart 5000E-14 125 gpm @ 100 psi automatic nozzle. Control for the monitor shall be a joystick located between the driver and officer.

The turret shall have a horizontal rotation of 180 degrees and operate from 90 degrees above to 45 degrees below horizontal. The horizontal rotation shall be driven by a 12-volt DC direct drive motor/actuator.

An electric 2.00" full flow ball valve shall be provided at the pump. The valve shall be activated by the turret (monitor) controls described above. This valve location shall keep the turret plumbing line from being pressurized unless the turret is in use.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**25. REAR DISCHARGE OUTLET**

There shall be One (1) discharge outlet piped to the rear of the hose bed, left side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing shall consist of 2.50" stainless steel piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**26. DISCHARGE CAPS/ INLET PLUGS**

Chrome plated, rocker lug, caps with chain shall be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets.

Chrome plated, rocker lug, plugs with chain shall be furnished for all auxiliary inlets 1.00" thru 3.00" in size.

The caps and plugs shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**27. OUTLET BLEEDER VALVE**

A 0.75" bleeder valve shall be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets only if approved by the Fire Chief.

The valves shall be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders shall be located at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders shall be routed below the chassis frame rails.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**28. LEFT SIDE OUTLET ELBOWS**

The 2.50" discharge outlets located on the left side pump panel shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45-degree elbow.

The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**29. RIGHT SIDE OUTLET ELBOWS**

The 2.50" discharge outlets located on the right-side pump panel shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45-degree elbow.

The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**30. ADDITIONAL RIGHT SIDE OUTLET ELBOWS**

The 4.00" outlet shall be furnished with a 4.00" (F) National Standard hose thread x 4.00" Storz elbow adapter with Storz cap.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**31. REAR OUTLET ELBOWS**

The 2.50" discharge outlets located at the rear of the apparatus shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45-degree elbow.

The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**32. ADAPTERS**

There shall be one (1) adapter with 4.00" Storz x 2.50" MNST threads and a 2.50" cap installed on will be mounted on the Additional LDH .

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**33. DISCHARGE OUTLET CONTROLS**

The discharge outlets shall incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism shall indicate the position of the valve.

If a handwheel control valve is used, the control shall be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.

Any 3.00 inch or larger discharge valve shall be a slow-operating valve in accordance with NFPA 16.7.5.3.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**34. DELUGE RISER**

A 3.00" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping shall be installed securely so no movement develops when the line is charged. The riser shall be gated and controlled at the pump operator's panel.

Any 3.00 inch or larger discharge valve shall be a slow-operating valve in accordance with NFPA 16.7.5.3.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**35. NOZZLE, DELUGE**

Task Force Tips BlitzForce Lightweight Portable attack Monitor with combo nozzle and quad triple tips shall be provided and installed via a mounting bracket on apparatus (to be determined later).

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

**36. CROSSLAY HOSE BEDS**

Two (2) crosslays with 1.50" outlets shall be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed hose and shall be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.

**Outlets to be equipped with a 1.50" National Standard hose thread 90-degree swivel located in the hose bed so that hose may be removed from either side of apparatus, from the ground level.**

If height of crosslay beds is unable to be reached by ground level, the exception may be approved by the Fire Chief.

The crosslay controls shall be at the pump operator's panel.

The center crosslay dividers shall be fabricated of 0.25" aluminum and shall provide adjustment from side to side. The divider shall be unpainted with a brushed finish.

Vertical scuffplates, constructed of stainless steel shall be provided at the front and rear ends of the bed on each side of vehicle.

Crosslay bed flooring shall consist of removable perforated brushed aluminum.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**37. CROSSLAY/DEADLAY HOSE RESTRAINT**

There shall be a one (1) piece red vinyl cover provided across the top and each end of two (2) crosslay/deadlay(s) to secure the hose during travel. The vinyl top shall be attached at the front and rear of the crosslay/deadlay(s) with Velcro. Each vinyl end flap shall have 1.00" web straps that loop through footman loops at the bottom of the crosslay/deadlay(s) and fasten with spring clip and hook fasteners.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**38. BOOSTER HOSE REEL**

A Hannay electric rewind booster hose reel shall be installed over the pump in a recessed open compartment on the right side of the apparatus.

The exterior finish of the reel shall be painted #269 gray from the reel manufacturer.

A polished stainless-steel roller and guide assembly shall be mounted on the reel side of the apparatus.

Discharge control shall be provided at the pump operator's panel. Plumbing to the reel shall consist of 1.50" Aeroquip hose and a 1.50" valve.

Reel motor shall be protected from overload with a circuit breaker rated to match the motor.

An electric rewind control switch shall be installed on the reel side pump panel.

Booster hose, 1.00" diameter and 200 feet, with chrome plated Barway, or equal couplings shall be provided.

Working pressure of the booster hose shall be a minimum of 800 psi.

Capacity of the hose reel shall be 200 feet of 1.00" booster hose.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**39. HOSE REEL BLOWOUT**

A hose reel blowout shall be furnished to blow out any remaining water from the reel. Blowout shall be piped from the wet tank of the brake system to the reel, and shall be controlled at the pump operator's panel with a quarter turn valve.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**40. PUMP COMPARTMENT**

The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. It shall be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.

The pump compartment shall be mounted on the chassis frame rails with rubber biscuits in a four-point pattern to allow for chassis frame twist.

Pump compartment, pump, plumbing and gauge panels shall be removable from the chassis in a single assembly.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**41. PUMP MOUNTING**

Pump shall be mounted to a substructure which shall be mounted to the chassis frame rail using rubber isolators. The mounting shall allow chassis frame rails to flex independently without damage to the fire pump.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**42. LEFT SIDE PUMP CONTROL PANELS**

All pump controls and gauges shall be located at the left side of the apparatus and properly identified.

Layout of the pump control panel shall be ergonomically efficient and systematically organized.

The pump operator's control panel shall be removable in two (2) main sections for ease of maintenance:

**It is important that the pump be accessible through easy access doors. Inability to produce this will only be approved by the Fire Chief.**

The upper section shall contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels shall be removable from the face of the pump panel for ease of maintenance. Below the sub panels shall be located all valve controls and line pressure gauges.

The lower section of the panel shall contain all inlets, outlets, and drains.

All push/pull valve controls shall have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**43. IDENTIFICATION TAGS**

The identification tag for each valve control shall be recessed in the face of the tee handle.

All discharge outlets shall have color coded identification tags, with each discharge having its own unique color. Color coding shall include the labeling of the outlet and the drain for each corresponding discharge.

All line pressure gauges shall be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting shall be removable from the face of the pump panel for ease of maintenance. The casting shall be color coded to correspond with the discharge identification tag.

All remaining identification tags shall be mounted on the pump panel in chrome plated bezels.

The pump panel on the right side shall be removable with lift and turn type fasteners.

Trim rings shall be installed around all inlets and outlets.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

#### **44. PUMP PANEL CONFIGURATION**

The pump panel configuration shall be arranged and installed in an organized manner that shall provide user-friendly operation.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

#### **PUMP PANEL, COMPARTMENTS AND LIGHTS**

##### **1. PUMP AND GAUGE PANEL**

The pump and gauge panels shall be constructed of aluminum with a painted FormCoat black finish. A polished aluminum trim molding shall be provided around each panel.

The right-side pump panel shall be removable and fastened with swell type fasteners.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

##### **2. PUMP COMPARTMENT LIGHT**

A pump compartment light shall be provided inside the right-side pump enclosure and accessible through a door on the pump panel. It is strongly desired that this light and door be large and attainable.

A .125" weep hole shall be provided in each light lens, preventing moisture retention.

Engine monitoring graduated LED indicators shall be incorporated with the pressure controller.

Also provided at the pump panel shall be the following:

- Master Pump Drain Control

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

##### **3. THROTTLE READY GREEN INDICATOR LIGHT**

There shall be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators' panel that is activated when the pump is in throttle ready mode.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**4. OK TO PUMP INDICATOR LIGHT**

There shall be a green indicator light installed on the pump operators' panel that is activated when the pump is in Ok to Pump mode.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**5. DRAINS, LEFT SIDE**

The drains on the left side pump panel shall be located to keep the area under the main pump inlet clear for intake valve.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**6. RIGHT SIDE DRAINS**

The drains on the right-side pump panel shall be located to keep the area under the main pump inlet clear for intake valve.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**7. HEATER, PUMP COMPARTMENT**

A hot water heater rated for 33,000 BTU shall be installed in the pump compartment.

Controls for the heater shall be located at the pump operator's panel.

The pump compartment shall be enclosed at the top to retain the heat generated by the heater inside the pump compartment.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**8. ALUMINUM HEAT ENCLOSURE**

A heat enclosure shall be installed, trapping hot air radiated from the engine exhaust system, which shall warm the fire pump. The enclosure shall consist of an aluminum understructure, with easily removable aluminum panels. Also, a covering above the pump shall be provided, so warm air cannot escape freely.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**9. ELECTRIC GAUGE HEATER**

A 12v electric gauge heater shall be provided for all water carrying gauges.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**10. VACUUM AND PRESSURE GAUGES**

The pump vacuum and pressure gauges shall be liquid filled and manufactured by Class 1 Incorporated ©.

The gauges shall be a minimum of 4.00" in diameter and shall have white faces with black lettering, with a pressure range of 30.00"-0-600#.

Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

The pump pressure and vacuum gauges shall be installed adjacent to each other at the pump operator's control panel.

Test port connections shall be provided at the pump operator's panel. One (1) shall be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They shall have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They shall be marked with a label.

This gauge shall include a 10-year warranty against leakage, pointer defect, and defective bourdon tube.

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**11. PRESSURE GAUGES**

The individual "line" pressure gauges for the discharges shall be interlube filled and manufactured by Class 1©.

They shall be a minimum of 2.00" in diameter and shall have white faces with black lettering.

Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

Gauges shall have a pressure range of 30"-0-400#.

The individual pressure gauge shall be installed as close to the outlet control as practical.

This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**12. WATER LEVEL GAUGE**

An electric water level gauge shall be incorporated in the pressure controller that registers water level by means of nine (9) LEDs. They shall be at 1/8 level increments with a tank empty LED. The LEDs shall be a bright type that is readable in sunlight, and have a full 180-degree of clear viewing.

To further alert the pump operator, the gauge shall have a warning flash when the tank volume is less than 25 percent. The gauge shall have down chasing LEDs when the tank is almost empty.

The level measurement shall be ascertained by sensing the head pressure of the fluid in the tank or cell.

There shall be a light driver module with this installation to power additional water level gauge included on the apparatus.

**Does your bid comply?      YES\_\_\_\_\_      NO \_\_\_\_\_**

**13. WATER LEVEL GAUGE**

There shall be two (2) additional water level indicator, Whelen®, Model PSTANK2, LED module with chrome flange, installed one (1) on right side, forward and up high on the body side sheet and One (1) on the rear of the apparatus, visible to operator from rear when dumping water.

This light module shall include four (4) colored levels, and function similar to the water level indicator located at the operator's panel:

- First green module indicates a full water level
- Second blue module indicates a water level above 3/4 full
- Third amber module indicates a water level above 1/2 full
- Last red module indicates a water level above 1/4 full and empty

- Above 1/4 this light shall be steady burning
- At empty this light shall be flashing

This module shall be activated at all times, when truck is running.

**Does your bid comply?      YES \_\_\_\_\_ NO \_\_\_\_\_**

**14. STEP/LIGHT SHIELD**

There shall be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operators' panel.

- There shall be 12-volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights shall be activated by the pump panel light switch. Additional lights shall be included every 18.00" depending on the size of the pump house.
- One (1) pump panel light shall come on when the pump is in ok to pump mode.

There shall be a light activated above the pump panel light switch when the parking brake is applied. This is to afford the operator some illumination when first approaching the control panel.

There shall be one (1) white LED, step light provided above this step. In order to ensure exceptional illumination, each step light shall provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The step light shall be activated by the pump panel light switch.

**Does your bid comply?      YES \_\_\_\_\_ NO \_\_\_\_\_**

**15. ADDITIONAL STEP/LIGHT SHIELD**

There shall be an additional aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the passenger's side pump panel.

- There shall be 12-volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights shall be activated by the pump panel light switch. Additional lights shall be included every 18.00" depending on the size of the pump house.

There shall be one (1) white LED, step light provided above the step. In order to ensure exceptional illumination, each step light shall provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The step light shall be activated by the pump panel light switch.

**Does your bid comply?      YES \_\_\_\_\_ NO \_\_\_\_\_**

**16. AIR HORN SYSTEM**

Two (2) Grover, Stutter Tone, air horns shall be recessed in the front bumper. The horn system shall be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve shall be installed in-line to prevent loss of air in the air brake system.

**Air Horn Location**

The air horns shall be located on each side of the bumper, towards the outside.

**AIR HORN CONTROL**

The air horns shall be actuated by two (2) lanyards, one (1) located on the officer's side and one (1) on the driver's side. The air horns shall also be actuated by horn button in the steering wheel. The driver shall have the option to control the air horns or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**17. ELECTRONIC SIREN**

A Whelen, Model 295HFS2, electronic remote siren with noise canceling microphone shall be provided.

This siren to be active when the battery switch is on and that emergency master switch is on.

Siren head shall be located near the overhead switches.

The electronic siren shall be controlled on the siren head only. No horn button or foot switches shall be required.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**18. SPEAKER**

There shall be one (1) Whelen®, Model SA315P, black nylon composite, 100-watt, speaker with through bumper mounting brackets and polished stainless-steel grille provided. The speaker shall be connected to the siren amplifier.

The speaker(s) shall be recessed in the center of the front bumper.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**EMERGENCY LIGHTING**

**1. FRONT ZONE UPPER WARNING LIGHTS**

There shall be one (1) 60.00" Whelen Freedom IV LED lightbar mounted on the cab roof.

The lightbar shall include the following:

- One (1) red flashing LED module in the driver's side rear corner position.
- Open in the driver's side end position.
- One (1) red flashing LED module in the driver's side front corner position.
- One (1) white flashing LED module in the driver's side first front position.
- Open in the driver's side second front position.
- Open in the driver's side third front position.
- One (1) red flashing LED module in the driver's side fourth front position.
- Open in the driver's side fifth front position.
- Open in the passenger's side fifth front position.
- One (1) blue flashing LED module in the passenger's side fourth front position.
- Open in the passenger's side third front position.
- Open in the passenger's side second front position.
- One (1) white flashing LED module in the passenger's side first front position.

- One (1) blue flashing LED module in the passenger's side front corner position.
- Open in the passenger's side end position.
- One (1) blue flashing LED module in the passenger's side rear corner position.

There shall be clear lenses included on the lightbar.

There shall be a switch in the cab on the switch panel to control this lightbar.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**2. WARNING LIGHTS**

A pair of surface mounted Whelen model RSR02ZCR, LIN3 Super LED flashing lights shall be provided on the grille.

The color of the DS light shall be blue.

The color of the PS light shall be red.

A switch shall be provided inside the cab on the switch panel for actuation.

These lights shall be installed with a plastic, chrome-plated flange.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**3. SIDE ZONE LOWER LIGHTING**

There shall be four (4) Whelen®, Model M6\*C, flashing LED warning lights with chrome trim installed per the following:

- Two (2) lights, one (1) each side on the bumper extension. The side front lights to be blue.
- Two (2) lights, one (1) each side above rear wheels. The side rear lights to be red.
- The lights shall include clear lenses.

There shall be a switch in the cab on the switch panel to control the lights.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**4. REAR ZONE LOWER LIGHTING**

There shall be two (2) Whelen®, Model M6\*\*, 4.31" high x 6.75" wide x 1.37" deep flashing LED warning lights with chrome trim located at the rear of the apparatus per the following:

- The left side rear warning light to include red LEDs
- The right-side rear warning light to include blue LEDs
- The warning light lens color to be clear

There shall be a switch in the cab on the switch panel to control the lights.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**5. REAR OF HOSE BED WARNING LIGHTS**

There shall be two (2) Whelen Rota-Beam, Model R316\*F, 4.00" high x 7.19" wide beacons with clear domes provided.

The rear zone upper lights to be red on the driver side and blue on the officer side.

There shall be a switch located in the cab on the switch panel to control the beacons.

The rear warning lights shall be mounted on stainless steel brackets with all wiring totally enclosed. These brackets shall also support the rear deck lights and clearance/marker lights.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**6. INVERTER**

There shall be a 2/0 cable installed on the switch battery power stud and a 2/0 cable installed on the ground stud with a **Kussmaul Auto Charge 1200 12-volt DC to 120 volt AC power inverter** (or equivalent per approval from Fire Chief).

The Kussmaul Inverter shall be located within one of the driver side compartments that will take up as little space as possible.

There shall be a 120V AC line with an SOOW cable routed from the shoreline to the inverter/charger location.

There shall be a junction box with a 20-amp 120-volt AC duplex receptacle.

The circuit shall be load managed when the parking brake is released.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**7. 120 VOLT RECEPTACLE**

There shall be three (3), 15/20 amp 120 volt AC three (3) wire straight blade duplex receptacle with interior stainless steel wall plate, installed there will be one (1) outlet in the cab, one (1) near the pump panel and one (1) on or near the rear of the apparatus. The final locations will be determined at a later date. The NEMA configuration for the receptacle shall be 5-20R.

The receptacle shall be powered from the shoreline inlet.

There shall be a label installed near the receptacle that state the following:

- Line Voltage
- Current Rating (amps)
- Phase
- Frequency
- Power Source

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**1. LOOSE EQUIPMENT**

The following equipment shall be furnished with the completed unit:

- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**2. NEW TANKER LOOSE EQUIPMENT**

• **PORTABLE FOLDING TANK**

- A quantity of one (1) Husky, 2500 gallon with 22oz yellow liner will be provided.

• **HOSE/ NOZZLES**

- Two (2) Flex-Lite, Part No. HSH-60NH-10, 10 Foot lengths of 6.00" PVC Flexible Suction Hose, Coupled with 6.00" NST Couplings. Long Handle Female Swivel x Rocker Lug Male
- One (1) Elkhart Nozzle Part No. 04XD0051, Chief XD Nozzle
- One (1) Elkhart Nozzle Part No. 0033XD02, XD Shutoff Nozzle
- One (1) Elkhart Nozzle Tip Part No. 04XD0101, Chief XD Tip
- One (1) Elkhart Nozzle Tip Part No. 66762007, XD Smooth Bore Tip
- Eight (8) Sections of Key Hose Part No. DP17-1000, 50' 1 3/4" Combat Ready Fire hose (White)
- Eight (8) Sections of Key Hose Part No. DP17-1000, 50' 1 3/4" Combat Ready Fire hose (Yellow)

• **KOCHEK LOW- LEVEL STRAINER**

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

• **AMEREX 4A:80B:C DRY CHEMICAL EXTINGUISHER**

(Or other approved extinguisher from the Fire Chief)

- The extinguisher shall be mounted in one of the compartments

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

• **AMEREX 2.5 GALLON WATER EXTINGUISHER**

(Or other approved extinguisher from the Fire Chief)

- The extinguisher shall be mounted in one of the compartments

Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_

• **Two (2) Streamlight Fire Vulcan LED Lanterns with two (2) vehicle mounted charging racks**

• **Kussmaul Auto Charge 1200 12-volt DC to 120-volt AC power inverter**

**3. NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT**

The following loose equipment as outlined in NFPA 1901, 2016 edition, section 7.9.3.1, 7.9.3.2, and 7.9.4 shall be provided by the fire department.

- 200 ft (60 m) of 2.50" (65 mm) or larger fire hose.
- 100 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose (if equipped with a fire pump).
- One (1) handline nozzle, 95 gpm (360 L/min) minimum (if equipped with a fire pump).

- One (1) first aid kit.
- Two (2) combination spanner wrenches.
- One (1) hydrant wrench.
- One (1) double female adapter, sized to fit 2.50" (65 mm) or larger fire hose.
- One (1) double male adapter, sized to fit 2.50" (65 mm) or larger fire hose.
- One (1) rubber mallet, for use on suction hose connections (if equipped with a fire pump).
- One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, *Standard for High Visibility Public Safety Vests*, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front.
- Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band.
- Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities.
- One (1) automatic external defibrillator (AED).
- If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side shall be carried. Any intake connection larger than 3.00" (75 mm) shall include a pressure relief device that meets the requirements of 16.6.6 (if equipped with pump).
- If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake shall be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake.
- If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters shall be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.

Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_

**1. PAINT PROCESS**

The exterior custom cab and/or body painting procedure shall consist of a seven (7) step finishing process. A commercial chassis paint process shall follow similar processes as determined by the chassis manufacturer. The following procedure shall be used by the apparatus manufacturer:

1. Manual Surface Preparation - All exposed metal surfaces on the custom cab and body shall be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces shall be removed and sanded to a smooth finish. Exterior seams shall be sealed before painting. Exterior surfaces that shall not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.
2. Chemical Cleaning and Pretreatment - All surfaces shall be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces shall be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces shall be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse shall be applied to all metal surfaces.
3. Surface Primer - The Surface Primer shall be applied to a chemically treated metal surface to provide a strong corrosion protective base coat. A minimum thickness of 2 mils of Surface Primer is applied to surfaces that require

a critical aesthetic finish. The surface primer shall be a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.

4. **Finish Sanding** - The surface primer shall be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.
5. **Sealer Primer** - The sealer primer is applied prior to the base coat in all areas that have not been previously primed with the surface primer. The sealer primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when top coated.
6. **Base coat Paint** - Two coats of a high performance, two component high solids polyurethane base coat shall be applied. The Base coat shall be applied to a thickness that shall achieve the proper color match. The Base coat shall be used in conjunction with a urethane clear coat to provide protection from the environment.
7. **Clear Coat** - Two (2) coats of clear coat shall be applied over the base coat color. The clear coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style doors shall be clear coated to match the body. Paint warranty for the roll-up doors shall be provided by the roll-up door manufacturer.

Specifications are written to define cyclic corrosion testing, physical strengths, durability and minimum appearance requirements must be met in order for an exterior paint finish to be considered acceptable as a quality finish.

Each batch of base coat color shall be checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment shall be used to compare the color sample to the color standard entered into the computer. Color specifications are used to determine the color match. A Delta E reading shall be used to determine a good color match within each family color.

All removable items such as brackets, compartment doors, door hinges, and trim shall be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly.

**Does your bid comply?      YES \_\_\_\_\_      NO \_\_\_\_\_**

## **2. Environmental Impact**

Contractor shall meet or exceed all current State regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water and soil. Controls shall include the following conditions:

- Topcoats and primers shall be chrome and lead free.
- Metal treatment chemicals shall be chrome free. The wastewater generated in the metal treatment process shall be treated on-site to remove any other heavy metals.
- Particulate emission collection from sanding operations shall have a 99.99 percent efficiency factor.
- Particulate emissions from painting operations shall be collected by a dry filter or water wash process. If the dry filter is used, it shall have an efficiency rating of 98 percent. Water wash systems shall be 99.97 percent efficient.
- Water from water wash booths shall be reused. Solids shall be removed on a continual basis to keep the water clean.
- Paint wastes shall be disposed of in an environmentally safe manner.
- Empty metal paint containers shall be recycled to recover the metal.
- Solvents used in clean-up operations shall be recycled on-site or sent off-site for distillation and returned for reuse.

Additionally, the finished apparatus shall not be manufactured with or contain products that have ozone depleting substances. Contractor shall, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with the state EPA rules and regulations.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**3. PAIN**

To ensure a perfect color match between the body and chassis, the apparatus manufacturer shall also repaint the commercial chassis cab. The apparatus shall be painted to exactly match Sikkens Red Color FLNA30012. **Or an approved color based on Fire Chief recommendation.**

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**4. COMMERCIAL CHASSIS REPAINT**

In order to assure a perfect match between the chassis cab and the rest of the apparatus, or to provide the specified color not typically available from a commercial chassis manufacturer, the chassis cab shall be repainted by the apparatus manufacturer.

Since it is not practical to repaint certain areas of the cab such as the fire wall, radiator core support, or bottom of the cab, the best results shall be obtained by ordering the commercial chassis painted a neutral color. Exceptions to this will be only if approved by the Fire Chief.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**5. PAIN CHASSIS FRAME ASSEMBLY**

The chassis frame assembly shall be painted black by the chassis manufacturer. It shall remain the commercial grade finish as provided.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**6. COMPARTMENT INTERIOR PAINT**

The interior of all compartments shall be painted with a gray spatter type paint.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**7. REFLECTIVE BAND**

A 10.00" white reflective band shall be provided across the front of the vehicle and along the sides of the body.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**8. REFLECTIVE VINYL ON FRONT BUMPER**

There shall be a reflective vinyl band provided across the front bumper.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**9. CHEVRON STRIPING, REAR**

There shall be chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, shall be covered.

The colors shall be 12 red and 15 white Reflexite.

Each stripe shall be 6.00" in width.

A blue field with white stars shall be provided in the upper left to center section of the rear of the body. The field shall be triangular in shape as per the customer supplied sketch.

This shall not meet the requirements of NFPA 1901, 2009 edition, which states that 50% of the rear surface shall be covered with chevron striping.

NFPA 1901, 2016 edition 15.9.3.2.1 requires each stripe in the chevron to be a single color alternating between red and either yellow, fluorescent yellow, or fluorescent yellow green. Use of the red and yellow color is endorsed by the International Association of Fire Chiefs. The fire apparatus purchaser shall realize that by requesting an exception to this aspect of NFPA 1901, this fire apparatus will not contribute to the national standardization initiative. Per the purchaser's specification, this apparatus shall not be compliant to NFPA 1901 standards in this regard.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**10. REFLECTIVE STRIPE, CAB DOORS**

A white reflective stripe shall be provided on the interior of each cab door.

This stripe shall be a minimum of 96.00 square inches and shall meet the NFPA 1901 requirement.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**11. LETTERING**

The lettering shall be totally encapsulated between two (2) layers of clear vinyl.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**A. LETTERING**

(40) genuine gold leaf lettering, 3.00" high, with outline and shade shall be provided.

(WEBSTER CITY FIRE DEPT) on each side door of apparatus.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**B. LETTERING**

(40) genuine gold leaf lettering, 6.00" high, with outline and shade shall be provided.

(WEBSTER CITY FIRE DEPT) on each top side of tank on apparatus.

**Does your bid comply?    YES \_\_\_\_\_    NO \_\_\_\_\_**

**C. LETTERING**

There shall be reflective lettering, 6.00" high, with no outline or shade provided. There shall be four (4) letters provided.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**D. LETTERING**

There shall be reflective lettering, 18.00" high, with outline provided. There shall be two (2) letters provided.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**MANUALS**

**1. MANUAL, BODY PARTS ONLY**

A custom parts manual for the factory installed parts only shall be provided in written and USB flash drive format with the completed unit.

The manual shall contain the following:

- Job number
- Part numbers with full descriptions
- Table of contents
- Parts section sorted in functional groups reflecting a major system, component, or assembly
- Parts section sorted in Alphabetical order
- Instructions on how to locate parts

The manual shall be specifically written for the body model being purchased. It shall not be a generic manual for a multitude of different bodies.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**2. SERVICE PARTS INTERNET SITE**

One (1) written copy of the service parts will be provided. The service parts information included in this manual are also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**3. MANUALS, SERVICE**

A written and USB flash drive format service manual supplement containing parts and service information on factory installed components shall be provided with the completed unit.

The manual shall be specifically written for the unit being purchased. It shall not be a generic manual for a multitude of different units.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**4. MANUAL, CHASSIS OPERATION**

One (1) written chassis operation (manufacturers standard) shall be provided with the completed unit.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**WARRANTIES**

**1. ONE (1) YEAR MATERIAL AND WORKMANSHIP**

Each new piece of apparatus shall be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service. This shall include parts and labor.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**2. CHASSIS WARRANTY**

The chassis manufacturer shall provide a **three (3) year or 100,000-mile warranty. This shall include parts and labor.**

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**3. TEN (10) YEAR PRO-RATED PAINT AND CORROSION**

Each new piece of apparatus shall be provided with a **ten (10) year** pro-rated paint and corrosion limited warranty on the apparatus cab. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**4. CAMERA SYSTEM WARRANTY**

A fifty-four (54) month warranty shall be provided for the camera system.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**5. COMPARTMENT LIGHT WARRANTY**

A ten (10) year material and workmanship limited warranty shall be provided for the 12-volt DC LED strip lights. The warranty shall cover the LED strip lights to be free from defects in material and workmanship that would arise under normal use.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**6. TRANSMISSION WARRANTY**

The transmission shall have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty to be provided by Allison Transmission and not apparatus builder.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**7. WATER TANK WARRANTY**

The UPF poly water tank shall be provided with a lifetime material and workmanship limited warranty.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**8. FIVE (5) YEAR STRUCTURAL INTEGRITY**

Each new piece of apparatus shall be provided with a five (5) year material and workmanship limited warranty on the apparatus body. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**9. ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY**

A roll-up door limited warranty shall be provided. The mechanical components of the roll-up door shall be warranted against defects in material and workmanship for the lifetime of the vehicle. A **six (6) year** limited warranty shall be provided on painted and satin roll up doors.

A copy of the warranty certificate shall be submitted with the bid package.

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**10. PUMP WARRANTY**

The Waterous pump shall be provided with a Seven (7) year material and workmanship limited warranty.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

**11. TEN (10) YEAR PUMP PLUMBING WARRANTY**

The stainless-steel plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system shall be warranted for a period of **ten (10) years or 100,000 miles**. This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of delivery.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**12. TEN (10) YEAR PRO-RATED PAINT AND CORROSION**

Each new piece of apparatus shall be provided with a **ten (10) year** pro-rated paint and corrosion limited warranty on the apparatus body. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**13. THREE (3) YEAR MATERIAL AND WORKMANSHIP**

The gold leaf lamination shall be provided with a **three (3) year** material and workmanship limited warranty. The warranty shall cover the gold leaf lamination as being free from defects in material and workmanship that would arise under normal use and service.

A copy of the warranty certificate shall be submitted with the bid package (no exception).

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**14. VEHICLE STABILITY CERTIFICATION**

The fire apparatus manufacturer shall provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification shall be provided at the time of bid.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**15. CAB INTEGRITY**

The cab has been tested to and passed the following standards:

- ECE Regulation No.29
- SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.

Does your bid comply? YES \_\_\_\_\_ NO \_\_\_\_\_

**16. AMP DRAW REPORT**

The bidder shall provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

The manufacturer of the apparatus shall provide the following:

- Documentation of the electrical system performance tests.
- A written load analysis, which shall include the following:
  - The nameplate rating of the alternator.
  - The alternator rating under the conditions specified per:
    - Applicable NFPA 1901 or 1906 (Current Edition).

- The minimum continuous load of each component that is specified per:
  - Applicable NFPA 1901 or 1906 (Current Edition).
- Additional loads that, when added to the minimum continuous load, determine the total connected load.
- Each individual intermittent load.

All of the above listed items shall be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).

**Does your bid comply?    YES\_\_\_\_\_    NO \_\_\_\_\_**

