URBANA FIRE DEPT. PUMPER SPECIFICATION

CITY OF URBANA, ILLINOIS
CITY BUILDING
400 SOUTH VINE STREET
URBANA, ILLINOIS 61801

BID # _____

URBANA FIRE DEPARTMENT
REQUST FOR BIDS AND SPECIFICATIONS

SEVERE SERVICE FIRE APPARATUS
(PUMPING FIRE ENGINE)

ISSUED: September 16th, 2014

RESPONSE DUE: October 31st, 2014 AT 2:00 p.m. CST

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CITY OF URBANA, ILLINOIS
Fire Department

A. GENERAL TERMS AND CONDITIONS:

1. Summary Description of Purpose of Proposal:

The City of Urbana, Champaign County, Illinois (hereinafter, the "City"), a municipal corporation acting pursuant to its statutory home-rule powers and authority (Illinois Constitution of 1970, Article VII, Section 6; 65 ILCS 5/1-1-9), is soliciting bids regarding the manufacture, construction, fabrication, equipping, supplying, and delivery of one new severe service 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 Urbana Fire Department no later than **October 31st, 2014 at 2:00 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 serving populations over 100,000 and which respond to 5,000 or more incidents per year with severe service 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 authorized 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:

Kyle Hensch
Division Chief
City of Urbana Fire Department
City of Urbana, Illinois
400 South Vine Street
Urbana, IL 61801
(217) 384-2421
Fax: (217) 384-2449
E-Mail: kdhensch@urbanaillinois.us

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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 other 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 determine 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:

Office of the Fire Chief
City of Urbana
400 South Vine Street
Urbana, Illinois 61801

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 "Fire Chief, Urbana Fire Department, City of Urbana" 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:

Fire Chief
Urbana Fire Department
400 South Vine Street
Urbana, IL 61801

Bids must be in the hands of the City by no later than 2:00 p.m. CST on October 31st, 2014. 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.

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 Urbana 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 six (6) calendar days following the date when the bid submissions are due to be received by the City. During the six-day period prior to the date scheduled for opening the bids, the City shall have the right, without opening any bid, to undertake its reasonable due diligence regarding each Bidder.

The bid opening shall occur in Council Chambers, 1st floor, Urbana City Building, 400 S. Vine, Urbana, Illinois at 9:00 a.m., CST unless each Bidder is otherwise notified in writing which writing may be transmitted by any reasonable means designed, calculated and intended to reach each respective Bidder. 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. Purchasing Certification:

The Purchasing Certification Form provided in Section 7.3 of the City's Policies and Procedures and as attached to this Request for Bids and Specifications must be completed, executed by a duly authorized officer of the Bidder, and submitted with the Bidder's bid.

18. Equal Employment Opportunity:

The Equal Employment Opportunity Workforce Statistics Form provided in Section 7.3 of the City's Policies and Procedures and as attached to this Request for Bids and Specifications must be completed, executed by a duly authorized officer of the Bidder, and submitted with the Bidder's bid. 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 award and such revocation, termination or cancellation shall not be deemed, construed or interpreted as an improper or unlawful breach of the same.

19. 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.

20. 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.

21. Indemnification:

a. 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.

22. 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 engage 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.

23. 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.

24. 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.

25. 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.

26. 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 *ab initio* and of no further legal force or effect.

27. 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.

28. 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 Urbana
Urbana Fire Department
400 South Vine Street
Urbana, Illinois 61801

29. 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.

30. 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.

31. Disputes:

a. 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 Urbana Fire Department and the said Fire Chief's resolution shall be deemed final.

b. 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.

c. 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 Circuit Court for the Sixth Judicial Circuit, Champaign County, Illinois or in the United States District Court for the Central District of Illinois. Each party shall bear its own costs and expenses, including but not necessarily limited to its attorneys' fees.

32. Notices:

Any notice required to be given under this Request for Bids and Specifications or any Contract entered into by and between the City and a successful Bidder, if any, shall be given as follows:

To the successful Bidder: _____. Facsimile number: _____

To the City: Fire Chief, Urbana Fire Department, City Building, 400 South Vine Street, Urbana, Illinois 61801. Facsimile number: (217) 384- 2449.

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:

a. 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.

b. 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.

c. 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.

d. If by facsimile, such notice shall be deemed effective on the date immediately following the date when the facsimile was transmitted but only if the transmitting facsimile machine prints out an acknowledgement that the notice recipient's facsimile machine received the facsimile.

No other form of notice shall be deemed effective.

33. 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.

34. 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 Urbana 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 employees 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.

35. 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.

36. 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.

37. 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.

38. 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 the 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.

39. 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.

URBANA FIRE DEPT. PUMPER SPECIFICATION

[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 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 be within the limits set by the chassis manufacturer. The front axle loads shall not be less than the minimum axle loads specified by the chassis manufacturer, under full loads and all other loading conditions.

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 insure 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. <u>Performance Tests and Requirements:</u>

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 insure 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 must also maintain a 24 hour/ 7 day a week, toll free emergency hot line.

d. 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.

e. The manufacturer must be capable of providing both in-house and on-site service for the apparatus.

f. The manufacturer shall offer regional factory hands-on repair and maintenance training classes.

g. 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: $25,000,000
ii. Each Occurrence: $25,000,000

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 polices 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.

e. A nameplate indicating the chassis transmission shift selector position to be used when pumping shall be provided in the driving compartment and located so that it can be easily read from the driver's position.

Does your bid comply? YES_____ NO _____

13. NFPA 2009 Standards:

a. This unit shall comply with the NFPA standards effective January 1, 2009, 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)

b. A placard shall be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.

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. <u>1 Year Performance Bond:</u>

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 a preconstruction conference at the manufacturing facility with a factory representative

present and four (4) individuals from the Urbana Fire Department to finalize all construction details.

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 with four (4) individuals from the Urbana Fire Department to inspect the apparatus after construction.

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) 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 2015 or newer model year.

Does your bid comply? YES_____ NO _____

C. CHASSIS & DRIVELINE SPECIFICATIONS

1. General Specifications:

a. The chassis provided shall be a new, tilt-type custom fire apparatus produced by a single source manufacturer.

b. The chassis shall be designed and manufactured for heavy–duty service, with adequate strength and capacity for the intended load to be sustained and the type of service required.

c. The Urbana 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 47,000#.

Does your bid comply? YES_____ NO _____

3. Occupant Protection:

a. The vehicle shall include an occupant protection system which shall secure belted occupants 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 the outer rail measuring 10.25 inches high X 3.50 inches deep upper and lower flanges X 0.38 inches thick or equivalent. The inner channel shall measure ~~of~~ 9.44 inches high X 3.13 inches deep and 0.38 inches thick or equivalent. Each rail shall be constructed of 110,000 psi minimum yield high strength low alloy steel. 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 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 insure 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:

a. The chassis shall feature a 4 x 2 axle configuration consisting of a single rear drive axle with a single front steer axle.

Does your bid comply? YES_____ NO _____

8. Front Axle:

a. The front axle shall include an independent front suspension (IFS).

b. The travel of the Independent Front Suspension System (IFS) shall be 6.50 inches, providing 3.00 inches jounce and 3.50 inches rebound or equivalent of the suspension.

c. The IFS front axle shall have a minimum rating of 20,000 pounds.

d. The Bidder shall clearly provide and document the chassis cramp angle to the left and right.

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 20,000 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.

URBANA FIRE DEPT. PUMPER SPECIFICATION

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 brand or approved equal, tubeless radial, XFE regional tread, properly sized, and mounted to the front wheels.

Does your bid comply? YES_____ NO _____

14. Front Wheel:

a. The front wheels shall be Alcoa hub piloted; Alcoa Dura-Bright™, or approved equal, polished aluminum wheels. The hub piloted mounting system shall provide easy installation and shall include two-piece flange nuts. The wheels shall feature one-piece forged strength and a polished finish that lasts.

Does your bid comply? YES_____ NO _____

15. Rear Axle:

a. The rear axle shall be a Meritor model RS-25-160 single drive axle or approved equal.

b. The axle shall include precision forged, single reduction differential gearing, and shall have a fire service rated capacity of 27,000 pounds minimum.

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 axle shall be warranted for two (2) years with unlimited miles 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 68 MPH +/-2 MPH at governed engine RPM.

Does your bid comply? YES_____ NO _____

17. Rear Suspension:

a. The single rear axle shall feature a Hendrickson Firemaax™ air suspension or approved equal.

b. The suspension shall include two optimized air springs mounted to cast structural trailing arms, a transverse cross beam for increased roll stability and two heavy duty shock absorbers. Dual air height control valves shall be installed to ensure equal frame height on both sides of the vehicle regardless of the load. 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.

d. The rear suspension capacity shall be rated at a minimum 27,000 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, Michelin brand or approved equal, tubeless radial XDN2 all-weather tread, properly sized, and mounted to the rear wheels.

Does your bid comply? YES_____ NO _____

20. Rear Wheels:

a. All rear wheels shall be Alcoa hub piloted, Alcoa Dura-Bright™ or approved equal, polished aluminum wheels. The hub piloted mounting system shall provide easy installation and shall include two-piece flange nuts. The wheels shall feature one-piece forged strength and a polished finish that lasts.

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, three (3) reservoir systems with a total of 4152 cubic inch of air capacity. A floor mounted treadle valve shall be mounted inside the cab for graduated control of applying and releasing the brakes. An inversion valve shall be installed to provide a service brake application in the unlikely event of primary air supply loss. All air reservoirs provided on the chassis shall be properly labeled for identification.

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 using PID/SID and FMI standards.

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

e. A momentary rocker style switch shall be provided and properly labeled "mud/snow". When the switch is pressed once, the system shall allow a momentary wheel slip to obtain traction under extreme mud and snow conditions. During this condition the ATC light and the light on the rocker switch shall blink continuously notifying the driver of activation. Pressing the switch again shall deactivate the mud/snow feature.

Does your bid comply? YES_____ NO _____

26. Front Brakes:

a. The front brakes shall be Bendix ADB 22X, or approved equal, disc brakes with accurately sized vented rotors.

Does your bid comply? YES_____ NO _____

27. Rear Brakes:

a. The rear brakes shall be Meritor EX225 Disc Plus, or approved equal, disc brakes with accurately sized vented rotors.

Does your bid comply? YES_____ NO _____

28. Park Brake:

a. A Meritor-Wabco, or equivalent, 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:

a. The brake system shall include an internal purge Bendix AD-IP, or approved equal, fully self-contained air dryer which shall not require an extra purge tank or additional valves.

b. The AD-IP system shall include a spin-off desiccant filter with a 12-volt, 75-watt thermostatically controlled heating element.

c. The air dryer shall feature 3.9 pounds of premium, high crush strength desiccant. It shall also offer protection against contamination and desiccant breakdown.

Does your bid comply? YES_____ NO _____

30. Front Brake Chambers:

a. The front brakes shall be provided with type 24 brake chambers as supplied with the independent front suspension axle.

Does your bid comply? YES_____ NO _____

31. Rear Brake Chambers:

a. The rear axle shall include TSE 24/30 H.O.T. (High Output Technology), or approved equal, brake chambers shall convert the energy of compressed air into mechanical force and motion.

Does your bid comply? YES_____ NO _____

32. Air Compressor:

a. The air compressor provided for the engine shall be a Wabco SS318 single cylinder pass-through drive type compressor, or equivalent, which shall be capable of producing 18.7 CFM at 1200 engine RPMs.

b. The air supply for the compressor shall come from the non-pressure side of the turbo charger.

Does your bid comply? YES_____ NO _____

33. Air Governor:

a. An air governor shall be provided to control the cut-in and cut-out pressures of the engine mounted air compressor. The governor shall be calibrated to meet FMVSS requirements.

Does your bid comply? YES_____ NO _____

34. Air Tank Drain Extension Cables:

a. There shall be manual pull air tank drain cables provided with the apparatus.

b. Manual cable actuated drain valves shall be installed on all reservoirs of the air supply system except for the wet tank which shall feature an automatic heated moisture ejector.

c. The actuation pull cables shall be coiled and tied at each drain valve.

d. A label shall be affixed indicating "Air Tank Drain".

e. The supplied cables when extended shall be sufficient in length to allow each drain to be activated from the side of the apparatus.

Does your bid comply? YES_____ NO _____

35. Brake Lines:

a. Color-coded nylon brake lines shall be provided. The lines shall be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat. Brass compression type fittings shall be used on the nylon tubing.

b. All drop hoses shall include fiber reinforced neoprene covered hoses or equivalent.

c. The air tubing lines shall not be painted.

Does your bid comply? YES_____ NO _____

36. Air Inlet:

a. One (1) air inlet with male coupling shall be provided. It shall allow station air to be supplied to the apparatus brake system through a shoreline hose.

b. The inlet shall be located on the driver's side pump panel. A check valve shall be provided to prevent reverse flow of air. The inlet shall discharge into the "wet" tank of the brake system.

c. A mating female coupling shall also be provided with the loose equipment.

Does your bid comply? YES_____ NO _____

37. Engine:

a. The chassis engine shall be a Cummins ISL9 engine. The ISL9 engine, or approved equal to the following specifications, shall be an in-line six (6) cylinder, four cycle diesel powered engine. The engine shall offer a rating of 450 horse power at 2100 RPM and shall be governed at 2200 RPM. The torque rating shall feature 1250 foot pounds of torque at 1400 RPM with 543 cubic inches (8.9 liters) of displacement.

b. The ISL9 engine shall feature a VGT Turbocharger, a high pressure common rail fuel system, fully integrated electronic controls with an electronic governor, and shall be EPA

certified to meet the 2013 emissions standards using cooled exhaust gas recirculation and selective catalytic reduction technology.

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

Does your bid comply? YES_____ NO _____

38. High Idle:

a. The vehicle shall be equipped with an automatic high-idle speed control. It shall be pre-set so when activated, it will operate the engine at the appropriate RPM to increase alternator output.

b. A high idle switch shall be provided, inside the cab, on the instrument panel, that shall automatically maintain a preset engine rpm. A switch shall be installed, at the cab instrument panel, for activation/deactivation.

c. This device shall operate only when the master switch is activated and the transmission is in neutral with the parking brake set. The device shall disengage when the parking brake is de-activated or the transmission is placed in gear.

d. A green indicator light shall be provided, adjacent to the switch. The light shall illuminate when the above conditions are met. The light shall be labeled "OK to Engage High Idle."

Does your bid comply? YES_____ NO _____

39. Engine Brake:

a. A compression brake, for the six (6) cylinder engine shall be provided with controls located on the instrument panel within easy reach of the driver.

b. The driver shall be able to turn the engine brake system on/off and have a low/medium/high setting.

c. The engine brake shall be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.

d. A cutout relay shall be installed to disable the compression brake when in pump mode or when an ABS event occurs. The engine compression brake shall activate upon 0% accelerator when in operation mode and actuate the vehicle's brake lights.

e. The engine shall utilize a variable geometry turbo (VGT) as an integrated auxiliary engine brake to offer a variable rate of exhaust flow, which when activated in conjunction with the compression brake shall enhance the engine's compression braking capabilities.

f. A compression brake control device shall be included. The electronic control device shall monitor various conditions and shall activate the engine brake only if all of the following conditions are simultaneously detected:

i. A valid gear ratio is detected.
ii. The driver has requested or enabled engine compression brake operation.
iii. The throttle is at a minimum engine speed position.
iv. The electronic controller is not presently attempting to execute an electronically controlled final drive gear shift.

Does your bid comply? YES_____ NO _____

40. Clutch Fan:

a. The engine cooling system fan shall incorporate a thermostatically controlled, Horton or equivalent, clutched type fan drive.

b. When the clutched fan is disengaged it shall facilitate improved vehicle performance, cab heating in cold climates, and fuel economy.

c. The fan clutch design shall be fail safe so that if the clutch drive fails the fan shall engage to prevent engine overheating due to the fan clutch failure.

d. The fan clutch shall be automatic when the pump transmission is in "Road" position, and fully engaged in the "Pump" position.

Does your bid comply? YES_____ NO _____

41. Engine Air Intake Filter & Restriction W/Replaceable Element:

a. The engine air intake system shall include an ember separator air intake filter. This filter shall protect the downstream air filter from embers using a combination of unique flat and crimped metal screens constructed into a corrosion resistant steel frame. This multilayered screen shall be designed to trap embers or allow them to burn out before passing through the pack, while creating only minimal air flow restriction through the system. Periodic cleaning or replacement of the screen shall be all that is required after installation.

b. The engine shall also include an air intake filter which shall be bolted to the frame. The system shall utilize a replaceable dry type filter which ensures dust and debris remains safely contained inside the housing during operation via leak-tight seals. The service cover shall be located on the bottom of the housing, eliminating the chance of contaminating the air intake system during air filter service.

c. The air flow distribution and dust loading shall be uniform throughout the high-performance filter element, which shall result in pressure differential for improved horsepower and fuel economy. The air intake ember separator shall be mounted for easy access. The air intake system shall include a restriction indicator light in the warning light cluster on the instrument panel, which shall activate when the air cleaner element requires replacement.

URBANA FIRE DEPT. PUMPER SPECIFICATION

Does your bid comply? YES_____ NO _____

42. Air Intake Protection:

a. A light duty skid plate shall be supplied for the engine air intake system. The skid plate shall provide protection for the air intake system from light impacts, stones, and road debris.

b. The air intake shall be a minimum twenty-two inches from the ground.

Does your bid comply? YES_____ NO _____

43. Engine Exhaust System:

a. The exhaust system shall be mounted below the frame in the outboard position with the SCR canister in line rearward of the DPF.

b. The exhaust system shall utilize a 90-degree bend in the exhaust tubing from the turbo into a side inlet DPF canister that allows the entire system to be pulled forward.

c. The discharge shall terminate horizontally on the right side of the vehicle ahead of the rear tires.

d. The exhaust system shall include a diesel particulate filter (DPF), a diesel oxidation catalyst, and a selective catalytic reduction (SCR) catalyst to meet current EPA standards. The selective catalytic reduction catalyst utilizes a diesel exhaust fluid solution consisting of urea and purified water to convert NOx into nitrogen, water, and trace amounts of carbon dioxide. The solution shall be injected into the system through the decomposition tube between the DPF and SCR.

e. The system shall utilize a minimum 0.07 inch thick stainless steel exhaust tubing between the engine turbo and the DPF. Zero leak clamps seal all system joints between the turbo and DPF. An exhaust temperature mitigation device shall be provided. The temperature mitigation device shall lower the temperature of the exhaust by combining ambient air with the exhaust gasses at the exhaust outlet.

f. The exhaust tubing between the engine turbo and the diesel particulate filter (DPF) shall be wrapped with a thermal cover in order to retain the necessary heat for DPF regeneration. The exhaust wrap shall also help protect surrounding components from radiant heat which can be transferred from the exhaust.

g. The DPF, the decomposition tube, and the SCR canister through the end of the tailpipe shall be connected with zero leak clamps.

Does your bid comply? YES_____ NO _____

44. Engine Cooling System:

a. The radiator and the complete cooling system shall meet or exceed the NFPA and engine manufacture cooling system standards.

b. There shall be a heavy-duty aluminum cooling system designed to meet the demands of the emergency response industry. The cooling system shall have the capacity to keep the engine properly cooled under all conditions of road and pumping operations. The cooling system shall be designed and tested to meet or exceed the requirements specified by the engine and transmission manufacturer and all EPA requirements. The complete cooling system shall be mounted to isolate the entire system from vibration or stress. The individual cores of the cooling system shall be mounted in a manner to allow expansion and contraction at various rates without inducing stress into the adjoining cores.

c. The cooling system shall utilize a charge air cooler to radiator serial flow package that provides the maximum cooling capacity for the specified engine as well as serviceability. The main components shall include a surge tank; an air to air charge air cooler bolted to the front of the radiator, recirculation shields, a shroud, a fan, and required tubing.

d. The radiator shall be a down-flow design constructed with aluminum cores, plastic end tanks, and a steel frame.

e. The radiator shall be equipped with a drain cock to drain the coolant for serviceability.

f. The cooling system shall include a one piece injection molded polymer eleven (11) blade fan with a fiberglass fan shroud.

g. The cooling system shall be equipped with a surge tank that is capable of removing entrained air from the system. The surge tank shall be equipped with a low coolant probe and sight glass to monitor the level of the coolant. The surge tank shall have a dual seal cap that meets the engine manufacturer's pressure requirements, and allows for expansion and recovery of coolant into a separate integral expansion chamber.

h. All radiator tubes shall be formed from aluminized steel tubing. Recirculation shields shall be installed where required to prevent heated air from reentering the cooling package and affecting performance.

i. The charge air cooler shall be a cross-flow design constructed completely of aluminum with cast tanks. All charge air cooler tubes shall be formed from aluminized steel tubing and installed with silicone hump hoses and stainless steel “constant torque” style clamps meeting the engine manufacturer’s requirements.

Does your bid comply? YES_____ NO _____

45. Engine Cooling System Protection:

a. The engine cooling system shall include a recirculation shield designed to act as a light duty skid plate below the radiator to provide additional protection for the engine cooling system from light impacts, stones, and road debris.

URBANA FIRE DEPT. PUMPER SPECIFICATION

Does your bid comply? YES_____ NO _____

46. Engine Coolant:

a. The cooling package shall include Extended Life Coolant (ELC). The use of ELC provides longer intervals between coolant changes over standard coolants providing improved performance.

b. The coolant shall contain a 50/50 mix of ethylene glycol and de-ionized water to keep the coolant from freezing to a temperature of -34 degrees Fahrenheit.

c. Proposals offering supplemental coolant additives (SCA) shall not be considered, as this is part of the extended life coolant makeup.

Does your bid comply? YES_____ NO _____

47. Coolant Hoses:

a. The cooling system hoses shall be silicone heater hose with rubber hoses in the cab interior. The radiator hoses shall be formed silicone coolant hoses with formed aluminized steel tubing.

b. All heater hoses, silicone coolant hoses, and tubing shall be secured with stainless steel constant torque band clamps.

Does your bid comply? YES_____ NO _____

48. Fuel Tank:

a. The fuel tank shall have a minimum capacity of sixty-five (65) gallons. The baffled tank shall be made of a minimum 14 gauge aluminized steel. The exterior of the tank shall be painted with a PRP Corsol™ black anti-corrosive exterior metal treatment finish or equivalent. This results in a tank which offers the internal and external corrosion resistance.

b. The tank shall have a vent port to facilitate venting to the top of the fill neck for rapid filling without "blow-back" and a roll over ball check vent for temperature related fuel expansion and draw.

c. The tank is designed with dual draw tubes and sender flanges. The tank shall have a 2.00 inch NPT fill port. A 0.50 inch NPT drain plug shall be centered in the bottom of the tank.

d. The fuel tank shall be mounted below the frame, behind the rear axle. The tank shall be mounted to allow the tank to be easily lowered and removed for service purposes. The tank shall be secured with stainless steel straps. Rubber isolating pads shall be provided between the tank and the upper tank mounting brackets. Strap mounting studs through the rail, hidden behind the body shall not be acceptable.

e. There shall be a fuel fill assembly located on the apparatus body accessing the chassis supplied fuel tank. The assembly shall be located in the left rear behind the rear axle.

f. There shall be a drain in the fuel fill assembly to allow over flow to drain on the back side of the apparatus body. The fuel fill cap shall be manufactured of plastic materials, green in color and equipped with a tether.

g. The fuel fill cap shall be labeled "DIESEL FUEL". The stainless steel fuel fill neck shall have a 3/8" inside diameter vent line installed from the top of the fuel tank to the fill tube.

Does your bid comply? YES_____ NO _____

49. Fuel Filter/Water Separator:

a. The fuel system shall have a Fleetguard FS1003 or equivalent fuel filter/water separator as a primary filter. The fuel filter shall have a drain valve.

b. A “water in fuel” sensor shall be provided and wired to an instrument panel lamp and audible alarm to indicate when water is present in the fuel/water separator.

c. A secondary fuel filter shall be included as approved by the engine manufacturer.

Does your bid comply? YES_____ NO _____

50. Fuel Lines:

a. The fuel system supply and return lines installed from the fuel tank to the engine shall be reinforced nylon tubing rated for diesel fuel with brass fittings or equivalent.

Does your bid comply? YES_____ NO _____

51. Diesel Exhaust Fluid Tank:

a. The exhaust system shall include a molded cross linked polyethylene tank for Diesel Exhaust Fluid (DEF). The tank shall have a capacity of six (6) usable gallons.

b. The DEF tank shall be designed with capacity for expansion in case of fluid freezing. Engine coolant, which shall be thermostatically controlled, shall be run through lines in the tank to help prevent the DEF from freezing and to provide a means of thawing the fluid if it should become frozen.

c. The tank fill tube shall be routed for easy access and filling.

Does your bid comply? YES_____ NO _____

52. Transmission:

a. The drive train shall include an Allison model EVS 3000, or approved equal, torque converting, automatic transmission which shall include electronic controls. The transmission shall feature two (2) 10-bolt PTO pads located on the converter housing.

b. The transmission, upon start-up, will automatically select a four (4) speed operation. The fifth speed over drive shall be available with the activation of the mode button on the shifting pad.

c. The transmission shall include two (2) internal oil filters and Castrol TranSynd™, or approved equal, synthetic TES 295 transmission fluid which shall be utilized in the lubrication of the EVS transmission. An electronic oil level sensor shall be included with the readout located in the shift selector.

d. The transmission fluid shall be monitored electronically and shall send a signal to activate a warning in the instrument panel when levels fall below normal.

e. The Allison Gen V-E transmission EVS group package number 127, or approved equal, shall contain the 198 vocational packages in consideration of the duty of this apparatus as a pumper. This package shall incorporate an automatic neutral with selector override. This feature commands the transmission to neutral when the park brake is applied, regardless of drive range requested on the shift selector. This requires re-selecting drive range to shift out of neutral for the override.

f. This package shall be coupled with the use of a split shaft PTO and incorporate pumping circuits. These circuits shall be used allowing the vehicle to operate in the fourth range lockup while operating the pump mode due to the 1 to 1 ratio through the transmission, therefore the output speed of the engine is the input speed to the pump. The pump output can be easily calculated by using this input speed and the drive ratio of the pump itself to rate the gallons of water the pump can provide.

g. The transmission shall have two (2) power take off (PTO) mounting locations, one (1) in the 8:00 o'clock position and one (1) in the 4:00 o'clock position. These positions are necessary to facilitate a flat crew area floor.

Does your bid comply? YES_____ NO _____

53. Transmission Shift Selector:

a. A pressure sensitive range selector touch pad shall be provided and located to the right of the driver within clear view and easy reach. The shift selector shall have a graphical Vacuum Florescent Display (VFD) capable of displaying two lines of text. The shift selector shall provide mode indication and a prognostic indicator (wrench symbol) on the digital display. The prognostics monitor various operating parameters and shall alert you when a specific maintenance function is required.

b. When the auxiliary brake is engaged, the transmission shall automatically shift to second gear to decrease the rate of speed assisting the secondary braking system and slowing the vehicle.

c. The transmission gear ratios shall be:

1st	3.49:1
2nd	1.86:1
3rd	1.41:1
4th	1.00:1
5th	0.75:1
6th	0.65:1 (if applicable)
Rev	5.03:1

Does your bid comply? YES_____ NO _____

54. Transmission Cooling System:

a. The transmission shall include water to oil cooler system located in the cooling loop between the radiator and the engine. The transmission cooling system shall meet all transmission manufacturer requirements. The transmission cooling system shall feature continuous flow of engine bypass water to maintain uninterrupted transmission cooling.

Does your bid comply? YES_____ NO _____

55. Driveline:

a. All drivelines shall be heavy duty metal tube and equipped with Spicer 1710 series universal joints or approved equal. The shafts shall be dynamically balanced prior to installation to alleviate future vibration. In areas of the driveline where a slip shaft is required, the splined slip joint shall be coated with Glide Coat® or equivalent.

Does your bid comply? YES_____ NO _____

56. Steering:

a. The hydraulic power steering pump shall be a Vickers V20F or equivalent and shall be gear driven from the engine. The pump shall be a fixed displacement vane type.

Does your bid comply? YES_____ NO _____

57. Steering Column/ Wheel:

a. The cab shall include a Douglas Autotech or equivalent steering column which shall include a seven (7) position tilt, a 2.25 inch telescopic adjustment, and an 18.00 inch, four (4) spoke steering wheel located at the driver's position. The steering wheel shall be covered with black polyurethane foam padding.

b. The steering column shall contain a horn button, self-canceling turn signal switch, four-way hazard switch and headlamp dimmer switch.

Does your bid comply? YES_____ NO _____

58. Interior Customer Nameplate:

a. The interior shall include a customer nameplate which states the vehicle was custom built for "Urbana Fire Department."

Does your bid comply? YES_____ NO _____

59. Front Bumper:

a. The chassis shall be equipped with a severe duty front bumper constructed from structural steel channel.

b. The front bumper shall be extended approximately 28.00 inches ahead of the cab.

c. The front bumper extension frame shall feature an overall width of 48.25 inches.

d. The bumper material shall be a minimum 0.38 thick ASTM A36 steel which shall measure 12.00 inches high with a 3.05 inch flange and the width shall be determined accordingly to the cab width and will have angled front corners.

e. The bumper shall be primed and painted the main body color.

f. The 28.00 inch extended front bumper shall include an apron constructed of a minimum 0.19 inch thick embossed aluminum tread plate.

g. The apron shall be installed between the bumper and the front face of the cab affixed using stainless steel bolts attaching the apron to the top bumper flange.

Does your bid comply? YES_____ NO _____

60. Gravel Pan:

a. A gravel pan, constructed of bright aluminum treadplate, shall be furnished between the bumper and cab face.

b. 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 _____

61. Tow Fork Provision:

a. A tow bar provision shall be installed on the front of the chassis and attached to the frame rails which shall allow the vehicle to be picked up from the front and towed.

Does your bid comply? YES_____ NO _____

62. Front Bumper Tow Hooks:

a. Two (2) heavy duty tow hooks, painted to match the chassis frame, shall be installed below the front bumper, forward position and bolted directly to the outside of each chassis frame rail with grade 8 bolts.

Does your bid comply? YES_____ NO _____

63. Rescue Winch Receivers (Four):

a. Left & Right Side Winch Receiver: There shall be a rescue winch receiver tube located in line with the rear tow eyes below the body, behind the rear axle on the left and right side. The receiver tube shall have a 2" square opening to allow a portable rescue winch to be installed. The maximum pull capacity equals 9000 pounds straight pull. There shall be a label placed on or near the winch receiver tube stating the maximum load rating of the tie off tube.

   A receptacle shall be supplied adjacent to the rescue winch receiver tube and wired for a portable electric winch.

b. Front Winch Receiver: A rescue winch receiver shall be installed on the front of the apparatus. The receiver shall be mounted directly to the chassis frame rails and have a 2" square opening for the attachment of a portable rescue winch. The receiver shall have a maximum straight line pull capacity equaling 9000 pounds. A label shall be permanently affixed on or near the winch receiver indicating the maximum straight line pull rating of the anchor.

   A power receptacle shall be installed adjacent to the rescue winch receiver and wired for a portable electric winch.

c. Rear Winch Receiver: A rescue winch receiver shall be installed below the rear center compartment on the rear of the apparatus. The receiver tube shall have a 2" square opening to allow a portable rescue winch to be mounted. The receiver shall be installed directly to the chassis frame rails. The maximum straight line pull capacity shall equal 9000 pounds. There shall be a label affixed on or near the winch receiver stating the maximum straight line pull rating of the anchor.

   A power receptacle shall be installed adjacent to the rescue winch receiver and wired for a portable electric winch.

d. The rear of the apparatus body shall include a recessed, standard automotive 7 pin, female connection point with cover.

e. All rescue winch receivers and mounting hardware shall be painted with black, Line X type, heavy duty coating.

f. The Bidder shall supply two (2), weight approved, pins to secure the 2" customer supplied attachment

Does your bid comply? YES_____ NO _____

64. Bumper Mounted Rescue Tools:

a. There shall be aluminum recessed storage compartment(s) installed in the front bumper extension. The compartments shall be made of smooth aluminum and shall have the edges flush with the gravel shield.

b. There shall be modular floor tiles installed in the bottom and drain holes provided in the corners.

c. There shall be a full width, raised embossed aluminum diamond plate cover provided and installed over the front bumper compartment. The cover shall be incorporated with a minimum of one (1) lift handle near the front edge.

d. The rear edge of the cover shall be attached with a stainless steel hinge and have two (2) mechanical style hold down latches installed to keep the compartment closed. An automatic type hold open device or devices shall be installed on the cover to hold the door open. The device shall automatically hold the door open without manual manipulation.

e. An NFPA compliant super bright AMDOR™ LED strip light shall be provided and installed on the underside rearward portion of the cover nearest the hinge point.

f. A tool compartment shall be located in the driver's side of the front bumper extension, sized to accommodate a CMW Products, model 6011 dual electric rewind rescue reel.

g. A recessed tool compartment shall be located in the center of the front bumper extension for storage of two (2) pre-connected rescue tools.

h. A tool compartment shall be located in the passenger's side of the front bumper extension, sized to accommodate a CMW Products, model 6015 single electric rewind rescue reel.

i. The make and model of the hydraulic tools shall be Genesis Cutter and Genesis Spreader HP.

Does your bid comply? YES_____ NO _____

65. Under Bumper Lights:

a. There shall be two (2) LED, Super Bright, NFPA compliant, AMDOR™ strip lights mounted under the bumper.

b. The under bumper lights shall be shock mounted for extended life.

c. The under bumper ground lighting shall be interlocked with the park brake and the marker light activation.

Does your bid comply? YES_____ NO _____

D. CAB SPECIFICATIONS:

URBANA FIRE DEPT. PUMPER SPECIFICATION

1. General Specifications:

a. The cab shall be a custom, fully enclosed, LFD (Long Four Door) model with a minimum 10.00 inch raised roof over the driver, officer, and crew area, designed and built specifically for use as an emergency response vehicle by a company specializing in cab and chassis design for all emergency response applications. The cab shall be designed for extreme heavy-duty service utilizing superior strength and capacity for the application of protecting the occupants of the vehicle. The cab shall offer six (6) seating positions.

b. The cab shall incorporate a fully enclosed design with side wall roof supports, allowing for a spacious cab area with no partition between the front and rear sections of the cab. The roof, the rear wall and side wall panels shall be assembled using a combination of welds and proven industrial adhesives designed specifically for aluminum fabrication for construction.

c. The cab shall be constructed using multiple aluminum extrusions in conjunction with aluminum plate. All aluminum welding shall be completed to the American Welding Society and ANSI D1.2-96 requirements for structural welding of aluminum.

d. All interior and exterior seams shall be sealed for optimum noise reduction and to provide the most favorable efficiency for heating and cooling retention.

e. The cab shall be constructed of 5052-H32 or equivalent, corrosion resistant aluminum plate. The cab shall incorporate tongue and groove fitted 6061-T6 0.13 & 0.19 inch thick aluminum extrusions, or equivalent, for extreme duty situations. A single formed, one (1) piece extrusion or equivalent, shall be used for the "A" pillar, adding strength and rigidity to the cab as well as additional roll-over protection. The cab side walls and lower roof skin shall be a minimum 0.13 inch thick; the rear wall and raised roof skins shall be a minimum 0.09 inch thick; the front cab structure shall be a minimum 0.19 inch thick.

f. The exterior width of the cab shall be a minimum, 94.00 inches wide with a minimum interior width of 88.00 inches. The cab shall be a minimum of 67.50 inches from the centerline of the front of the axle to the back of the cab.

g. The cab interior shall be designed to afford the maximum usable interior space and attention to ergonomics with hip and legroom while seated which exceeds industry standards. The crew cab floor shall be flat across the entire walking area for ease of movement inside the cab.

h. The cab shall offer a minimum interior height of 57.50 inches from the front floor to the headliner and a rear floor to headliner height of 65.00 inches in the raised roof area, at a minimum. The cab shall offer a minimum interior measurement at the floor level from the rear of the engine tunnel to the rear wall of the cab of 63.38 inches. All interior measurements shall include the area within the interior trimmed surfaces and not to any unfinished surface.

i. The cab shall include a driver and officer area with two (2) cab doors large enough for personnel in full firefighting gear. The front doors shall offer a minimum clear opening of 40.25 inches wide X 53.50 inches high, from the cab floor to the top of the door opening.

The cab shall also include a crew area with two (2) cab doors, also large enough for personnel in full firefighting gear. The rear doors shall offer a minimum clear opening of 32.25 inches wide X 61.00 inches high, from the cab floor to the top of the door opening.

j. The cab shall incorporate a progressive two (2) step configuration from the ground to the cab floor at each door opening. The progressive steps are vertically staggered and extend the full width of each step well allowing personnel in full firefighting gear to enter and exit the cab easily and safely.

k. The first step for the driver and officer area shall measure a minimum 10.25 inches deep X 31.13 inches wide. The intermediate step shall measure a minimum 8.38 inches deep X 32.13 inches wide. The height from the first step to the intermediate step and the intermediate step to the cab floor shall not exceed 11.00 inches.

l. The first step for the crew area shall measure a minimum of 10.38 inches deep X 20.44 inches wide. The intermediate step shall measure a minimum of 10.20 inches deep X 21.00 inches wide. The height from the first step to the intermediate step and the intermediate step to the cab floor shall not exceed 12.80 inches.

Does your bid comply? YES_____ NO _____

2. Cab Side Drip Rail:

a. There shall be a drip rail along the top radius of each cab side. The drip rails shall help prevent water from the cab roof running down the cab side.

Does your bid comply? YES_____ NO _____

3. Cab Insulation:

a. The cab ceiling, walls, and engine tunnel shall be insulated in all strategic locations to maximize acoustic absorption and thermal insulation. The cab shall be insulated with 2.00" minimum thickness foam insulation in the rear wall, 3.00" insulation on the side walls, and 1.50" insulation in the ceiling.

b. The insulation shall act as a barrier absorbing noise as well as assisting in sustaining the desired climate within the cab interior.

Does your bid comply? YES_____ NO _____

4. Exterior Cab Extinguisher Compartments:

a. The cab shall offer two (2) exterior compartments on the left and right side of the cab behind the rear door. The compartment openings shall be a minimum 10.00 inches wide X 31.19 inches high.

b. The compartment sizes shall be a minimum 11.34 inches wide X 31.19 inches high X 21.19 inches deep.

c. The compartments shall have a minimum 1.50 inch thick hinged box pan style flush mount door with a bright aluminum tread plate inner panel and a bent D-ring slam latch.

d. There shall be a door switch to activate a light inside the compartments and the open compartment warning light in the cab in the event either door is left ajar.

e. Each compartment shall be equipped with a minimum of one (1) super white LED AMDOR™ strip light installed to properly illuminate the compartment.

f. The interior and inside vertical surface of the exterior compartment doors shall have a light grey Line-X type finish, color and matched to the apparatus body interior compartment finish.

Does your bid comply? YES_____ NO _____

5. Pike Pole Tubes:

a. There shall be two (2) aluminum pike pole tubes mounted inside the extinguisher compartment, accessible from either side of the cab.

b. The tubes shall be capable of accommodating a 6.00' FDNY hook.

c. The tubes shall be permanently mounted and incorporate a self-locking groove to prevent movement.

Does your bid comply? YES_____ NO _____

6. Fender Liners:

a. Full-circular, stainless steel inner fender liners in the wheel wells shall be provided. Each wheel well shall be a continuous piece with no breaks or ledges where road grime or debris may accumulate.

Does your bid comply? YES_____ NO _____

7. Cab Windshield:

a. The cab windshield shall have a minimum surface area of 2825.00 square inches and be a single or two (2) pieces with a wraparound design for maximum visibility.

b. The glass utilized for the windshield shall include standard automotive tint. The left and right windshield shall be fully interchangeable.

c. Each windshield shall be installed using black self-locking window rubber.

Does your bid comply? YES_____ NO _____

8. Sunvisors:

a. Two (2) sun visors, one each side forward of the driver and officer seating positions shall be mounted above the windshield.

Does your bid comply? YES_____ NO _____

9. Windshield Wiper System:

a. The cab shall include a dual arm wiper system which shall clear the windshield of water, ice and debris.

b. There shall be a minimum of two (2) windshield wipers which shall be affixed to a radial wet arm.

c. The system shall include a single motor which shall initiate the arm in which both the left hand and right hand windshield wipers are attached, initiating a back and forth motion for each wiper.

d. The wiper motor shall be activated by a switch. The wiper control shall include high and low wiper speed settings and an intermittent wiper control located within easy reach of the driver's position.

Does your bid comply? YES_____ NO _____

10. Engine Tunnel:

a. The cab interior shall include an integrated engine tunnel constructed of 5052-H32 Marine Grade, 0.19 inch thick aluminum or equivalent.

b. The underside of the cab tunnel surrounding the engine and the underside of the entire cab floor shall be lined with multi-layer insulation, engineered for application inside diesel engine compartments.

c. The insulation shall act as a noise barrier, absorbing noise thus keeping the decibel level in the cab well within NFPA recommendations. As an additional benefit, the insulation shall assist in sustaining the desired temperature within the cab interior.

d. The engine tunnel insulation shall measure approximately 0.75 inch thick including a vertically lapped polyester fiber layer, a 1.0 lbs. /ft² PVC barrier layer, an open cell foam layer, and a moisture and heat reflective foil facing reinforced with a woven fiberglass layer. The insulation shall meet or exceed FMVSS 302 flammability test.

e. The cab floor insulation shall measure .56 inch thick including a 1.0#/sf PVC barrier and a moisture and heat reflective foil facing, reinforced with fiberglass strands. The insulation shall meet or exceed MVSS 302 flammability test.

f. The insulation shall be cut precisely to fit each section and sealed for additional heat and sound deflection. The insulation shall be held in place by 3 mils of acrylic pressure sensitive adhesive and aluminum pins with hard hat, hold in place fastening heads. In addition, the

insulation on the underside of the cab floor shall have an expanded metal overlay to assist in retaining the insulation tight against the cab.

Does your bid comply? YES_____ NO _____

11. Engine Tunnel Equipment Mounting Plate:

a. A ¼" unpainted aluminum mounting plate shall be installed on the top of the engine tunnel. This plate shall have ¼" spacers to allow space below the plate for the electrical wiring.

Does your bid comply? YES_____ NO _____

12. Electrical Access Chase:

a. The manufacture shall provide a ¾" access hole to the accessory 12V power leads previously specified. This shall allow a clean and neat finish appearance. The hole shall but cut adjacent or underneath the engine tunnel mounting plate. The hole shall be protected by a rubber grommet.

Does your bid comply? YES_____ NO _____

13. Accessory Trays and Cup Holders:

a. To enhance de-cluttering inside the cab, an area shall be designed to accommodate multiple recessed trays and two (2) cup holders.

b. The area shall be located on the engine tunnel near the dash.

c. Final design and location will be approved at pre-construction

Does your bid comply? YES_____ NO _____

14. Cab Rear Corner Trim:

a. There shall be mirror finish stainless steel scuff plates on the outside corners at the back of the cab.

b. The stainless steel plate shall be affixed to the cab using two sided adhesive tape.

Does your bid comply? YES_____ NO _____

15. Trim Roof:

a. The raised portion of the cab roof shall include 3003-H22 bright aluminum embossed tread plate which is a minimum 0.08 inches thick.

b. This plate shall be intended for reinforcement value and shall start at the rear edge of the roof extending to the radius at the forward end of the raised roof, and shall be the full width of the flat portion of the roof left to right.

c. The tread plate shall be held in place using stainless steel fasteners and shall be sealed with silver silicone caulk around the perimeter of the tread plate and at each mounting screw.

Does your bid comply? YES_____ NO _____

16. Cab Tilt System:

a. The entire cab shall be capable of tilting approximately 45-degrees to allow for easy maintenance of the engine and transmission.

b. The electric-over-hydraulic lift system shall include an ignition interlock and red cab lock down indicator lamp on the tilt control which shall illuminate when holding the "Down" button to indicate safe road operation.

c. It shall be necessary to activate the master battery switch and set the parking brake in order to tilt the cab. As a third precaution the ignition switch must be turned off to complete the cab tilt interlock safety circuit.

d. Two (2) spring-loaded hydraulic hold down hooks located outboard of the frame shall be installed to hold the cab securely to the frame. Once the hold-down hooks are set in place, it shall take the application of pressure from the hydraulic cab tilt lift pump to release the hooks.

e. Two (2) cab tilt cylinders shall be provided with velocity fuses in each cylinder port. The cab tilt pivots shall be 1.90 inch ball and be anchored to frame brackets with 1.25 inch diameter studs.

f. A steel safety channel assembly, painted safety yellow shall be installed on the right side cab lift cylinder to prevent accidental cab lowering. The safety channel assembly shall fall over the lift cylinder at a height of one hundred and sixty four (164) inches.

g. A cable release system shall also be provided to retract the safety channel assembly from the lift cylinder to allow the lowering of the cab.

h. A manual cab tilt pump module shall be attached to the cab tilt pump housing.

Does your bid comply? YES_____ NO _____

17. Cab Tilt Control:

a. The cab lift controls shall be located on the same side of the apparatus as the safety channel assembly. The controls shall include a permanently mounted weather proof raise/lower switch. For enhanced visibility during cab tilt operations, a remote control tether with on/off

switch shall be supplied on a coiled cord that shall extend from 2.00' (coiled) to 6.00' (extended).

Does your bid comply? YES_____ NO _____

18. Interlock, Cab Tilt To Parking Brake/Limit:

a. A cab tilt limit switch shall be installed. The switch will effectively limit the travel of the cab when being tilted.

b. The limit adjustment of the switch shall be preset by the manufacturer to prevent damage to the cab or any bumper mounted option mounted in the cab tilt arc.

c. The cab tilt safety system shall be interlocked to the parking brake. The cab tilt mechanism shall be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism shall be disabled.

Does your bid comply? YES_____ NO _____

19. Grille:

a. The front cab fascia shall include a classic box style, and a stainless steel front grille.

b. The grille shall serve as an air intake to the radiator.

Does your bid comply? YES_____ NO _____

20. Cab Front Fascia:

a. The front cab fascia shall be constructed of 5052-H32 Marine Grade or equivalent, a minimum 0.13 inch thick aluminum plate which shall be an integral part of the cab.

b. The cab fascia will encompass the entire front of the aluminum cab structure from the bottom of the windshield to the bottom of the cab and shall be a "Classic" type design.

c. The front cab fascia shall include two (2) molded plastic modules on each side accommodating a total of up to four (4) Hi/Low beam LED headlights and four (4) warning lights.

d. A chrome plated molded plastic bezel shall be provided on each side around each set of four lamps.

Does your bid comply? YES_____ NO _____

21. Molding (Sides of Cab):

a. Chrome molding shall be provided on both sides of the cab.

URBANA FIRE DEPT. PUMPER SPECIFICATION

Does your bid comply? YES_____ NO _____

22. Mirrors:

a. Retrac Aerodynamic West Coast style dual vision mirror heads model 613305, or equivalent, shall be provided and installed on each of the front cab doors.

b. The mirrors shall be mounted via 1.00 inch diameter tubular stainless steel arms to provide a rigid mounting to reduce mirror vibration.

c. The mirrors shall measure 8.00 inches wide X 19.00 inches high, minimum, and shall include an integral convex mirrors installed in the mirror head below the flat glass to provide a wider field of vision. The flat and convex mirrors shall be motorized with remote horizontal and vertical adjustment. The control switches shall be mounted within easy reach of the driver. The flat and convex mirrors shall be heated for defrosting in severe cold weather conditions.

d. The mirrors shall be constructed of a vacuum formed chrome plated ABS plastic housing that is corrosion resistant and shall include the finest quality non-glare glass.

e. The switch to control the heated mirrors shall be controlled through a rocker switch on the dash in the switch panel and be located within easy reach of the driver.

Does your bid comply? YES_____ NO _____

23. Cab Doors – Barrier Type:

a. The cab shall include four (4) entry doors, two (2) front doors and two (2) crew doors designed for ease of entering and egress when outfitted with an SCBA. The doors shall be constructed of extruded aluminum with a nominal minimum thickness of 0.13 inch. The exterior skins shall be constructed of a minimum 0.13 inch aluminum plate.

b. The doors shall include a double rolled style automotive rubber seal around the perimeter of each door frame and door edge which ensures a weather tight fit.

c. All doors shall be flush mounted for a pleasing smooth appearance and perfect fit along each side of the cab.

d. Each door hinge shall be piano style hinge with a minimum 0.38 inch pin and shall be constructed of stainless steel.

e. All cab entry doors shall be barrier clear design resulting in exposed lower cab steps. The doors shall provide a minimum 32.00 inches of clearance from the ground to the bottom of the door so cab doors may be opened un-hindered by most obstacles encountered, such as guard rails along interstate highways.

f. Each cab entry door shall include a three step entry.

g. The first step closest to the ground shall be constructed of polished 5032 H32 aluminum Grip Strut® grating with angled outer corners.

h. The middle step shall be integral with the cab construction and shall be trimmed with a Flex-Tred® adhesive grit surface material.

i. The lower step shall be mounted to a frame which is integral with the construction of the cab for rigidity and strength.

j. The cab steps shall include a kick plate in the rise of each step. The risers shall be trimmed in 3003-H22 bright aluminum tread-plate.

k. The cab entry doors shall be equipped with exterior pull handles, suitable for use while wearing firefighter gloves.

l. The handles shall be made of aluminum with a chrome plated finish.

m. The interior exit door handles shall be flush paddle type, which are incorporated into the upper door panel.

n. All cab entry doors shall include locks which are keyed alike. The door locks shall be designed to prevent accidental lockout.

o. The exterior pull handles shall include a scuff plate behind the handle constructed of polished stainless steel to help protect the cab finish.

p. Each cab entry door shall include a manually operated door lock.

q. Each door lock may be actuated from the inside of the cab by means of a red knob located on the paddle handle of the respective door or by using a key from the exterior.

r. The chassis shall include a total of four (4) door keys for the manual door locks.

Does your bid comply? YES_____ NO _____

24. Door Panels:

a. The interior trim on the doors of the cab shall consist of a stainless steel trim panel.

b. The remaining door panels shall include a black Line-X finish.

Does your bid comply? YES_____ NO _____

25. Door Pockets:

a. To provide organized storage and clutter control in the cab, the front cab interior doors shall be provided with a storage pockets. The pocket shall be large enough to hold a 3” letter sized binder.

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Does your bid comply? YES_____ NO _____

26. Interior Door Open Warning Lights:

a. The interior of every cab entry door shall include one (1) red with clear lens Whelen 500 TIR6 Super LED warning light located on the door panel. Each light will have a chrome flange.

b. Each light shall activate with a flashing pattern when the door is in the open position to serve as a warning to oncoming traffic.

Does your bid comply? YES_____ NO _____

27. Glass Front Door:

a. The front cab doors shall include a window which shall be a minimum of 27.00 inches in width X 26.00 inches in height. These windows shall have the capability to roll down completely into the door housing. This shall be accomplished electronically utilizing a push button control on the door area. The driver's door shall have controls capable of controlling all windows. A reinforced window regulator assembly shall be provided for severe duty use.

b. There shall be an irregular shaped fixed window which shall minimally measure 2.50 inches wide at the top, 8.00 inches wide at the bottom X 26.00 inches in height, more commonly known as "cozy glass" ahead of the front door roll down windows.

c. The windows shall be mounted within the frame of the front doors trimmed with a black anodized ring on the exterior.

d. The windows located in the left and right front doors shall have a standard green automotive tint which shall allow seventy-five percent (75%) light transmittance.

Does your bid comply? YES_____ NO _____

28. Glass Rear Crew Door(s):

a. The rear crew side doors shall include a window which shall be a minimum of 27.00 inches in width X 26.00 inches in height. Each window shall roll up and down electronically utilizing a push button control on the door area. A reinforced window regulator assembly shall be provided for severe duty use.

b. The window located in the rear crew doors shall include a dark gray automotive tint which shall allow forty-five percent (45%) light transmittance. The dark tint shall aid in cab cooling and help protect passengers from radiant solar energy.

Does your bid comply? YES_____ NO _____

29. Side Middle Glass:

a. The cab shall include a window on the right and left side behind the front doors and ahead of the crew door which shall measure 16.00 inches wide X 26.00 inches high. These windows shall be fixed within this space and shall be rectangular in shape.

b. The windows shall be mounted using self-locking window rubber. The glass utilized for this window shall include a dark gray automotive tint which shall allow forty-five percent (45%) light transmittance. The dark tint shall aid in cab cooling and help protect passengers from radiant solar energy.

Does your bid comply? YES_____ NO _____

30. Cab Steps:

a. The cab shall be equipped with four (4) stirrup style auxiliary steps, one installed below each of the cab door openings.

b. The step frame shall be constructed of 0.19 inch thick 5052-H32 Marine Grade aluminum plate or equivalent.

c. The step surface shall be constructed of heavy duty aluminum Grip-Strut or equivalent safety grating which meets or exceeds Federal Specification RRG-1602-latest revision and performs under dry, greasy, muddy, soapy and icy conditions and offers open drainage.

d. The front step surface shall measure a minimum 7.69 inches deep X 27.73 inches wide. The rear step surface shall measure a minimum 7.69 inches deep X 16.88 inches wide.

Does your bid comply? YES_____ NO _____

31. Ground Lights:

a. Each door shall include an LED, Super Bright, and NFPA compliant, ground light mounted to the underside of the cab step below each door.

b. The ground lights shall be shock mounted for extended life.

c. The ground lighting shall be activated by the opening of the respective door as well as being activated when the parking brake is set.

Does your bid comply? YES_____ NO _____

32. Step Lights:

a. The middle step located at each cab door shall also include a recess mounted LED, Super Bright, NFPA compliant light which shall activate with the opening of the respective door.

Does your bid comply? YES_____ NO _____

33. Fender Crowns:

a. Stainless steel fender crowns shall be installed at the cab wheel openings.

Does your bid comply? YES_____ NO _____

34. Mounting System:

a. The center section of the interior rear wall, between the forward facing seats of the cab, shall have PacTrac panels installed, horizontally.

b. The PacTrac shall go up from the floor to approximately fifty (50) inches above the floor.

Does your bid comply? YES_____ NO _____

35. Mobile Data Terminal Provision:

a. The right hand dash area shall include a glove compartment with a hinged door and a Mobile Data Terminal (MDT) provision.

b. The glove compartment size will measure, a minimum, 14.00 inches wide X 6.38 inches high X 5.88 inches deep.

c. The MDT provision shall be provided above the glove compartment.

Does your bid comply? YES_____ NO _____

36. 12v & USB Power Points - Dash Mount:

a. The cab shall include two (2) 12 volt cigarette lighter type receptacles in the dash to provide a power source for 12 volt electrical equipment. The receptacles shall be wired to be constantly live.

b. A dual port USB connection point shall also be located in the dash for charging devices using a USB connection. This port shall also be wired to be constantly live.

Does your bid comply? YES_____ NO _____

37. Cab Interior Upholstery:

a. The cab interior upholstery shall be black. All cab interior materials shall meet FMVSS 302 (flammability of interior materials).

Does your bid comply? YES_____ NO _____

38. Cab Paint Interior:

a. All visible interior cab structure surfaces shall be painted with a black Line-X, spatter, spray on liner product or equivalent, which shall mold to each surface of the cab interior. The Line-X type shall be environmentally friendly and chemically resistant.

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Does your bid comply? YES_____ NO _____

39. Cab Floor:

a. The floor of the cab shall be covered with a multi-layer mat consisting of 0.25 inch thick sound absorbing closed cell foam with a 0.06 inch thick non-slip vinyl surface with a pebble grain finish.

b. The covering shall be held in place by a pressure sensitive adhesive and aluminum trim molding. All exposed seams shall be sealed with silicone caulk matching the color of the floor mat to reduce the chance of moisture and debris retention.

c. The floor shall have an overlay of 3003-H22 polished aluminum embossed tread plate which is 0.08 inches thick. The tread plate shall be held down with screws and aluminum trim molding.

Does your bid comply? YES_____ NO _____

40. Engine Tunnel Trim:

a. The cab engine tunnel shall be covered with a multi-layer mat consisting of 0.25 inch thick sound absorbing closed cell foam with a 0.06 inch thick non-slip vinyl surface with a pebble grain finish. The covering shall be held in place by a pressure sensitive adhesive.

b. The cab engine tunnel shall have an overlay of 5052-H32 smooth aluminum plate with a Line-X type finish, colored to match the cab paint interior finish color scheme.

c. The aluminum plate shall be held down with screws. All exposed seams shall be sealed with silicone caulk matching the color of the floor mat to reduce the chance of moisture and debris retention.

Does your bid comply? YES_____ NO _____

41. HVAC:

a. The cab shall be equipped with a combination defrost / heating and air-conditioning system. The system shall be mounted in a central location.

b. The system shall offer a minimum of sixteen (16) adjustable louvers. Six (6) of the louvers shall face forward towards the windshield, offering 45,000 BTU of heat at 320 CFM for defrosting. The system shall include six (6) rearward facing louvers to direct air for the crew area and four (4) for driver and officer comfort.

c. The HVAC system shall be designed to produce 60,000 BTU of heat and 32,000 BTU of cooling. The HVAC cover shall be made of aluminum which shall be coated with a customer specified interior paint, or protective coating.

d. All defrost/heating systems shall be plumbed with one (1) central seasonal shut-off valve at the front corner on the right side of the cab.

e. The air conditioner lines shall be a mixture of custom bent zinc coated steel fittings and Aero-quip GH 134 flexible hose with Aero-Quip EZ-Clip fittings.

f. The climate control system shall include a gravity drain for water management. The gravity drain shall remove condensation from the air conditioning system without additional mechanical assistance.

g. The heating, defrosting and air conditioning controls shall be on the dash next to driver panel, in a position which is easily accessible to the driver. The climate control shall be activated by a rotary switch.

h. The air-conditioning compressor shall be a belt driven, engine mounted, open type compressor that shall be capable of producing a minimum of 32,000 BTU at 1500 engine RPMs.

i. The compressor shall utilize R-134A refrigerant and PAG oil.

j. A roof mounted A/C condenser shall be installed centered on the cab forward of the raised roof against the slope rise.

k. The exterior A/C exterior cover shall be painted to match the body color.

Does your bid comply? YES_____ NO _____

42. Auxiliary Front Underseat Heaters:

a. Two (2) 13,500 BTU heaters shall be provided and installed in the face of the seat riser storage area for the left and right front seats, one (1) each side.

b. Theses heater fan controls shall be individual switches located in the rocker switch area of the dash within easy reach of each of the respective sides.

c. The auxiliary heater system hoses shall be silicone with stainless steel constant torque clamps approved for use with silicone hose.

d. All defrost/heating systems shall be plumbed with one (1) seasonal shut-off valve at the front corner on the right side of the cab.

Does your bid comply? YES_____ NO _____

43. 12V Fans:

a. There shall be four (4) adjustable 12 volt fans permanently installed inside the cab.

b. Two (2) shall be located in the front of the cab one (1) on the driver's side and one (1) on the officer's side.

c. Two (2) shall be located in the rear crew area, adjacent to the rear facing jump seats.

d. Final location will be determined at pre-construction.

Does your bid comply? YES_____ NO _____

44. Grab Handle:

a. There shall be two (2) black rubber covered grab handles installed inside the cab, one on each "A" post at the left and right door openings.

b. The handles shall assist personnel in entering and exiting the cab.

c. Both front cab doors shall also include one (1) ergonomically contoured 9.00 inch cast aluminum handle mounted horizontally on the interior door panels.

d. The handles shall feature a textured black powder coat finish to assist personnel entering and exiting the cab.

e. The rear crew doors shall feature a black powder coated cast aluminum assist handle (Chicago Bar). One (1) shall be provided on the inside of each rear crew door.

f. A 30.00 inch long handle shall extend horizontally the width of the window just above the window sill. The handle shall assist personnel in exiting and entering the cab.

g. This handle shall be welded to the door assembly.

Does your bid comply? YES_____ NO _____

45. Engine Compartment Light:

a. There shall be an LED, Super Bright, and NFPA compliant light mounted under the engine tunnel for area work lighting on the engine.

b. The light shall include a polycarbonate lens, a housing which is vibration welded and a bulb which shall be shock mounted for extended life.

c. The light shall activate with an integral switch.

Does your bid comply? YES_____ NO _____

46. Seating Capacity:

a. The seating capacity in the cab shall be six (6).

Does your bid comply? YES_____ NO _____

47. Driver Seat:

a. The driver's seat shall be an H.O. Bostrom Sierra model, or approved equal, seat with air suspension. The four-way seat shall feature 3.00 inch vertical travel air suspension and manual fore and aft adjustment with 5.00 inches of travel. The suspension control shall be located on the seat below the left front corner of the bottom cushion. The seat shall also feature integral springs to isolate shock.

b. The seat shall feature an all belts to seat (ABTS) safety restraint system. The ABTS feature shall include a three-point shoulder harness with the lap belt, automatic retractor and buckle as an integral part of the seat assembly. The buckle portion of the seat belt shall be mounted on a semi-rigid stalk extending from the seat base within easy reach of the occupant.

c. The minimum vertical dimension from the seat H-point to the ceiling for this belted seating position shall be a minimum of 37.00 inches measured with the seat suspension height adjusted to the upper limit of its travel.

d. The driver's seat shall feature a two (2) way adjustable lumbar support and offer an infinite fully reclining adjustable titling seat back. The seat back shall also feature a contoured head rest.

e. The seat shall feature an all belts to seat (ABTS) safety restraint system. The ABTS feature shall include a three-point shoulder harness with the lap belt, automatic retractor and buckle as an integral part of the seat assembly. The buckle portion of the seat belt shall be mounted on a semi-rigid stalk extending from the seat base within easy reach of the occupant.

f. The driver's seat shall be installed in an ergonomic position in relation to the cab dash.

g. This model of seat shall have successfully completed the static load tests set forth by FMVSS 207, 209, and 210 in effect at the time of manufacture.

h. The materials used in construction of the seat shall also have successfully completed testing with regard to the flammability of materials used in the occupant compartments of motor vehicles as outlined in FMVSS 302, of which dictates the allowable burning rate of materials in the occupant compartments of motor vehicles

Does your bid comply? YES_____ NO _____

48. Officer Seat:

a. The officer's seat shall be an H.O. Bostrom Sierra model, or approved equal, seat with air suspension. The four-way seat shall feature 3.00 inch vertical travel air suspension and manual fore and aft adjustment with 5.00 inches of travel. The suspension control shall be located on the seat below the left front corner of the bottom cushion. The seat shall also feature integral springs to isolate shock.

b. The seat shall feature an all belts to seat (ABTS) safety restraint system. The ABTS feature shall include a three-point shoulder harness with the lap belt, automatic retractor and buckle as an integral part of the seat assembly. The buckle portion of the seat belt shall be mounted on a semi-rigid stalk extending from the seat base within easy reach of the occupant.

c. The minimum vertical dimension from the seat H-point to the ceiling for this belted seating position shall be 37.00 inches measured with the seat suspension height adjusted to the upper limit of its travel.
d. This model of seat shall have successfully completed the static load tests set forth by FMVSS 207, 209, and 210 in effect at the time of manufacture.

e. The officer's seat back shall include an IMMI brand SmartDock® Gen 2 hands-free self-contained breathing apparatus (SCBA) holder. The hands-free holder shall meet NFPA 1901-03 9G dynamic requirements for cylinder restraint systems for use in crew compartments of emergency response vehicles. The bracket shall accommodate and secure most types of self-contained breathing apparatus cylinders.

f. The hands-free holder shall consist of a back plate, bottom cradle, non-marring top claws, and claw height adjustment knob. The height adjustment knob shall allow for easy adjustment of the claws to the SCBA. The hands-free holder's claws shall lock from inertial forces to prevent the SCBA from becoming a projectile in the event of a crash to meet the NFPA 1901-03 standard for SCBA retention. The SCBA holder shall offer single-motion insertion into the claws and hands-free release when the SCBA fitted seat occupant rises.

g. The seat back shall include a removable padded cover which shall be provided over the SCBA cavity.

h. The officer's seat shall be installed in an ergonomic position in relation to the cab dash.

i. The materials used in construction of the seat shall also have successfully completed testing with regard to the flammability of materials used in the occupant compartments of motor vehicles as outlined in FMVSS 302, of which dictates the allowable burning rate of materials in the occupant compartments of motor vehicles.

Does your bid comply? YES_____ NO _____

49. Ems Storage Cabinet:

a. There shall be one (1) compartment fabricated out of 1/8", minimum, smooth aluminum installed in the chassis cab.

b. The compartment(s) shall be sized to fit between the rear facing seats, extend from the rear of the doghouse to the rear edge of the seats and as tall as the doghouse.

c. The cabinet shall have an aluminum framed door with 2" wide cargo netting to secure the equipment inside the compartment.

d. The compartment shall have one (1) shelf and adjustable shelf tracking installed.

e. The shelf shall be fabricated of 1/8" smooth aluminum and shall have 1" formed lips to retain its contents and provide rigidity.

f. Two (2) NFPA compliant LED, AMDOR™, strip lights shall be installed in the EMS cabinet. The lights shall be located so that the entire cabinet is illuminated when lite.

g. The lights in the compartment shall be on a separate circuit and activated by a weather proof switch located adjacent to the cabinet.

h. The interior of the cabinet and each shelf provided shall be left natural finish aluminum.

i. The exterior shall have a black Line-X type finished coating for a pleasing appearance and durable finish.

Does your bid comply? YES_____ NO _____

50. 12-Volt Power Leads:

a. One (1) pair of power and grounding leads shall be provided and installed with circuit breaker protection.

b. The leads shall be capable of carrying up to a 40 amp battery direct load.

c. The leads shall be located on the left sidewall, inside the EMS Cabinet.

Does your bid comply? YES_____ NO _____

51. Rear Facing Outboard Seats:

a. The crew area shall include two (2) rear facing, outboard crew seats. One (1) shall be located directly behind the driver's side front seat and one (1) located directly behind the officer's side front seat.

b. The seats shall be a H.O. Bostrom Firefighter series or equivalent.

c. The seat shall feature a tapered and padded seat, and cushion.

d. The rear facing outer seats shall offer a special mounting position 3.75 inches rearward of the standard mounting location offering additional room ahead of the seat.

e. The seat shall feature an all belts to seat (ABTS) style of safety restraint. The ABTS feature shall include a three-point shoulder harness with the lap belt and automatic retractor as an integral part of the seat assembly.

f. The minimum vertical dimension from the seat H-point to the ceiling for each belted seating position shall be a minimum of 35.00 inches.

g. The crew area seat backs shall include an IMMI brand SmartDock® Gen 2 hands-free self-contained breathing apparatus (SCBA) holder. The hands-free holder shall meet NFPA 1901-03 9G dynamic requirements for cylinder restraint systems for use in crew

compartments of emergency response vehicles. The bracket shall accommodate and secure most types of self-contained breathing apparatus cylinders.

h. The hands-free holder shall consist of a back plate, bottom cradle, non-marring top claws, and claw height adjustment knob. The height adjustment knob shall allow for easy adjustment of the claws to the SCBA. The hands-free holder's claws shall lock from inertial forces to prevent the SCBA from becoming a projectile in the event of a crash to meet the NFPA 1901-03 standard for SCBA retention. The SCBA holder shall offer single-motion insertion into the claws and hands-free release when the SCBA fitted seat occupant rises.

i. This model of seat shall have successfully completed the static load tests by FMVSS 207/210.

j. The model of seats shall also have successfully completed the flammability of materials used in the occupant compartments of motor vehicles as outlined in FMVSS 302.

Does your bid comply? YES_____ NO _____

52. Forward Facing Outboard Folding Seats:

a. The crew area shall include two (2) forward facing outboard seats. One (1) located next to the outer wall of the cab on the driver's side of the cab and one (1) located next to the outer wall on the officer's side of the cab.

b. The seats shall be H.O Bostrom Firefighter series or equivalent.

c. The seat shall feature a tapered and padded seat back and cushion.

d. The forward facing outer seat shall be installed in a special mounting position moved inboard from the outer walls towards the center of the cab providing approximately 5.00 inches between the seat and the side wall.

e. The bottom cushion, on both forward facing seats, shall be hinged and compact in design for additional room and shall remain in the stored position until occupied.

f. The seat shall feature an all belts to seat (ABTS) style of safety restraint. The ABTS feature shall include a three-point shoulder harness with the lap belt and automatic retractor as an integral part of the seat assembly.

g. The minimum vertical dimension from the seat H-point to the ceiling for each belted seating position shall be 35.00 inches.

h. The crew area seat backs shall include an IMMI brand SmartDock® Gen 2 hands-free self-contained breathing apparatus (SCBA) holder. The hands-free holder shall meet NFPA 1901-03 9G dynamic requirements for cylinder restraint systems for use in crew compartments of emergency response vehicles. The bracket shall accommodate and secure most types of self-contained breathing apparatus cylinders.

i. The hands-free holder shall consist of a back plate, bottom cradle, non-marring top claws, and claw height adjustment knob. The height adjustment knob shall allow for easy adjustment of the claws to the SCBA. The hands-free holder's claws shall lock from inertial forces to prevent the SCBA from becoming a projectile in the event of a crash to meet the NFPA 1901-03 standard for SCBA retention. The SCBA holder shall offer single-motion insertion into the claws and hands-free release when the SCBA fitted seat occupant rises.

j. The seat back shall include a removable padded cover which shall be provided over the SCBA cavity.

k. This model of seat shall have successfully completed the static load tests by FMVSS 207/210.

l. The model of seats shall also have successfully completed the flammability of materials used in the occupant compartments of motor vehicles as outlined in FMVSS 302.

Does your bid comply? YES_____ NO _____

53. Forward Facing Seat Frame:

a. The forward facing center seating positions shall include a full width seat frame located and installed at the rear wall.

b. The seat frame shall span the available space on the rear wall.

c. The seat frame shall be constructed of Marine Grade 5052-H32 0.19 inch thick aluminum plate or equivalent.

d. The seat box shall be painted the same color and texture as the interior.

Does your bid comply? YES_____ NO _____

54. Forward Facing Seat Frame Storage Access:

a. There shall be one (1) access point to the storage area centered on the front of the seat frame.

b. This access point shall be covered by a hinged door to allow access for storage in the seat box.

c. The seat frame shall be open to the exterior rear compartment on both the right hand side and the left hand side.

d. This shall allow interior access to the left and right exterior rear compartments.

Does your bid comply? YES_____ NO _____

55. Seat Material:

a. The seats shall include a covering of high strength, wear resistant fabric made of durable ballistic polyester. A PVC coating shall be bonded to the back side of the material to help protect the seats from UV rays and from being saturated or contaminated by fluids. Common trade names for this material are Imperial 1200 and Durawear 1800.

b. All seats supplied with the chassis shall be black in color.

c. All seats shall include red seat belts.

Does your bid comply? YES_____ NO _____

56. Seat Belts:

a. All seating positions shall have red seat belts.

Does your bid comply? YES_____ NO _____

57. Seat Belt Monitoring System:

a. A seat belt monitoring warning system, integrated with the Vehicle Data Recorder system, shall be installed for each seat within the cab. The system shall activate an indicator light in the instrument panel, a digital seat position indicator with a seat position legend in the switch panel, and an audible alarm.

b. The warning system shall activate when any seat is occupied with a minimum of 60 pounds and the corresponding seat belt remains unfastened. The warning system shall also activate when any seat is occupied and the corresponding seat belt was fastened in an incorrect sequence. Once activated, the visual indicators and audible alarm shall remain active until all occupied seats have the seat belts fastened.

Does your bid comply? YES_____ NO _____

58. Helmet Restraints:

a. All NFPA required helmet restraints will be supplied and installed by the Customer prior to the truck being placed into service.

b. A high-visibility label shall be installed in a location clearly detectable from each seating position. The label shall indicate the following specified information.

c. “DO NOT WEAR HELMET WHILE SEATED”

Does your bid comply? YES_____ NO _____

59. Cab Dome Lights:

a. There shall be four (4) dual red/white Whelen LED dome lamps.

b. Two (2) lights shall be mounted above the inside shoulder of the driver and officer.

c. Two (2) lights shall be installed and located, one (1) on each side of the crew cab.

d. The dome lamps shall be rectangular in shape and shall include a black colored bezel.

e. The white function of each lamp shall be activated by the door switches and the lens switch.

f. The red function shall be controlled by the lens switch.

g. An additional functioning clear Whelen, LED dome lamp shall be provided, centered, over the forward engine tunnel. The function of this lamp shall be activated by the door switches and the lens switch.

Does your bid comply? YES_____ NO _____

60. Overhead Map Lights:

a. There shall be two (2) white round adjustable map lights installed in the cab:

b. One (1) overhead in front of the driving position.

c. One (1) overhead in front of the passenger's position.

d. Each light shall include a switch on the light housing.

e. The light switches shall be connected directly to the battery switched power.

Does your bid comply? YES_____ NO _____

61. Instrumentation:

a. An ergonomically designed instrument panel shall be provided and each gauge shall be backlit with LED lamps.

b. Stepper motor movements shall drive all gauges.

c. The instrumentation system shall be multiplexed and shall receive ABS, engine, and transmission information over the J1939 data bus to reduce redundant sensors and wiring.

d. The instrument panel shall contain the following gauges:

e. One (1) electronic speedometer shall be included. The primary scale on the speedometer shall read from 0 to 100 MPH, and the secondary scale on the speedometer shall read from 0 to 160 KM/H.

f. One (1) electronic tachometer shall be included. The scale on the tachometer shall read from 0 to 3000 RPM.

g. One (1) two-movement gauge displaying primary system, and secondary system air volumes and integral LCD odometer/trip odometer shall be included on the lower portion of the LCD. The scale on the air pressure gauges shall read from 0 to 150 pounds per square inch (PSI). The air pressure scales shall be linear to operate with an accuracy of 1 degree of the measured data with a red indication zone on the gauge showing critical levels of air pressure. A red indicator light in the gauge shall indicate a low air pressure, as well as a message on the LCD screen. The odometer shall display up to 9,999,999.9 miles. The trip odometer shall display 9,999.9 miles. The LCD shall display Transmission Temperature in degrees Fahrenheit on the upper portion of the LCD. The LCD screen shall also be capable of displaying certain diagnostic functions.

h. One (1) four-movement gauge displaying engine oil pressure, coolant temperature, fuel level, voltmeter, and an *indicator bar displaying Diesel Exhaust Fluid (DEF) LED bar shall be included. The scale on the engine oil pressure gauge shall read from 0 to 120 pounds per square inch (PSI). The engine oil pressure scale shall be linear to operate with an accuracy of 1 degree of the measured. A red indicator light in the gauge shall indicate a low engine oil pressure, as well as a message on the LCD screen. The scale on the coolant temperature gauge shall read from 100 to 250 degrees Fahrenheit (F). The coolant temperature scale shall be linear to operate with an accuracy of 1 degree of the measured data with a red indication zone on the gauge showing critical levels of air pressure. A red indicator light in the gauge shall indicate high coolant temperature, as well as a message on the LCD screen. The scale on the fuel level gauge shall read from empty to full as a percentage of fuel remaining. An amber indicator light shall indicate low fuel at 25% tank level. The scale on the voltmeter shall read from 10 to 16 volts with a red indication zone on the gauge showing critical levels of battery voltage. A red indicator light shall indicate high or low system voltage, as well as a message on the LCD screen. The scale on the DEF LED bar will consist of four (4) LEDs displaying levels in increments of 25% of useable DEF in green. Upon decreasing levels, the indicator bar will change colors to notify the driver of decreasing levels of DEF and action will be required. An amber indicator light shall indicate low levels of DEF, as well as a message on the LCD screen and an audible alarm.

i. The instrument panel shall include a light bar that contains the following LED indicator lights and produce the following audible alarms in applicable configurations:

Does your bid comply? YES_____ NO _____

62. Red Lamps:

a. Stop Engine-indicates critical engine fault
b. Air Filter Restricted-indicates excessive engine air intake restriction
c. Park Brake-indicates parking brake is set
d. Seat Belt Indicator-indicates when a seat is occupied and corresponding seat belt remains unfastened
e. Low Coolant-indicates engine coolant is required

Does your bid comply? YES_____ NO _____

63. Amber Lamps:

a. MIL-indicates an engine emission control system fault
b. Check Engine-indicates engine fault
c. Check Trans-indicates transmission fault
d. High Transmission Temperature-indicates excessive transmission oil temperature
e. ABS-indicates anti-lock brake system fault
f. HEST-indicates a high exhaust system temperature
g. Water in Fuel-indicates presence of water in fuel filter
h. *DPF-indicates a restriction of the diesel particulate filter
i. *Regen Inhibit-indicates regeneration has been postponed due to user interaction
j. Range Inhibit-indicates a transmission operation is prevented and requested shift request may not occur.
k. *SRS-indicates a problem in the supplemental restraint system
l. Check Message-Turn Signal On
m. Check Message-Door Ajar
n. Check Message-Cab Ajar
o. *Check Message-ESC Active
p. *Check Message-DPF Regen Active
q. Check Message-No Engine Data
r. Check Message-No Transmission Data
s. Check Message-No ABS Data
t. Check Message-No Data All Communication with the Vehicle Systems Has Been Lost
u. Check Message-Check Engine Oil Level
v. Check Message-Check Washer Fluid Level
w. Check Message-Check Power Steering Fluid Level
x. Check Message-Low Transmission Fluid Level
y. Check Message-Check Coolant Level

Does your bid comply? YES_____ NO _____

64. Green Lamps:

a. Left and Right turn signal indicators
b. *ATC-indicates low wheel traction for automatic traction control equipped vehicles, also indicates mud/snow mode is active for ATC system
c. High Idle-indicates engine high idle is active.
d. Cruise Control-indicates cruise control is active
e. OK to Pump-indicates the pump engage conditions have been met
f. Pump Engaged-indicates the pump is currently in use
g. Auxiliary Brake-indicates secondary braking device is active
h. OK for PTO-indicates the PTO engage conditions have been met

*Items marked with an asterisk are provided only in applicable configurations.

Does your bid comply? YES_____ NO _____

65. Blue Lamp:

a. High Beam Indicator

Does your bid comply? YES_____ NO _____

66. White Lamp:

a. Wait to Start-indicates active engine air preheat cycle

Does your bid comply? YES_____ NO _____

67. Audible Alarms from Gauge Package:

a. High Trans Temp
b. High or Low Voltage
c. Check Engine
d. Check Transmission
e. Stop Engine
f. Low Air Pressure
g. Fuel Low
h. Water in Fuel
i. *ESC
j. High Coolant Temperature
k. Low Engine Oil Pressure
l. Low Coolant Level
m. *Low DEF Level
n. Air Filter Restricted
o. Extended Left and Right Turn Remaining On
p. Cab Ajar
q. Door Ajar
r. ABS System Fault
s. Seatbelt Indicator

*Items marked with an asterisk are provided only in applicable configurations.

Does your bid comply? YES_____ NO _____

68. External Audible Alarm:

a. Air Filter
b. Cab Ajar
c. Door Ajar
d. Check Engine
e. Stop Engine
f. Low Air Pressure
g. Low Engine Oil Pressure
h. Water in Fuel

i. *Low DEF
j. ABS System Fault
k. Seatbelt Indicator

*Items marked with an asterisk are provided only in applicable configurations.

Does your bid comply? YES_____ NO _____

69. Backlighting Color:

a. The instrumentation gauges and the switch panel legends shall be backlit using red LED backlighting.

Does your bid comply? YES_____ NO _____

70. Indicator Lamp and Alarm Prove Out:

a. Telltale indicators and alarms shall perform prove-out at initial power-up to ensure proper performance.

Does your bid comply? YES_____ NO _____

71. Control Switches:

a. For ease of use, the following controls shall be provided immediately adjacent to the cab instrument panel within easy reach of the driver.

b. Emergency master switch: A molded plastic two position switch with integral indicator lamp shall be provided. Pressing the switch shall activate emergency response lights and siren control. A green lamp on the switch provides indication that the emergency master mode is active. Pressing the switch again disables the emergency master mode.

c. Headlight / Parking light switch: A three (3)-position maintained rocker switch shall be provided. The first switch position shall deactivate all parking lights and the headlights. The second switch position shall activate the parking lights. The third switch position shall activate the headlights.

d. Panel backlighting intensity control switch: A switch shall be provided to control the minimum level and maximum level intensity of the backlighting.

e. The following standard controls shall be integral to the gauge assembly. All switches have backlit labels for low light applications.

f. <u>High idle engagement switch:</u> A two (2)-position momentary rocker switch with integral indicator lamp shall be provided. The first switch position is the default switch position. The second switch position shall activate and deactivate the high idle function when pressed and released. The "Ok to Engage High Idle" indicator lamp must be active for the high idle

function to engage. A green indicator lamp integral to the high idle engagement switch shall indicate when the high idle function is engaged.

g. "Ok to Engage High Idle" indicator lamp: A green indicator light shall be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

h. The following standard controls shall be provided adjacent to the cab gauge assembly within easy reach of the driver. All switches shall have backlit labels for low light applications.

i. Ignition switch: A switch configuration shall be provided that shall activate and deactivate the vehicle ignition system. A green indicator lamp shall be activated with vehicle ignition.

j. Engine start switch: A two (2)-position momentary rocker switch shall be provided. The first switch position is the default switch position. The second switch position shall activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.

k. 4-way hazard switch: A two (2)-position maintained switch shall be provided. The first switch position shall deactivate the 4-way hazard switch function. The second switch position shall activate the 4-way hazard function.

l. Heater, defroster, and air conditioning control panel: A control panel with switches shall be provided to control heater/defroster temperature and heater, defroster, and air conditioning fan speeds.

m. Turn signal arm: A self-canceling turn signal with high beam headlight and windshield wiper/washer controls shall be provided.

n. The windshield wiper control shall have high, low, and intermittent modes.

o. Parking brake control: An air actuated push/pull park brake control valve shall be provided.

p. Chassis horn control: Activation of the chassis horn control shall be provided through the center of the steering wheel.

Does your bid comply? YES_____ NO _____

72. Custom Switch Panels:

a. The design of cab instrumentation shall allow for emergency lighting and other switches to be placed within easy reach of the driver and officer.

b. A master switch shall be included in the main rocker switch panel. The switch shall be a rocker type, red in color and labeled “Master” for identification.

c. The switch shall feature control over all devices wired through it. Any warning device switch left in the “ON” position shall automatically power up when the master switch is activated.

d. There shall be positions for a minimum of three (3) switch panels in the engine tunnel console.

e. A rocker switch with a blank legend installed directly above shall be provided for any position without a switch and legend designated by a specific option. The non-specified switches shall be two-position, black switches with a green indicator light.

f. All switches shall have backlit labels for low light applications.

Does your bid comply? YES_____ NO _____

73. Radio Faceplates:

a. There shall be provisions located on the dash panel or in the overhead console to accommodate 9.00" of Jotto brand, or approved equal, faceplates or equivalent.

b. These areas shall be reinforced to hold customer supplied radios and accessories.

c. Final layout will be approved at pre-construction.

Does your bid comply? YES_____ NO _____

74. Do Not Move Apparatus Light:

a. The front headliner of the cab shall include a flashing red Whelen 500 Series 5mm LED light clearly labeled "Do Not Move Apparatus".

b. In addition to the flashing red light, an audible alarm shall be included which shall sound while the light is activated.

c. The flashing red light shall be located centered left to right for greatest visibility.

d. The light and alarm shall be interlocked for activation when either a cab door is not firmly closed or an apparatus compartment door is not closed, and the parking brake is released.

Does your bid comply? YES_____ NO _____

75. Weather Band Radio:

a. There shall be an AM/FM/Weather band stereo installed and mounted in the switch panel or overhead console per layout to monitor local conditions and storms.

b. The weather band radio shall be interfaced with the intercom system. The radio shall mute or silence when a 2 way radio communication is transmitted.

c. The weather band radio shall be mounted in the overhead console on the officer's side of the cab.

d. There shall be a roof mounted rubber antenna located in an open space, on the cab roof.

Does your bid comply? YES_____ NO _____

76. Data Recording System:

a. The chassis shall have a Vehicle Data Recorder (VDR) system installed. The system shall be designed to meet NFPA 1901. The following information shall be recorded:

i. Vehicle Speed
ii. Acceleration
iii. Deceleration
iv. Engine Speed
v. Engine Throttle Position
vi. ABS Event
vii. Seat Occupied Status
viii. Seat Belt Status
ix. Master Optical Warning Device Switch Position
x. Service Brake
xi. Engine Hours
xii. Time
xiii. Date

b. Each portion of the data shall be recorded at the specified intervals and stored for the specified length of time to meet NFPA 1901 guidelines and shall be retrievable by connecting a laptop computer to the VDR system. The laptop connection shall be a panel mounted female type B USB connection point, remotely mounted in the left side foot well of the cab.

c. The manufacturer shall supply the software needed to retrieve any data from the VDR.

Does your bid comply? YES_____ NO _____

77. Intercom System:

a. There shall be a digital, single radio interface, intercom located in the cab. The front panel shall be recessed mounted for a clean and neat appearance. The front panel shall have master volume, and squelch controls with illuminated indicators, allowing for independent level setting of radio and auxiliary audio devices.

b. There shall be one (1) , recessed mount, radio listen only / transmit control with select, monitor, receive, and transmit indicators.

c. There shall be one (1) auxiliary audio input with select, and receive indicators.

d. There shall be one (1) wireless radio base station and headset provided for the driver's position. A heavy duty, coiled 12 volt charging pigtail with plug shall be provided at the driver's position.

e. A radio / intercom interface shall be included for a Motorola XTL 1500.

f. There shall be six (6) over the head, wired, radio transmit headset(s) provided.

g. Each headset shall feature:

i. Noise cancelling electric microphone
ii. Flex boom rotates for left or right dress
iii. Ear seals with 24 dB noise reduction
iv. Red Radio Push To Talk button
v. Six (6) heavy duty headset hangers, to be located at pre-construction conference.

h. There shall be a total of six (6) outlet jacks wired and provided. The exact location of these jacks will be determined at the pre-construction meeting

Does your bid comply? YES_____ NO _____

78. Communication Antenna:

a. A quantity of two (2), 2 way radio, antennas shall be mounted on the right hand front corner of the cab roof so not to interfere with light bars or other roof mounted equipment installed.

b. One (1) VHF antenna and one (1) 800 MaH antenna shall be supplied by the customer.

c. The antenna cable(s) shall be routed from the antenna mounting bases on the roof to the area inside the center rocker switch console.

Does your bid comply? YES_____ NO _____

79. Indicator Light and Alarm Prove-Out System:

a. A system shall be provided which automatically test basic indicator lights and alarms located on the cab instrument panel.

Does your bid comply? YES_____ NO _____

80. Dedicated Radio Equipment Connection Points:

a. There shall be three (3) studs provided in the primary power distribution center for two-way radio equipment.

b. The studs shall consist of the following:

i. 12-volt 40-amp battery switched power
ii. 12-volt 60-amp ignition power
iii. 12-volt 60-amp direct battery power

c. There shall also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.

Does your bid comply? YES_____ NO _____

81. Enhanced Software:

a. The solid-state control system shall include the following software enhancements:

i. All perimeter lights and scene lights (where applicable) shall be deactivated when the parking brake is released.
ii. Cab and crew cab dome lights shall remain on for ten (10) seconds for improved visibility after the doors close. The dome lights shall dim after ten (10) seconds or immediately if the vehicle is put into gear.
iii. Cab and crew cab perimeter lights shall remain on for ten (10) seconds for improved visibility after the doors close. The dome lights shall dim after ten (10) seconds or immediately if the vehicle is put into gear.

Does your bid comply? YES_____ NO _____

82. Battery System:

a. There shall be a minimum of four (4), 12 volt, batteries that include the following minimum features:

i. 950 CCA, cold cranking amps
ii. 190 amp reserve capacity
iii. High Cycle
iv. Group 31
v. Rating of 3800 CCA at 0 degrees Fahrenheit
vi. 760 minutes of reserve capacity
vii. Threaded stainless steel studs

b. The inside of each battery shall consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.

c. The batteries shall be installed on a tray and mounted to the chassis. The battery tray(s) shall be coated with the same material as the frame.

d. The battery trays shall include drain holes in the bottom for sufficient drainage of water. A durable, non-conducting, interlocking mat made by Dri-Dek shall be installed in the bottom of the trays to allow for air flow and help prevent moisture build up.

e. The batteries shall be held in place by non-conducting phenolic resin hold down boards.

f. Each battery box shall include a cover which protects the top of the batteries.

g. Each cover shall include flush latches which shall keep the cover secure as well as a handle for convenience when opening.

h. The starting system shall include cables which shall be protected by 275 degree F. minimum high temperature flame retardant loom, sealed and encapsulated at the ends with heat shrink and sealant.

Does your bid comply? YES_____ NO _____

83. Jumper Studs:

a. The starting system shall include battery jumper studs.

b. The studs shall be located so that the cab does not need to be tilted in order to allow the vehicle to be jump started, charged, or the cab to be raised in an emergency in the event of battery failure.

Does your bid comply? YES_____ NO _____

84. Ignition:

a. A master battery system with a keyless start ignition system shall be provided. Each system shall be controlled by a one-quarter turn Cole Hersee switch, both of which shall be mounted to the left of the steering wheel on the dash. A push type starter button shall be provided adjacent to the master battery and ignition switches.

b. Each switch shall illuminate a green LED indicator light on the dash when the respective switch is placed in the "ON" position.

c. The starter button shall only operate when both the master battery and ignition switches are in the "ON" position.

Does your bid comply? YES_____ NO _____

85. Battery Charger / Air Compressor:

a. A Kussmaul 1200 battery charger and 120V auto pump shall be supplied.

b. A Kussmaul battery charger display shall be supplied. The display shall be mounted in the cab, viewable through the cab middle side window behind the left front door.

c. The air compressor shall be installed to maintain the air system pressure when the vehicle is not in use.

d. The battery charger shall be wired directly to the AC shoreline inlet.

e. The battery charger and auto pump shall be located in a secluded area in the cab that is easily serviceable.

URBANA FIRE DEPT. PUMPER SPECIFICATION

Does your bid comply? YES_____ NO _____

86. Auto Eject For Shoreline:

a. A Kussmaul 20 amp super auto-eject electrical receptacle shall be supplied. It shall automatically eject the plug when the starter button is depressed.

b. A single item or an addition of multiple items must not exceed the rating of the electric inlet that it's connected to.

c. The electrical inlet shall be connected to the battery conditioner and the air pump.

d. The electrical shoreline inlet shall be installed on the left hand side of cab over the wheel well.

e. The electrical shoreline inlet connection shall include a yellow cover.

Does your bid comply? YES_____ NO _____

87. Shoreline Powered Outlets:

a. The following specified outlets shall be provided and installed on the apparatus; and be live when shoreline power is provided:

b. Three (3) NEMA 5-15, 120V/15A, commercial grade, duplex receptacle with weather resistant cover shall be located as specified below:

i. One (1) inside EMS cabinet.
ii. One (1) inside compartment L1
iii. One (1) inside compartment R1
iv. One (1) inside compartment R2

c. The final location of these outlets will be determined at pre-construction.

Does your bid comply? YES_____ NO _____

88. Alternator:

a. An alternator shall be provided that has a rated output current of 430 amps, as measured by SAE method J56. The alternator shall feature an integral regulator and rectifier system that has been tested and qualified to an ambient temperature of 257 degrees Fahrenheit (125 degrees Celsius). The alternator shall be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

Does your bid comply? YES_____ NO _____

89. Load Management System:

a. The apparatus shall be equipped with a Class 1 Total System Manager (TSM) for performing electrical load management. The TSM shall have sixteen (16) programmable outputs to supply warning and load switching requirements. Outputs one (1) through twelve (12) shall be independently programmable to activate during the scene mode, the response mode, or both. These outputs can also be programmed to activate with the ignition or master warning switch, or to sequence and shed along with the priority. Output thirteen (13) shall be designated to activate a fast idle system. Output fourteen (14) shall provide a low voltage warning for an isolated battery. Output fifteen (15) is a user configurable output and shall be programmable for activating between 10.50 and 15.00 volts. Output sixteen (16) shall provide a low voltage alarm that activates at the NFPA required 11.80 volts.

b. The TSM shall have a digital display to indicate system voltage in normal operation mode and also indicate the output configuration during programming mode. The TSM shall be protected against reverse polarity and shorted outputs and be enclosed in a metal enclosure to enhance EMI/RFI protection.

Does your bid comply? YES_____ NO _____

90. Headlights:

a. The cab front shall include four (4) rectangular LED, high intensity, headlights with Low/High beam in same housing mounted in bright chrome bezels.

b. The headlights shall be located on the front fascia of the cab directly below the front warning lights.

Does your bid comply? YES_____ NO _____

91. Headlight and Marker Light Activation:

a. The headlights and marker lights shall be controlled through a rocker switch within easy reach of the driver.

b. There shall also be a dimmer switch within easy reach of the driver to adjust the brightness of the dash lights.

Does your bid comply? YES_____ NO _____

92. Front Turn Signals:

a. The front fascia shall include two (2) Whelen model M6 amber sequential LED turn signals which shall be installed in chrome housing above and outboard of the front warning and head lamps.

Does your bid comply? YES_____ NO _____

93. Cab Clearance / Marker / and Id Lights:

a. In accordance with FMVSS, there shall be seven (7) Whelen model 0SA00MCR LED cab marker lamps designating the presence and overall width of the vehicle in the following locations:

   i. Three (3) amber LED identification lights shall be installed in the center of the cab above the windshield.
   ii. Two (2) amber LED clearance lights shall be installed, one (1) on each outboard side of the cab above the windshield.
   iii. Two (2) amber LED marker lights shall be installed, one (1) on each side above the cab doors.

b. The lights shall be installed on the face of the cab within full view of other vehicles from ground level.

Does your bid comply? YES_____ NO _____

94. Rear FMVSS Led Lighting:

a. There shall be seven (7) LED lights located on the rear of the apparatus.

b. The lights shall be Weldon brand 9186-1500 series LED red and amber markers.

c. Three (3) of the lights shall be mounted on the rear of the apparatus, for use as identification lamps.

d. Two (2) lights shall be located on the rear, one each side.

e. Two (2) lights shall be located on the side, facing outward, for use as clearance lamps.

f. If the apparatus is 30' or longer there shall be two (2) LED amber intermediate turn signals and two (2) amber intermediate marker lights on the sides of the apparatus (one (1) each per side) between the front and rear axles.

Does your bid comply? YES_____ NO _____

95. Rear FMVSS Led Lighting:

a. There shall be a Whelen M6FCV4 Chrome Quad-Cluster flange provided and installed on the rear of the apparatus, one each side. The cluster shall consist of the following specified components:

   i. 1 - Whelen #M6RC LED warning light – 1st position
   ii. 1 - Whelen #M6BTT LED red brake light – 2nd position
   iii. 1 - Whelen #M6T LED sequential amber turn signal light – 3rd position
   iv. 1 - Whelen #M6 BUW LED clear backup light – 4th position

b. The backup lights shall illuminate when the apparatus is placed in reverse gear.

URBANA FIRE DEPT. PUMPER SPECIFICATION

Does your bid comply? YES_____ NO _____

96. Back-Up Alarm:

a. A backup alarm shall be installed at the rear of the chassis with an approved output level and shall automatically activate when the transmission is placed in reverse.

Does your bid comply? YES_____ NO _____

97. Side Turn/Marker Lights:

a. The sides of the cab shall include two (2) Whelen model 0SA00MCR LED side marker lights, with stainless steel trim, shall be provided just behind the front cab radius corners.

Does your bid comply? YES_____ NO _____

98. Cab Perimeter Lights:

a. There shall be 4 (4) 20.00" white, super bright, 12 volt, AMDOR™, LED strip lights provided, one (1) for each cab door.

b. These lights shall be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.

Does your bid comply? YES_____ NO _____

99. Body Perimeter Lights:

a. There shall be 4 (4) 20.00" white, super bright, 12 volt, AMDOR™, LED strip lights provided.

b. The lights shall be mounted in the following locations:

i. One (1) light shall be provided under the driver's side pump panel running board.
ii. One (1) light shall be provided under the driver's side rear step area shinning to the rear.
iii. One (1) light shall be provided under the passenger's side rear step area shinning to the rear.
iv. One (1) light shall be provided under the passenger's side pump panel running board.

c. The perimeter scene lights shall be activated by a switch inside the cab and when the parking brake is applied.

Does your bid comply? YES_____ NO _____

100. Step Lights:

a. Four (4) white LED step lights with chrome housings 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.

b. 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.

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

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

Does your bid comply? YES_____ NO _____

101. Side 12v Scene Lighting:

a. There shall be a six (6) 12 volt surfaced mounted LED combination spot/flood light(s) located three (3) on each side of the apparatus.

b. The lights shall be Whelen model Pioneer model #PCPSM2C, dual lamp, 12 volt, LED flood light with chrome flange.

c. There shall be one (1) light mounted on each side of the upper cab side, rearward of the cab "B" pillar in the raised roof portion of the cab between the front and rear crew doors.

d. The body scene lights shall be located on each side of the fire body. There shall be two (2) on each upper body sides of the hatch compartments, one (1) at the front and one (1) at the rear corner of the body side walls.

e. There shall be one (1) switch for each side. One (1) switch will active the entire right side and one (1) switch will active the entire left side.

f. The scene lighting shall be activated by the following:

i. A switch on driver's side switch panel
ii. A switch on the officer's side switch panel
iii. A weatherproof switch, on a switch panel, located inside compartment L1.

g. The scene light rocker switches shall be properly labeled.

Does your bid comply? YES_____ NO _____

102. Front 12v Scene Lighting:

a. The front of the cab shall include two (2) Whelen Pioneer model PCP2 contour roof mount scene lights installed and spaced accordingly on the front brow of the cab.

b. Each lamp head shall have two (2) 12 volt high intensity LED panels. One side of each lamp head shall include a flood light and the other side shall include an 8-degree spotlight. Each lamp head shall draw 12.0 amps and generate 16,000 lumens total.

c. The lamp head and bracket shall be powder coated white.

d. The front scene lighting shall be activated by a rocker switch located on the driver, officer, and compartment L1 switch panel.

Does your bid comply? YES_____ NO _____

103. Rear Work Lights:

a. There shall be two (2) Whelen model #PELCC 12 volt work lights with chrome bezel provided.

b. The rear work lights shall be located on the rear of the body, mounted approximately 50.00" from the ground, one (1) on each side.

c. The rear work lights shall be activated by a switch:

i. On the interior cab switch panel
ii. A weather resistant cup switch, located at the rear of the body.

Does your bid comply? YES_____ NO _____

104. Hose Bed Lights:

a. There shall be white 12 volt, AMDOR™, LED light strips with stainless steel protective cover, provided to light the hose bed area.

i. One (1) light strip shall be installed the entire length of the driver's side of the hose bed.
ii. One (1) light strip shall be installed the entire length of the passenger's side of the hose bed.

b. The lights shall be activated by a cup switch at the rear of the apparatus no more than 62.00" from the ground.

Does your bid comply? YES_____ NO _____

E. BODY SPECIFICATIONS

1. Water Tank:

a. The tank shall be 500 gallons in capacity, constructed of polypropylene plastic, and shall be "L" shaped to allow a lower hose bed floor.

b. The water tank shall be designed to utilize cavities that have commonly been wasted space. The water tank shall extend up and over the rear center compartment to just behind the rear body wall. The water tank shall fill the void between the main hose bed floor and the top of the rear center compartment. This tank design shall provide for a lower overall tank height, resulting in a lower overall main hose bed height. In addition, this design shall create a lower center of gravity of the vehicle, for improved vehicle handling.

c. Construction
The booster tank shall be constructed of ½" thick polypropylene sheet stock which is a non-corrosive stress relieved thermoplastic. It shall be designed to be completely independent of the body and compartments. All joints and seams are extrusion welded and/or contain the "Bent Edge" and tested for maximum strength and integrity. The top of the booster tank is fitted with lifting eyes designed with a 3 to 1 safety factor to facilitate tank removal.

d. Cover
The tank cover shall be constructed of ½" thick polypropylene and shall be recessed. A minimum of two lifting dowels shall be drilled and tapped ½" x 2" to accommodate the lifting eyes.

e. Baffles
The tank shall be baffled in accordance with NFPA bulletin 1901 requirements. The swash partitions shall be manufactured from ½" polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments to provide to provide maximum water flow. All swash partitions interlock and are welded to one another as well as to the walls of the tank.

f. Mounting
The tank shall have a reinforced ¾" floor for added strength and durability. The tank shall be isolated from the body substructure cross members with ½" x 2 ½" rubber strips that are 60 durometer in hardness. The tank shall sit nested inside the center body substructure and shall be completely removable without disturbing the body side panels. Tank stops on all four sides will keep the tank from shifting front to back or side to side.

g. The fill tower opening shall be a minimum 13" x 8". The tower will have a ¼" thick removable polypropylene screen and a polypropylene hinged type cover that will open if the tank is filled at an excess rate. There shall be a removable ¼" thick polypropylene screen to prevent debris from falling into the tank. The fill tower shall have a 4" overflow that will discharge underneath the tank, behind the rear wheels. The overflow shall terminate above the tank water level when filled to the rated capacity.

h. The fill tower shall be located in the left front hose bed.

i. The sump will be constructed in an 8.0" wide x 8.0" long x 6.0" deep area. The construction material shall utilize ½" polypropylene and be located in line with the tank suction valve. There shall be a 4" schedule 40 polypropylene tube installed that will run from the suction outlet to the sump location. The tank will have an anti-swirl plate located approximately 2" above the sump.

j. The sump shall have a 3" plug for use in draining and cleaning out the tank.

Does your bid comply? YES_____ NO _____

2. Hose Bed:

a. A hose bed shall be provided and installed with a minimum of thirty (30) cubic feet of storage space available.

b. The hose bed shall have a slotted ¼" aluminum flooring installed to allow drainage through the tank cavity to the ground below.

c. The aluminum flooring shall be manufactured in discrete sections to allow for ease of removal and stability.

d. The area shall be free of sharp edges to protect the hose when loading and unloading.

e. The lowest possible hose bed height shall be supplied.

f. The hose bed area of the apparatus shall be overlaid with brushed stainless steel material.

g. The vertical corners at the back hose bed shall be trimmed with brushed stainless steel. The trim shall extend from the hose floor level up to the top edge of the body side.

h. The top rail on the hose bed side walls shall have a trim cap fabricated of 16 gauge brushed 304L stainless steel.

i. The cap shall run the entire length of the hose bed side wall and shall provide a smooth surface with a highly finished appearance. It shall extend down at least 1" on each side of the hose bed side wall.

j. The hose bed shall accommodate the following hose loads:

Qty	Size
600'	3" DJ Hose-Center
700'	5" LDH-Driver's Side
800'	2 ½" DJ Hose-Officer's Side

Does your bid comply? YES_____ NO _____

3. Hose Bed Divider with Hand Cutout:

a. There shall be a total quantity of three (3) adjustable dividers installed in the hose bed.

b. There shall be a reinforced hose bed divider provided and installed in the hose bed area of the apparatus body.

c. The divider shall be fabricated of ¼" thick aluminum plate with double side reinforcements and attached to the adjustable slide rails.

d. The rear of the divider shall have a radius to provide a smooth corner and a hand cut out to aid in access to the hose bed area.

e. The top and rear edges shall be reinforced with 1" round aluminum tubing for extra rigidity. Hose payout shall be unobstructed by the divider.

Does your bid comply? YES_____ NO _____

4. Hose Bed Storage Compartment:

a. There shall be a custom hose compartment designed to carry two (2) independent 50' lengths of 5" LDH hose loaded flat.

b. The clear opening dimensions of each "tube", compartment, or tray shall be approximately 9" high X 9" wide.

c. The length shall be sized accordingly. Ultimately, the compartment opening shall be able to house a 5" LDH storz coupling.

d. The compartment shall include two (2) poly trays, or equivalent, that will be stored side by side and secured from inadvertently sliding out.

e. The compartment shall be located on the driver's side rear hose bed floor. The top of the compartment will serve as part of the hose bed.

f. The rear cargo netting shall serve as the door for this compartment.

g. The Urbana Fire Department has strict hose bed dimensions, final dimensions will be decided at the pre-construction meeting.

Does your bid comply? YES_____ NO _____

5. Aluminum Hose Bed Cover:

a. There shall be a double door cover furnished and installed which overlays a structure for the hose bed.

b. Each cover shall be capable of supporting 600 lbs. while standing on the cover.

c. Each cover shall be capable of being opened independently and rest on a structure which runs down the middle of the hose bed with a truss support at the rear of the apparatus.

d. The covers in the closed position shall be higher in the center of the hose bed than they are at the hinged end to create an 'A' frame appearance and to aid in water run-off.

e. The front and rear of hose bed covers shall have vertical end caps that extend down to create a level line of diamond plate the width of the covers.

f. The doors shall be fabricated of .125" embossed aluminum diamond plate with full length two-piece stainless steel piano hinges.

g. There shall be a gas strut hold open device on each cover to hold in the open position.

h. The hose bed cover shall be wired to the open door warning light in the chassis cab with sensors at the hinges to warn the crew when the cover is open when the transmission is placed into drive or reverse movement mode.

i. To aid in opening and closing the cover, there shall be two (2) grab handles, one (1) for each cover, installed on the rear facing vertical end cap.

j. The hose bed covers shall be fabricated of embossed aluminum diamond plate to comply with the NFPA standards for a “slip resistance” surface.

k. The rear flap shall be black, heavy duty, wide cargo netting.

Does your bid comply? YES_____ NO _____

6. Hose Bed Dunnage Area:

a. A vertical bulkhead shall be provided and installed at the front of the hose bed area, just behind the water tank fill tower, forming a storage area that is separated from the hose bed.

b. The rear face of the bulkhead shall serve as a mounting surface for the hose bed dividers, resulting in the ability to move any hose bed divider across the entire width of the hose bed.

Does your bid comply? YES_____ NO _____

7. Running Boards:

a. The running boards shall be made of a structural tubular framework. The tubular frame support all loads by transmitting the loads through the pump compartment structure directly to the chassis frame rails.

b. The running boards shall be independent of the apparatus body and shall be integrated to the pump compartment structure only, eliminating any pump compartment to body interference. This is essential in keeping a truly 'modular' configuration. Slip-resistant abrasive adhesive materials shall be applied to the top surface of the running board framework to provide a suitable stepping surface.

c. The left and right side running boards shall have a 1/8" embossed aluminum diamond plate overlay installed.

d. The stepping area shall be as large as possible, overlapping the perimeter of the structural running board framework.

e. The embossed aluminum diamond plate material shall meet the minimum NFPA standard requirements for slip resistance.

Does your bid comply? YES_____ NO _____

8. Rear Tailboard:

a. The rear tailboard shall be fabricated of the same tubular materials as used in the apparatus body. The tailboard shall be an independent assembly welded to the rear body structural framing to provide body protection and a solid rear stepping platform. The rear step shall be designed to incorporate "crush zone" technology. This idea incorporates lighter materials in the tailboard than the body structure so the step will "crush" in a collision before the body structure.

b. The rear of the apparatus body shall be vertical in design - otherwise known as a 'flat-back'. On the rear body surface, a sign shall be attached that states: "DO NOT RIDE ON REAR STEP, DEATH OR SERIOUS INJURY MAY RESULT."

c. The rear tailboard and body shall be constructed such that the angle of departure shall be no less than 8 degrees at the rear of the apparatus when fully loaded (Per NFPA 1901).

d. The rear tailboard shall be approximately 13½”(13.5) inches deep and shall incorporate a ventilated "Diamondback" material stepping surface bolted in place which spans the full width of the apparatus on non-recess designs, and as wide as possible on inset recess designs. The extruded stepping surface shall be completely enclosed by the supporting structural framework to minimize damage.

e. The ventilated "Diamondback" material shall be capable of being easily replaced if necessary, using only hand tools. The framework shall be covered with an adhesive tape providing an aggressive traction surface. Use of any aluminum diamond plate material on these areas shall not be acceptable.

Does your bid comply? YES_____ NO _____

9. Front & Rear Overlays:

a. The entire front face of the apparatus body shall have aluminum diamond plate overlays installed. The entire rear face of the apparatus body shall have painted stainless steel overlays installed for the installation of chevron striping.

b. All overlay materials shall be coated with 3M adhesive sealant on the back portion to provide an insulating barrier between dissimilar metals.

c. The front of the apparatus body, vertical wall overlay shall be integrated with a 1/8” aluminum diamond plate corner trim pieces for edge protection. The vertical edge trim piece

shall extend from the top to bottom and shall be fastened at a minimum of three locations, top, middle, and bottom.

d. The rear face of the apparatus body, vertical wall overlays shall be installed with a 16 gauge brushed stainless steel 1.0" x 1.0" corner trim piece, for edge protection. The vertical edge trim piece shall extend from the top to bottom and shall be fastened at a minimum of three locations, top, middle, and bottom.

e. The vertical edge trim piece that is protecting the chevron striping surface or that is utilized for the purpose of striping, shall be secured utilizing fasteners only.

Does your bid comply? YES_____ NO _____

10. Tow Eyes:

a. There shall be two rear tow eyes installed to the frame rails, one each side, accessible below the rear center compartment. They shall be manufactured of 1" plate steel and each plate shall be bolted to the chassis frame rail with a minimum quantity of (6) grade 8 bolts. The two plates shall be anchored together with 1" steel tubing to prevent swaying of the frame rails during a towing operation.

Does your bid comply? YES_____ NO _____

11. Body Structure Width:

a. The width of the apparatus body from the outside of the left compartments to the outside of the right compartments shall be 99" excluding any attached peripherals such as rub rails, fender crowns, grab handles, etc.

Does your bid comply? YES_____ NO _____

12. Stainless Steel Body Construction:

a. The apparatus body shall be a space frame design, structural body framework. The space frame design shall provide maximum torsional resistance and load capabilities. The entire space frame structure shall be welded together utilizing an A.W.S. Certified welding procedure.

b. The space frame design shall also be required because it provides energy absorbing impact zones in the structure, thus providing increased safety to the rest of the apparatus and personnel on board. Documented proof of this extra safety shall be required upon request.

c. The body structure shall consist entirely of closed section members, except where the body is mounted to the chassis. Closed section members (such as square, rectangular, triangular, or round tubes) are required to provide maximum strength and torsion rigidity. Body designs that use independent sub-frames will not be acceptable.

d. Body Structure Members: The space frame body shall have triangular shaped structural members in certain areas of the body to prevent loss of useable compartment space. Other body structure members shall be square or rectangular. Each structural member will have a nominal outside dimension of 2.5" in at least one direction. The body shall be designed for maximum strength to weight ratio, therefore the gauge of sheet metal and structural members varies from 11 to 14 gauge depending on the design requirement.

e. Body Material Type: All body structure and sheet material shall be premium grade Stainless Steel, Type 304L. No dissimilar metals shall be used in the body and its supporting substructure.

f. Front Body Compartment Walls: The front compartment walls of both forward most compartments shall be sheet finished. No overlay material shall be visible from the interior of the compartments.

g. Rear Body Compartment Walls: The rear compartment walls of both rearward most compartments shall be sheet finished. No overlay material shall be visible from the interior of the compartments. Access panels from the rear walls shall be strategically placed to ensure access to the rear taillight clusters for any servicing that may be completed.

h. Compartment Top: The top of the compartments shall be an integral portion of the body. No overlay material shall be visible from the interior of the compartments.

i. Compartment Floors: The body compartments shall be enclosed with stainless steel sheet metal as specified above. The compartment floors shall have a 1" lip downward at the door opening side of the compartment. This lip shall integrate with a structural member on the bottom edge and form a "sweep-out" compartment. This design shall also allow for a structural flush fitting door frame and a complete door/weather seal.

j. Compartment Load Capacity: Each compartment shall have a minimum of one additional structural compartment floor support centered on the underside of the compartment floor. This additional member shall be integral with the rest of the body structure. Each compartment must be designed, and 3rd party analyzed to carry a working load of:

    i. Full depth side compartment: 1,000 lbs. per compartment
    ii. Half depth side compartment: 750 lbs. per compartment
    iii. Rear center compartment: 1,500 lbs. per compartment

k. Exterior Hose Bed Walls: The exterior hose bed walls shall be an integral portion of the body. The wall shall give a smooth exterior look and finish with no vertical supports tubing visible from the exterior of the truck.

l. Finite Element Analysis: The proposed body design must have completed a review and analysis by a legitimate 3rd party engineering firm. At a minimum, the 3rd party must have conducted a computer model finite element analysis of the proposed design. The analysis is to include real world working load scenarios. Analysis to cover both static and dynamic situations must be completed. The purpose of the finite element analysis is to ensure proper design of the apparatus body, and that it is capable of carrying the typical fire apparatus

loads and those specified by NFPA for equipment. The analysis process must conclude that the body structure is properly designed and manufactured to provide longevity under normal conditions. The 3rd party must also validate the manufacturing processes are consistent with the design and analysis performed. Proof of having completed this testing must be submitted with the bid.

m. All compartments shall be constructed in a sweep out design to be water and dust resistant, and manufactured to the maximum possible storage capacity.

n. All bolts and nuts used in the finish construction of the apparatus shall be coated stainless steel which helps prevent dissimilar metal electrolytic reaction and corrosion. The Manufacturer may be requested to supply evidence of fastener coating and results of salt spray testing when dissimilar metals are used.

o. Any bolt extending into a compartment or into the hose bed area shall have an acorn nut attached or be protected in such manner where sharp edges are avoided.

p. The compartment interiors shall be coated with Line-X type finish. The color shall be light gray.

Does your bid comply? YES_____ NO _____

13. Underbody Support System:

a. The entire body module assembly shall be mounted so that it "floats" above the chassis frame rails. The body substructure shall be mounted above the frame to allow independent flexing to occur between the body and the chassis. Each assembly shall be mounted to the chassis frame rails with steel, gusseted mounting brackets. Each bracket shall be powder coated for corrosion resistance. Each body mount bracket shall be mounted to the side chassis frame flange with two 5/8"-UNC Grade 5 HHCS.

b. There shall be no welding to the chassis frame rail sides, web or flanges, or drilling of holes in the top or bottom frame flanges between axles. All body to chassis connections shall be bolted so that in the event of an accident, the body shall be easily removable from the truck chassis for repair or replacement.

c. Because of the constant vibration and twisting action that occurs in chassis frame rails and suspension, a torsion type mounting system or equivalent is required to minimize the possibility of premature body structural failures.

Does your bid comply? YES_____ NO _____

14. Aggressive Walking Surface:

a. 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 _____

15. Louvers:

a. Louvers shall be stamped into the compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment.

b. The louvers shall be formed into the metal.

Does your bid comply? YES_____ NO _____

16. Testing Of Body Design:

a. Body structural analysis has been fully tested. Proven engineering and test techniques such as finite element analysis, stress coating and strain gauging shall be performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure.

b. Body shall be tested while loaded to its greatest in-service weight.

c. The criteria used during the testing procedure shall include:

i. Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb.
ii. Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions.
iii. Driving the vehicle at 35 mph on a washboard road.
iv. Driving the vehicle at 55 mph on a smooth road.
v. Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement.

d. Evidence of actual testing techniques shall be made available upon request.

Does your bid comply? YES_____ NO _____

17. Dissimilar Metal Protection:

a. Absolutely no dissimilar metals shall be used in the interior compartments or compartment components without being separated by a sufficient corrosion and electrolysis inhibitor

Does your bid comply? YES_____ NO _____

18. Driver's Side Compartmentation:

a. The following compartments shall be supplied on the driver's side of the apparatus:

b. Compartment "L1": There shall be one (1) full height compartment ahead of the rear wheels on the left side of the apparatus. The approximate interior dimensions of this compartment shall be a minimum of 49" wide by 69" high with a lower depth of 25.5" and an upper depth of 12.5". The framed opening shall measure approximately 46.5" wide by 65" high.

c. The following equipment is intended to be carried inside compartment L1: Approximate Weight = 250 lbs.

i. Electric Smoke Ejector Fan w/Door Bar
ii. Various 2 ½" Water Delivery Adapters
iii. Engineer Wrenches & Tools
iv. TFT Foam Pro-Pak
v. (4) 2 ½" Nozzles
vi. Plasma Cutter
vii. (2) Portable Lights w/ Reels
viii. Hydraulic Ram and Extension Kit

d. Compartment "L2": There shall be one (1) compartment located directly over the rear wheels on the left side of the apparatus. The approximate interior dimensions of this compartment shall be a minimum of 62" wide by 39.5" high with a depth of 12.5". The framed opening shall measure approximately 62" wide by 35.5" high.

e. The following equipment is intended to be carried inside compartment L2: Approximate Weight = 50 lbs.

i. (4) Water Rescue Suits
ii. Rescue Sked
iii. Yates/Miller Half Back

f. Compartment "L3": There shall be one (1) full height compartment located behind the rear wheels on the left side of the apparatus. The approximate interior dimensions of this compartment shall be a minimum of 49" wide by 69" high with an upper depth of 12.5" and the lower portion being transverse into the rear compartment, unless partitions are installed. The framed opening shall measure approximately 46.5" wide by 65" high.

g. The following equipment is intended to be carried inside compartment L3: Approximate Weight = 400 lbs.

i. Wood Cribbing
ii. (4) Auto Crib-it
iii. (4) Rope Tool Boxes
iv. (4) Harness Bags
v. (6) Rope Bags

h. Vertically mounted Unistrut, or equivalent, shall be installed in all drivers' side compartments, to accommodate the installation of shelves, trays, and or other miscellaneous equipment.

i. Brushed stainless steel sill plates shall be installed at the bottom of each body compartment door opening.

Does your bid comply? YES_____ NO _____

19. Passenger's Side Compartmentation:

a. The following compartments shall be supplied on the passenger's side of the apparatus:

b. Compartment "R1": There shall be one (1) full height compartment ahead of the rear wheels on the right side of the apparatus. The approximate interior dimensions of this compartment shall be a minimum of 49" wide by 69" high with a depth of 25.5". The framed opening shall measure approximately 46.5" wide by 65" high.

c. The following equipment is intended to be carried inside compartment R1: Approximate Weight = 300 lbs.

i. IHT Genesis Power Unit
ii. Hand Tools
iii. (3) 50' 2 ½" High Rise Hose
iv. 150' 1 ¾" Apartment Hose
v. Officers Bag
vi. RASP Bags
vii. Electrical Extension Cords

d. Compartment "R2": There shall be one (1) compartment located directly over the rear wheels on the right side of the apparatus. The approximate interior dimensions of this compartment shall be a minimum of 62" wide by 39.5" high with a depth of 25.5". The framed opening shall measure approximately 62" wide by 35.5" high.

e. The following equipment is intended to be carried inside compartment R2: Approximate Weight = 300 lbs.

i. (9) Air Bags
ii. Air Bag Control Kit
iii. KED and Splints
iv. (3) Sawzalls w/Blades
v. Air Chisel Kit

f. Compartment "R3": There shall be one (1) full height compartment located behind the rear wheels on the right side of the apparatus. The approximate interior dimensions of this compartment shall be a minimum of 49" wide by 69" high with an upper depth of 25.5" and the lower portion being transverse into the rear compartment, unless partitions are installed. The framed opening shall measure approximately 46.5" wide by 65" high.

g. The following equipment is intended to be carried inside compartment R3: Approximate Weight = 375 lbs.

i. Rescue Struts
ii. Strut Accessories w/Poly Boxes
iii. (10) Traffic Cones
iv. Wobble Light

h. Vertically mounted Unistrut, or equivalent, shall be installed in all passenger side compartments, to accommodate the installation of shelves, trays, and or other miscellaneous equipment.

i. Brushed stainless steel sill plates shall be installed at the bottom of each body compartment door opening.

Does your bid comply? YES_____ NO _____

20. Over-Wheel Compartment Partitions (Dual Sides):

a. Compartment partitions, fabricated of the same material as the body, shall be welded in place in both left and right side over-wheel compartments flush to the forward and rearward frame openings.

b. These partitions shall aid in keeping loose equipment from falling into the fore and aft compartments.

Does your bid comply? YES_____ NO _____

21. Rear Center Compartment W/ Double Panel Door:

a. "B1" Compartment: There shall be one (1) compartment located at the rear of the apparatus, directly below the hose bed access area.

b. The following equipment is intended to be carried inside compartment B1: Approximate Weight = 200 lbs.

i. Portable Genesis Gas Power Unit
ii. (2) Spare Hydraulic Hoses
iii. 4-Way Hydrant
iv. Blitz Fire Portable Monitor

c. The approximate interior dimensions of this compartment shall be 43" wide and 34" high or as high as possible determined by the hose bed height with a depth of 24" dependent on suspension.

d. The compartment shall include two (2) bulkhead dividers installed on each side.

e. Unistrut or equivalent shall be installed on the inside of the bulkhead dividers to accommodate the adjustable rear shelf.

f. The compartment shall have two (2) vertical piano hinged doors with polished D-paddle handle with rotary style latch. The door shall utilize a concealed rotary latch on the secondary door, actuated by a recessed stainless steel handle. The framed opening shall be approximately 38" wide and 31" high.

Does your bid comply? YES_____ NO _____

URBANA FIRE DEPT. PUMPER SPECIFICATION

22. AMDOR™ Painted Roll-Up Doors:

a. AMDOR™ brand roll-up doors shall be provided and installed on all horizontal and vertical side compartment apparatus doors. The doors shall be complete and have the following features:

b. 1" aluminum double wall slats with continuous ball & socket hinge joint designed to prevent water ingression and weather tight recessed dual durometer seals.

c. Double wall reinforced bottom panel with stainless steel lift bar latching system.

d. Bottom panel flanges with cutouts for ease of access with gloved hands.

e. Reusable slat shoes with positive snap-lock securement.

f. Smooth interior door curtain to prevent equipment hang-ups.

g. One-piece aluminum door track / side frame, top gutter with non-marring seal.

h. Non-marring recessed side seals with UV stabilizers to prevent warp age.

i. Dual leg bottom seal, with all wear component material to be Type 6 Nylon.

j. Door striker will include support beneath the lift bar to prevent door curtain bounce.

k. The side compartment roll up doors shall be wet finish painted to color match the apparatus body.

l. The door track and trim shall be satin aluminum finish.

m. Each roll up door shall have an integral door ajar switch system provided by AMDOR™ and shall NOT include magnetic proximity based components. The switch device shall be a military grade contact switch capable of meeting MIL-S-8805, which can only be activated through positive engagement of the lift bar.

n. If the bar is not properly closed and the transmission is placed into drive or reverse mode with the parking brake released, it shall activate the "Door Open" indicator light in the cab to warn the crew.

Does your bid comply? YES_____ NO _____

23. Rear Compartment Door Finish:

a. The rear center compartment door shall be covered and matched with the required rear chevron package, detailed later in the specifications.

Does your bid comply? YES_____ NO _____

24. Roll-Up Door Protectors:

a. There shall be a protective cover installed under the rear compartment door roll to protect the door in the rolled up position.

b. The cover shall be fabricated of smooth aluminum and of natural finish.

Does your bid comply? YES_____ NO _____

25. Rear Compartment Unistrut:

a. Vertically mounted Unistrut, or equivalent, shall be installed on the back wall of the rear center compartment to accommodate mounting of shelves, trays, tool boards and or other miscellaneous equipment.

Does your bid comply? YES_____ NO _____

26. Fixed Vertical Compartment Dividers:

a. A stainless steel metal compartment divider shall be installed in the compartment. There shall be Unistrut, or equivalent, attached to both sides of the divider to aid in equipment mounting. A divider shall be installed in the following compartments:

i. R1 Compartment
ii. R3 Compartment

Does your bid comply? YES_____ NO _____

27. Shelving:

a. Each shelf shall be fabricated of 3/16" thick aluminum sheet material with the outside and inside edges flanged up to prevent equipment from sliding off.

b. Each shelf shall be as wide as possible to allow proper attachment to uni-strut channels. Each shelf shall be adjustable up and down.

c. Each shelf will be finish painted a light gray color to match the inside of the compartment.

d. The following shall be provided:

e. A 12.5” deep shelf shall be supplied and installed in the compartment. Each shelf shall be as wide as possible and there shall be a total quantity of four (4).

f. Each shelf or tray shall be covered with (black) Versaflex tile for durability and a pleasing appearance.

i. One (1) located in the L-1 compartment.
ii. Two (2) located in the L-2 compartment.

iii. One (1) located in the L-3 compartment.

g. A 25.5" deep shelf shall be supplied and installed in the compartment. Each shelf shall be as wide as possible and there shall be a total quantity of eight (8).

h. Each shelf or tray shall be covered with (black) Versaflex tile for durability and a pleasing appearance.

i. Two (2) located in the R-1 compartment.
ii. One (1) located in the R-2 compartment.
iii. Three (3) located in the R-3 compartment.
iv. One (1) located in the rear center compartment.

Does your bid comply? YES_____ NO _____

28. LED Compartment Lighting:

a. Two (2) LED, AMDOR™ strip lights shall be installed in each body compartment. The strips lights shall be centered vertically along each side of the door framing.

b. The lights shall be long/tall enough to completely light the compartment.

c. The lights in each compartment shall be on a separate circuit, turning on only those lights that have open compartment doors.

Does your bid comply? YES_____ NO _____

29. Hatch Compartments:

a. Four (4) storage compartments shall be provided and installed on the upper right and left sides of the apparatus body.

b. The approximate length of each compartment shall be 80" long.

c. The depth of the compartments shall be determined by the hose bed wall height.

d. The compartment shall extend beyond the apparatus body roof and walking surface approximately 1" and provide a vertical edge to prevent water intrusion.

e. The following equipment is intended to be divided and carried inside the hatch compartments: Approximate Weight = 400 lbs.

i. Foam – 20 Gallon
ii. Shovels (2)
iii. Squeegee (2)
iv. Broom (2)
v. Haz-Mat Kit
vi. Tri-Pod

vii. Collapsible Stokes Basket
viii. Spare Cribbing
ix. Extra Rope

f. An adhesive backed bulb seal shall be applied to the underside perimeter of the lid, excluding the hinge side, to ensure a positive seal.

g. The formed door incorporating broken edges of 45 degrees or less shall extend over the compartment edge approximately 1" to minimize water penetration. Each door shall be secured by dual push button weather resistant (C2) South Co Brand style latches or equivalent; the door shall be fabricated of NFPA compliant, slip resistant embossed aluminum diamond plate and be secured by an aluminum hinge.

h. The doors shall be reinforced to act as a suitable walking or standing surface. Each door shall be held open by a gas charged strut on each side and permit full access to the compartment along its length. The struts shall be concealed inside the compartment when the door is in the closed position. The compartments shall be constructed as part of the body and be accessible from the hose bed area.

i. The upper compartments shall not be vented. There shall be plastic tubing installed for adequate drainage that is routed from corners of the upper compartment floors down to below the lower compartment floor level.

j. There shall be one (1) white AMDOR™ 12 volt LED light strip with a stainless steel protective cover, provided to illuminate each hatch compartment. The light shall be as long as the compartment width.

k. The light shall be mounted on the upper inside wall of each compartment.

l. The light shall be on a separate circuit, activating only those lights that have an open compartment door.

Does your bid comply? YES_____ NO _____

30. Backboard Storage Compartment:

a. There shall be a free standing, permanently mounted, storage compartment provided and installed with the apparatus.

b. The compartment shall be located rearward of the two (2) crosslays, in the pump module.

c. The compartment shall be constructed of 1/8" smooth aluminum and allow access from either side if mounted in a transverse designed section.

d. The interior floor of the compartment shall be lined with black ABS plastic for ease of stowing and un-stowing equipment.

e. The compartment shall include provisions for mounting the following:

f. Two (2) Backboard(s) shall be stored in individual storage slot(s). The slot shall have clear inside dimensions of approximately 18" high x 3 ½" wide x 75" long. The backboard shall be removable without disturbing the storage of another.

g. The compartment shall be split lengthwise to separate the 2 backboards.

h. The compartment shall have two (2) hinged doors to access equipment. The doors shall be fabricated with brushed stainless steel, to match the side pump panels and shall be secured with two (2) push button latches.

i. The door shall be switched to the "Open Door Indicator Light" in the cab to alert the driver if the door is open.

Does your bid comply? YES_____ NO _____

31. Slide Master™ Floor Mounted Roll Out Tray:

a. Each tray shall be fabricated of 3/16" thick 3003 grade or higher aluminum with four 3" side flanges; corner welded for maximum strength. Each tray shall be as wide and deep as the door allows and secured to a (Slide Master™) roll-out system constructed of "heavy duty steel" with structural tube and channels. The slide assemblies shall incorporate cadmium plated ball bearing roller slides and a latching device to hold the tray in the stored position.

b. The following shall be provided:

c. A 600# capacity tray with 100% full extension shall be supplied and installed to the compartment floor. There shall be a total quantity of two (2).

d. Each shelf or tray shall be covered with (black) Versaflex, or equivalent, tile for durability and a pleasing appearance.

e. The roll-out tray(s) that protrude beyond the body of the apparatus shall have RED retro-reflective striping installed to indicate a hazard or an obstruction.

f. The slide shall be held in the locked position by a lever actuated twist lock.

g. The SlideMaster™ slides shall be wet painted silver in color.

i. One (1) located in the L-3 compartment.
ii. One (1) located in the B-1 rear compartment

Does your bid comply? YES_____ NO _____

32. Slide Master™ Unistrut Adjustable Roll Out Tray:

a. Each tray shall be fabricated of 3/16" thick 3003 grade or higher aluminum with four 3" side flanges; corner welded for maximum strength. Each tray shall be as wide and deep as the door allows and secured to a (Slide Master™) roll-out system constructed of "heavy duty

steel" with structural tube and channels. The slide assemblies shall incorporate cadmium plated ball bearing roller slides and a latching device to hold the tray in the stored position.

b. The following shall be provided:

c. A 600# capacity tray with 100% full extension and adjustable height utilizing unistrut materials shall be supplied and installed. There shall be a total quantity of three (3).

d. The roll-out tray(s) that protrude beyond the body of the apparatus shall have RED retro-reflective striping installed to indicate a hazard or an obstruction.

e. The slide shall be held in the locked position by a lever actuated twist lock.

f. The SlideMaster™ slides shall be wet painted silver in color.

i. One (1) located in the L-1 compartment.
ii. One (1) located in the L-3 compartment.
iii. One (1) located in the B-1 compartment.

Does your bid comply? YES_____ NO _____

33. Slide Master™ Pull-Out Tool Board:

a. A 600# capacity tray with 100% full extension board shall be supplied and installed to the compartment floor. There shall be a total quantity of four (4).

b. The board equipment mounting area shall utilize a peg board design for greater mounting flexibility.

c. The pull-out tool board shall be installed in the compartment as specified. The tool board shall be attached to uni-strut material mounted on the floor and ceiling of the compartment, extending perpendicular to the rear wall, allowing for horizontal adjustment from front to rear.

d. The slide shall be held in the locked position by a lever actuated twist lock.

e. There shall be a total quantity of four (4).

i. Two (2) located in the R-1 compartment.
ii. Two (2) located in the R-3 compartment.

f. The pull-out style tool board shall have RED reflective striping installed making the perimeter of the tool board more readily visible.

Does your bid comply? YES_____ NO _____

34. Slide Master™ Out-N-Down Shelf:

a. A 300# capacity out-n-down adjustable height shelf shall be supplied and installed utilizing unistrut materials. There shall be a quantity of one (1).

b. The out-n-down shelf shall be installed in compartment R2.

c. The slide shall be held in the locked position by a lever actuated twist lock.

d. There shall be a total quantity of one (1).

Does your bid comply? YES_____ NO _____

35. Air Bag Storage:

a. There shall be a fabricated rack installed for storing nine (9) air bags in the R2 compartment, towards the rear.

b. The front lip of the rear compartment adjustable shelf shall be reversed formed down.

c. The rack shall be finished to match the compartment interior.

d. One (1) inflatable air bag shall be stored, in each individual storage slot. The slot shall be wide enough to accommodate the specified bag dimensions and tether.

e. The fire department shall provide exact sizes of air bags prior to construction. The size of the air bags shall be "TBD" at pre-construction meeting.

f. The air bags shall be removable without disturbing the storage of another.

g. The following air bags shall be stored:

i. 2 - 24" X 24"
ii. 2 - 20" X 20"
iii. 2 - 21" X 15"
iv. 1 - 15" X 15"
v. 1 - 6" X 12"
vi. 1 - 10" X 10"

h. The compartment shall incorporate heavy duty Velcro strapping on each the end of the compartment to securely retain the equipment during transit.

Does your bid comply? YES_____ NO _____

36. Rub Rails (Aluminum Channel):

a. The lowest edge of the apparatus body side compartments shall be trimmed with brightly anodized aluminum channel rub rail material.

b. The rub rails shall be approximately 3.00" high with flanges turned outwards for increased rigidity, with each end chamfered to a 45 degree angle. The rub rails shall not be constructed as an integral part of the apparatus body structure, allowing each rub rail to be easily removed in the event of damage.

c. The rub rails shall be secured with stainless steel fasteners and spaced away from the apparatus body with ½" nylon spacers to help absorb moderate side impacts and prevent the collection of water and debris for easier cleaning.

Does your bid comply? YES_____ NO _____

37. Body Fender Crowns:

a. Two (2) polished stainless steel fender crowns shall be provided and installed on body rear wheel well openings, one (1) each side.

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

c. A dielectric barrier shall be provided between the fender crown fasteners (screws) and the fender sheet metal to resist deterioration.

Does your bid comply? YES_____ NO _____

38. Cab Grab Handles:

a. The cab shall include one (1) 18.00 inch knurled, anti-slip, exterior assist handle behind each cab door.

b. The grab handle shall be made of 14 gauge 304- stainless steel and be 1 ¼" inch diameter to enable non-slip assistance with a gloved hand.

Does your bid comply? YES_____ NO _____

39. Body Knurled Illuminated Handrails:

a. All handrails shall be 1 ¼" in diameter, constructed of extruded aluminum with a knurled grip, full length red reflective inserts and full length illuminated LED light insert. There shall be a 2" minimum clearance between the handrail and the body.

b. The light shall illuminate an area adjacent to the handrail that has been determined by the department and in accordance with the current edition of NFPA 1901 standard requirements.

c. The following handrails shall be installed at the approximate lengths noted:

d. Two (2) hand rails shall be installed on the rear of the apparatus. Each hand rail shall provide approximately 42 inches of gripping area for personnel.

e. Each handrail shall be constructed of extruded aluminum with a knurled grip, full length illuminated LED light insert.

f. There shall be a 2" minimum clearance between the handrail and the body.

g. The light shall illuminate an area adjacent to the handrail that has been determined by the department and in accordance with the current edition of NFPA 1901 standard requirements.

h. One (1) vertical hand rails shall be installed, on left side, just below the hose bed sides.

i. The remaining hand rail shall be installed horizontally, just below the hose bed area.

Does your bid comply? YES_____ NO _____

40. SCBA Bottle Storage Compartment(s):

a. There shall be storage compartments features incorporated on each side of the apparatus body wheel well modules to utilize and maximize storage space availability.

b. The body wheel well area shall be fabricated of smooth stainless steel and finish painted.

c. There shall be two (2) wheel well compartment modules located on each side of the apparatus.

d. The compartment module shall be located in front of the axle on the left and right side.

e. The wheel well compartment will hold three (3) 6.75" Diameter x 24" long SCBA bottles with 1" nylon safety loops installed.

f. The storage compartment doors shall be painted.

Does your bid comply? YES_____ NO _____

41. Fire Extinguisher Storage Compartment:

a. There shall be a compartment located in the wheel well for storage of:

i. One (1) 10 lb. CO2 extinguisher, and
ii. One (1) 10 lb. ABC fire extinguisher

b. The compartment module shall be located behind the axle on the right side.

c. The storage compartment doors shall be painted.

Does your bid comply? YES_____ NO _____

42. Slide-Out Floor Dry Module:

a. A slide-out floor dry storage module with locking slides shall be provided and installed in the apparatus wheel well storage area.

b. The compartment module shall be located behind the axle on the left side.

c. The floor dry storage module shall be manufactured as large as possible to maximize the available storage space. The module shall be capable of storing approximately 20-25 lbs. of all purpose floor dry absorbent compound material.

d. The floor dry compartment module shall have a hinged lid with mechanical latching device that can be easily accessed for refilling. The module shall include a grab handle for ease of deployment. The module shall be located directly behind the smart storage compartment door and to the rear of the fuel fill assembly. A manual drain shall be located at the bottom of the compartment module for ease of dispensing the material. The storage module shall be labeled "Floor Dry".

e. The slide out floor dry module shall have RED reflective striping installed making the perimeter more readily visible when deployed.

f. The storage compartment doors shall be painted to match the body.

Does your bid comply? YES_____ NO _____

43. Wheelwell Storage Latches:

a. Each of the four (4) wheel well storage compartments shall have two (2) flush mounted thumb latches to secure the door.

Does your bid comply? YES_____ NO _____

44. Door Open Indicator:

a. Each wheel well storage compartment door shall have a “plunger” style switch.

b. If the door is not properly closed and the transmission is placed into drive or reverse mode with the parking brake released, it shall activate the “Door Open” indicator light in the cab to warn the crew.

Does your bid comply? YES_____ NO _____

45. Extension Ladder:

a. There shall be a 28’, aluminum two section extension ladder, provided.

Does your bid comply? YES_____ NO _____

46. Roof Ladder:

a. There shall be a 14’ aluminum roof ladder provided.

Does your bid comply? YES_____ NO _____

47. Folding Ladder:

a. One (1) aluminum folding ladder shall be installed in a U-shaped through inside the ladder storage compartment.

Does your bid comply? YES_____ NO _____

48. Ladder Storage:

a. The ladders shall be stored within a compartment located beside the booster tank. The compartment shall be sealed and internally vented.

b. All items shall be stored in their own independent section to allow one item to be removed without disturbing another. There shall be polypropylene slide angles installed in each section where applicable, to support the ladders and allow ease of removal.

c. There shall be a vertically hinged door, matching the rear overlay material, on the rear of the compartment with two push button type latches and a chrome handle centered between the push button latches.

d. If the door is not properly closed and the transmission is placed into drive or reverse mode with the parking brake released, it shall activate the “Door Open” indicator light in the cab to warn the crew.

e. The compartment shall be located on the left side of the tank, with the ladders lying on their side.

f. The compartment shall be large enough for one (1) 10' aluminum folding ladder, one (1) 14 foot aluminum roof ladder, one (1) 24 foot two section Duo-Safety aluminum extension ladder, and two (2) pike poles to be stowed in individual divided slots, so one item may be removed without disturbing another.

g. There shall be a stop in the front of each compartment to prevent the items from sliding forward.

Does your bid comply? YES_____ NO _____

49. Folding Steps & Additional Handrails:

a. CPI™ illuminated folding step(s) shall be installed on the body as directed by the department or required per NFPA. The top of the stepping surface shall have a knurled finish and an LED light that illuminates the stepping surface. An additional light shall be provided on the step mounting bracket to illuminate the area under the step.

i. Four (4) folding steps shall be installed on the right forward wall of the front compartment. These steps shall be utilized to access the water tank fill tower of the apparatus.
ii. Four (4) folding steps shall be installed on the left forward wall of the front compartment. These steps shall be utilized to access the water tank fill tower of the apparatus. The steps shall also be utilized to gain access to the top of the pump compartment structure and any equipment located in the immediate vicinity.

b. The steps shall also be utilized to gain access to the top of the pump compartment structure and any equipment located in the immediate vicinity.

c. A total of two (2) handrails, one (1) on each side, 10" long x 1 ¼" diameter handrail constructed of extruded aluminum with a knurled grip, full length illuminated LED light insert shall be installed in a best fit location above the forward step(s) to assist in climbing the steps and in accordance with the current edition of NFPA 1901 standard requirements. There shall be a 2" minimum clearance between the bracket and the body.

Does your bid comply? YES_____ NO _____

50. Aluminum Access Ladder:

a. An aluminum fold down access ladder shall be provided at the rear of the apparatus.

b. The ladder rungs shall be constructed of a slip resistant stepping material.

c. The upper section shall be permanently secured to the body with a mechanical style hinge and fasteners that allow the ladder to extend down and out to the ground from the apparatus body.

d. When deployed, the fold-down steps shall create a safe and comfortable climbing angle.

e. Two (2) gas cylinders shall be installed to assist in the deployment of the lower fold-down section. A mechanical locking mechanism shall be provided to retain the ladder in a stowed and secured position when in transit or when not in use.

f. Access ladder rung illumination shall be provided during low light conditions.

g. The ladder shall be installed at the rear of the apparatus on the right (officer's) side.

h. One (1) LED AMDOR™ strip light with an aluminum mounting bezel shall be installed and positioned to illuminate the access ladder stepping area.

Does your bid comply? YES_____ NO _____

F. PUMP SPECIFICATIONS

1. Pump:

URBANA FIRE DEPT. PUMPER SPECIFICATION

a. The pump shall have a capacity of 1500 gallons per minute, measured in U.S. Gallons. The pump shall be a Waterous model CSUC20, single stage midship pump.

b. The pumps impellers shall be bronze with double suction inlets, accurately balanced (mechanically and hydraulically), of mixed flow design with reverse-flow, labyrinth-type, wear rings that resist water bypass and loss of efficiency due to wear. The impeller shall have flame plated hub to assure maximum pump life and efficiency despite the presence of abrasive particles, such as fine sand, in the water being pumped. The wear rings shall be bronze and easily replaceable to restore original pump efficiency and eliminate the need for replacing the entire pump casing due to wear.

c. Pump casing shall be close grained gray iron, bronze fitted and horizontally split in two sections for easy removal of entire impeller assembly, including wear rings, without disturbing setting of pump in chassis or pump piping. The pump, for ease and rapid servicing in the future, shall have the separable impeller shaft which allows true separation of transmission or pump without disassembly or disturbing the other component. This shall be accomplished by using a two piece shaft. This feature will allow field service to accomplish in much less time since each component (pump or transmission) can be repaired independently. The impeller shaft shall be stainless steel, accurately ground to size and polished. Shaft shall be supported at each end by ball type oil grease lubricated bearings. Sleeve bearings or bushings will not be acceptable. The bearings shall be protected from water at each end of the impeller shaft.

d. The discharge manifold shall be cast as an integral part of the pump body assembly and shall provide at least three full 3 1/2" openings for ultimate flexibility in providing various discharge outlets for maximum efficiency, and shall be located as follows: one outlet on the right side of the pump body, one outlet on the left side of the pump body, and one outlet directly on top of the pump discharge manifold.

e. The entire pump shall be cast, manufactured and tested at the pump manufacturer's factory. The pump transmission housing shall be high strength aluminum, three pieces and horizontally split. Power transfer to the pump shall be through a Morse Hy-Vo drive chain. Chain shall be pressure lubricated through oil pump. Chain sprockets shall be cut from carbonized, hardened alloy steel. Spur gears will not be acceptable.

f. The drive shafts shall be 2.35" in diameter, made of hardened and ground alloy steel. All shafts shall be ball bearing supported. Case shall be designed to eliminate the need of water cooling.

g. The entire pump, both suction and discharge passages, shall be hydrostatically tested to a pressure of 600 PSI.

h. A certificate documenting this test shall be provided with the completed apparatus. The pump shall be fully tested at the pump manufacturer's factory to the performance requirements as outlined by the latest NFPA 1901. Pump shall be free from objectionable pulsation and vibration.

i. The pump shall be the Class "A" type and shall deliver the percentage of rated discharge at pressures indicated below.

i. 100% of rated capacity at 150 PSI net pump pressure.
ii. 100% of rated capacity at 165 PSI net pump pressure.
iii. 70% or rated capacity at 200 PSI net pump pressure.
iv. 50% of rated capacity at 250 PSI net pump pressure.

Does your bid comply? YES_____ NO _____

2. Air Pump Shift:

a. The drive unit shall be provided with an air pump shift system. The control valve shall be a spring loaded guard lever that locks in "Road" or "Pump" mode.
b. To the left of the pump shift control, there shall be two indicator lights to show the position of the pump when the control is moved to "Pump" position. A green light shall be energized when the pump shift has been completed and shall be labeled "PUMP ENGAGED"; a second green light shall be labeled "OK TO PUMP" energized when both the pump shift has been completed and the chassis automatic transmission is engaged.

c. A third green indicator light shall be installed adjacent to the throttle on the pump operator's panel. This light shall be labeled "Throttle Ready".

d. In addition to this indicator light, an additional indication shall be provided to the pump operator at the panel when the pump is ready to pump. This additional indication shall be that one (1) of the operator's panel illumination lights will only activate when the "OK TO PUMP" indicator is lit. The remaining panel lights shall be controlled via push button switch.

Does your bid comply? YES_____ NO _____

3. Pump Shift Manual Override:

a. In the event of pump shift failure, the pump can be shifted into gear by a push/pull manual override mechanism, allowing the pump to be engaged manually.

b. The handle shall be located on the lower portion of the driver's side pump panel and shall be labeled accordingly.

Does your bid comply? YES_____ NO _____

4. Redundant Electronic Transmission Lockup Circuit:

a. There shall be a redundant electric circuit that upon actuation of a guarded toggle switch located in the cab will cause the Allison transmission to attempt to attain converter lockup in 4th range after the operator selects drive on the chassis provided transmission selector.

b. A placard will be provided detailing the sequence of events necessary to utilize the circuit.

Does your bid comply? YES_____ NO _____

5. Transmission Lock-Up:

a. The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control, in the cab, is activated.

Does your bid comply? YES_____ NO _____

6. Master Drain Valve:

a. A manifold type drain valve shall be installed in the pump compartment. All pump drains shall be connected to the master drain valve. The drain valve shall be controlled from the left side lower pump house sill. The control shall be a hand wheel knob marked "open" and "closed".

b. The drain shall be located such that it shall not interfere with pumping operations or function such as soft suction hoses, etc. nor shall it protrude past the outer edge of the apparatus, to prevent damage to the valve.

c. In some cases, it is necessary to locate the master drain in a secondary location to ensure proper function, such as draining, or if no lower or vertical sill exists. In this event, the drain shall be located below the bottom outside edge of the hose body near the forward most corner on the driver's side hose body. The drain shall not protrude past the outer edge of the body, thus preventing damage to the valve.

Does your bid comply? YES_____ NO _____

7. Pump Seals:

a. Stuffing boxes shall be integral with the pump body and be equipped with two piece glands to permit adjustment or replacement of packing without disturbing the pump. Lantern rings shall be located at the inner ends of stuffing boxes so that all rings of packing can be removed without removal of the lantern rings. Water shall be fed into the stuffing box lantern rings for proper lubrication and cooling when the pump is operating.

Does your bid comply? YES_____ NO _____

8. Pump Cooling Line:

a. There shall be a 3/8 inch (9.5 mm) line running from the pump to the water tank to assist in keeping the pump water from overheating. A quarter turn on/off valve shall be installed on the operator's panel.

Does your bid comply? YES_____ NO _____

9. Pump House Line Protection:

a. All drain lines for the discharges, suctions, ABS discharge gauge lines and any other connections in the pump house area shall have a protective cover provided on the lines in the

required areas of the lines to prevent the lines from rubbing on any other components in the pump house area.

b. All drain lines, ABS lines, high pressure discharge lines and electrical wiring in the pump house area shall be properly and neatly routed, wire tied and rubber coated "P" clamped, to keep the items secured.

Does your bid comply? YES_____ NO _____

10. Auxiliary Cooling System / Heat Exchanger:

a. A single bundle type coolant to water heat exchanger shall be installed between the engine and the radiator.

b. The heat exchanger shall be designed to prohibit water from the pump from coming in contact with the engine coolant.

c. This shall allow the use of water from the discharge side of the pump to assist in cooling the engine water coolant.

d. The heat exchanger shall be adequate in size to maintain safe operating temperature of the coolant in the pump drive engine and not in excess of the engine manufacturer's temperature rating, under all pumping conditions. Appropriate drains shall be provided to allow draining the heat exchanger to prevent damage from freezing.

e. A Class One model #120381, with ¾" J-style lift-up handle shall be provided for the heat exchanger. The drain valve shall be installed at the pump operator's position.

Does your bid comply? YES_____ NO _____

11. Intake Relief Valve:

A relief valve shall be installed on the suction side of the pump, preset at 125 psig.

a. The relief valve shall have a working range of 75 psig to 250 psig.

b. An outlet shall terminate below the frame rails with a 2.50" NST adapter and shall have a "Do Not Cap" warning tag.

c. The control shall be located behind an access door at the side of the pump panel.

Does your bid comply? YES_____ NO _____

12. Pressure Control Mechanism:

a. A Waterous adjustable relief valve, specially designed for the fire service, shall be installed on the pump operator's panel.

b. The valve shall be positive and quick acting. When in the off position, the relief valve shall be functionally removed from the system. When in the on position, it shall monitor and maintain the pressure with instantaneous reaction to the previous setting.

c. The control for adjusting pressure shall be elliptical in shape for positive griping. Two indicator lights shall be furnished to show the position of the relief valve; amber for open and green for closed. An easily removable strainer shall be provided to keep the lines leading to the control free from obstruction.

Does your bid comply? YES_____ NO _____

13. Engine Governor:

a. Fire Research™ Throttle Xcel model ELA200-A00 engine throttle and monitoring display shall be installed.

b. The case shall be waterproof. The control knob shall be 2" in diameter with no mechanical stops, have a serrated grip, and a red idle push button in the center.

c. Inputs for monitored information shall be from a J1939 CAN or independent sensors. Outputs for engine control shall be on the J1939 CAN or engine specific wiring.

d. The throttle shall be programmable to operate in one of two control modes. In the Throttle Control mode it shall provide for manual control of the engine RPM. In the Governor Control mode it shall automatically maintain the engine RPM at the level set by the operator.

e. A throttle ready LED shall light when the interlock signal is recognized and the throttle engine RPM output shall be set to idle regardless of the throttle control knob position.

f. The following continuous displays shall be provided:

i. Engine RPM; shown with four daylight bright LED digits more than 1/2" high
ii. Engine oil pressure; shown on a dual color (green/red) LED bar graph display
iii. Engine coolant temperature; shown on a dual color (green/red) LED bar graph display
iv. Transmission Temperature: shown on a dual color (green/red) LED bar graph display
v. Battery voltage; shown on a dual color (green/red) LED bar graph display
vi. Time and date; shown on a dot matrix message display
vii. Throttle ready LED.

g. A dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options when selected by the operator.

h. All LED intensity shall be automatically adjusted for day and night time operation

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

i. High Battery Voltage
ii. Low Battery Voltage (Engine Off)
iii. Low Battery Voltage (Engine Running)
iv. High Transmission Temperature
v. Low Engine Oil Pressure
vi. High Engine Coolant Temperature
vii. No Engine Response (visual alarm only).

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

Does your bid comply? YES_____ NO _____

14. Priming System:

a. The priming system shall include an electrically driven rotary vane priming pump rigidly attached to the pump transmission.

b. The priming pump shall be self-lubricating and shall not require an external oil reservoir.

c. The pump, when dry, shall be capable of taking suction and discharging water with a lift of 10 feet in not more than 30 seconds through 20 feet of suction hose through the steamers.

d. Priming pump shall be built by the manufacturer of the fire pump.

e. There shall be a manual level control to simultaneously actuate the primer control valve and the primer motor.

Does your bid comply? YES_____ NO _____

15. Pump Manuals:

a. Two (2) pump manuals from the pump manufacturer shall be furnished in compact disc format with the apparatus. Manuals shall cover pump operation, maintenance, and parts.

Does your bid comply? YES_____ NO _____

16. Stainless Steel Plumbing:

a. All auxiliary suction and discharge plumbing related fittings, and manifolds shall be fabricated with schedule 10 stainless steel pipe; brass or high pressure flexible piping with stainless steel couplings. Galvanized components and/or iron pipe shall NOT be accepted to

ensure long life of the plumbing system without corrosion or deterioration of the waterway system.

b. Where waterway transitions are critical (elbows, tees, etc.), no threaded fittings shall be allowed to promote the smooth transition of water flow to minimize friction loss and turbulence. All piping components and valves shall be non-painted, unless otherwise specified.

c. All piping welds shall be wire brushed and cleaned for inspection and appearance.

d. The high pressure flexible piping shall be black SBR synthetic rubber hose with 300 PSI working pressure and 1200 PSI burst pressure for flexible piping sizes 1 ½" through 4". Sizes ¾", 1" and 5" are rated at 250 PSI working pressure and 1000 PSI burst pressure. All sizes are rated at 30 in HG vacuum. Reinforcement consists of two plies of high tensile strength tire cord for all sizes and helix wire installed in sizes 1" through 5" for maximum performance in tight bend applications. The material has a temperature rating of -40° F to +210° F.

e. The stainless steel full flow couplings are precision machined from high tensile strength stainless steel. All female couplings are brass. Mechanical grooved and male ¾" and 1" couplings are brass. A high tensile strength stainless steel ferrule with serrations on the I. D. is utilized to assure maximum holding power when fastening couplings to hose.

Does your bid comply? YES_____ NO _____

17. Main Pump Inlets:

a. A 6.00 inch (152mm) pump manifold inlet shall be provided on each side of the pump.

b. The inlets shall protrude up to 2 inches (50mm) away from the side panels and maintain a low connection height.

c. The main pump inlets shall have National Standard Threads and include removable screens designed to provide cathodic protection for reducing deterioration in the pump.

d. There shall be two (2) 6" long handled chrome plated cap(s) installed the apparatus. The cap(s) shall be National Standard Thread.

Does your bid comply? YES_____ NO _____

18. Inlet (Left Side):

a. There shall be a gated 2½" auxiliary suction inlet with .75 inch (19mm) bleeder installed on the left side of the apparatus.

b. A total quantity of one (1) shall be provided with the following specified components:

i. A 2½" Akron Brass 8800 series swing-out valve with stainless steel ball.

ii. The control valve shall be a 'swing out type' direct operation manual lever actuator.
iii. The plumbing shall consist of 2½" piping, and shall incorporate a manual drain control installed below the pump area for ease of access.

c. The suction termination shall include the following components:

i. One (1) 2½" NST swivel female adapter with screen
ii. One (1) 2½" male self-venting plug, secured by a chain

Does your bid comply? YES_____ NO _____

19. Outlets:

a. In addition to the tank suction valve outlet located in the sump, there shall be an outlet provided for the tank fill valve.

Does your bid comply? YES_____ NO _____ EXCEPTION # _____

20. Tank to Pump Line:

a. The connection between the tank and the pump shall be capable of the flow recommendations as set forth in NFPA Pamphlet 1901, latest revision and shall be tested to those standards when the pump is being certified.

b. One (1) non-collapsible flexible hose(s) and valve(s) shall be incorporated into the tank to pump plumbing to allow movement in the line as the chassis flexes to avoid damage during normal road operation.

c. Four (4) inch stainless steel schedule 10 or Poly-Vinyl Chloride schedule 40 piping may be used to complete the connection from the tank to pump valve to the water tank.

d. A 3"Akron Brass 8000 series swing-out valve with a stainless steel ball.

e. There shall be a tank to pump check valve, conforming to NFPA standard requirements, which shall be of bronze construction. The check valve shall be mounted as an integral part of the pump suction extension.

f. The valve shall be controlled from the side operator's panel.

Does your bid comply? YES_____ NO _____

21. Tank Fill Line:

a. One (1) 2" tank fill/recirculating line shall be installed from the pump directly to the booster tank.

b. A 2"Akron Brass 8000 series swing-out valve with a stainless steel ball.

c. The valve shall be controlled from the side operator's panel.

Does your bid comply? YES_____ NO _____

22. Discharge Outlets (Left Side):

a. There shall be two (2) gated discharges installed on the left side of the apparatus.

b. A total quantity of two (2) shall be provided with the following specified components:

i. A 2½" Akron Brass 8800 series swing-out valve with a stainless steel ball.
ii. The control valve shall be a 'swing out type' direct operation manual lever actuator.
iii. The plumbing shall consist of 2½" piping, and shall incorporate a manual drain control installed below the pump area for ease of access.

c. The discharge termination shall include the following components:

i. One (1) 2½" Male NST adapter
ii. One (1) 2½" NST female by male swivel w/45 degree elbow
iii. One (1) 2½" female self-venting cap, secured by a chain

d. A Thuemling 2½" (63mm) heated gauge shall be supplied for the discharge pressure reading of 0-400 psi.

e. The gauge shall be a model FA-LFP-210 with a white face and black lettering.

Does your bid comply? YES_____ NO _____

23. Right Side Discharge:

a. There shall be a gated discharge installed on the right side of the apparatus.

b. A total quantity of one (1) shall be provided with the following specified components:

i. A 2½" Akron Brass 8800 series swing-out valve with a stainless steel ball.
ii. The discharge shall be controlled from the side operator's panel.
iii. The plumbing shall consist of 2½" piping, and shall incorporate a manual drain control installed below the pump area for ease of access.

c. The discharge termination shall include the following components:

i. One (1) 2½" Male NST adapter
ii. One (1) 2½" NST female by male swivel w/45 degree elbow
iii. One (1) 2½" female self-venting cap, secured by a chain

d. A Thuemling 2½" (63mm) heated gauge shall be supplied for the discharge pressure reading of 0-400 psi.

e. The gauge shall be a model FA-LFP-210 with a white face and black lettering.

Does your bid comply? YES_____ NO _____

24. Discharge Outlet, 4.00":

a. There shall be a master discharge installed on the right side of the apparatus.

b. A total quantity of one (1) shall be provided with the following specified components:

i. A 4"Akron Brass valve with 3" hand wheel control and position indicator shall be provided and installed.
ii. The plumbing shall consist of 4" piping, and shall incorporate a manual drain control installed below the pump area for ease of access.

c. The discharge termination shall include the following components:

i. One (1) 4" NST adapter
ii. One (1) 4" NST female swivel by 5"Storz cast aluminum 30 degree elbow
iii. One (1) 5" female Stortz self-venting cap, secured by a chain

d. A Thuemling 2½" (63mm) heated gauge shall be supplied for the discharge pressure reading of 0-400 psi.

e. The gauge shall be a model FA-LFP-210 with a white face and black lettering.

Does your bid comply? YES_____ NO _____

25. Left Rear Discharge:

a. There shall be a gated discharge installed on the left rear of the apparatus.

b. A total quantity of one (1) shall be provided with the following specified components:

i. A 2½" Akron Brass 8800 series swing-out valve with a stainless steel ball.
ii. The discharge shall be controlled from the side operator's panel.
iii. The plumbing shall consist of 2½" piping, and shall incorporate a manual drain control installed below the pump area for ease of access.

c. The discharge termination shall include the following components:

i. One (1) 2½" Male NST adapter
ii. One (1) 2½" NST female by male swivel w/45 degree elbow
iii. One (1) 2½" female self-venting cap, secured by a chain

d. A Thuemling 2½" (63mm) heated gauge shall be supplied for the discharge pressure reading of 0-400 psi.

e. The gauge shall be a model FA-LFP-210 with a white face and black lettering.

Does your bid comply? YES_____ NO _____

26. Right Rear Discharge:

a. There shall be a gated discharge installed on the right rear of the apparatus.

b. A total quantity of one (1) shall be provided with the following specified components:

i. A 2½" Akron Brass 8800 series swing-out valve with a stainless steel ball.
ii. The discharge shall be controlled from the side operator's panel.
iii. The plumbing shall consist of 2½" piping, and shall incorporate a manual drain control installed below the pump area for ease of access.

c. The discharge termination shall include the following components:

i. One (1) 2½" Male NST adapter
ii. One (1) 2½" NST female by male swivel w/45 degree elbow
iii. One (1) 2½" female self-venting cap, secured by a chain

d. A Thuemling 2½" (63mm) heated gauge shall be supplied for the discharge pressure reading of 0-400 psi.

e. The gauge shall be a model FA-LFP-210 with a white face and black lettering.

Does your bid comply? YES_____ NO _____

27. Outlet Bleeders:

a. All manual drains shall be Class One model #120381, with ¾" J-style lift handle kit.

Does your bid comply? YES_____ NO _____

28. Deck Gun Monitor Waterway:

a. There shall be one (1) deck gun monitor waterway(s) installed on the apparatus.

b. A 3"Akron Brass 8800 series "slow close" swing-out valve with a stainless steel ball.

c. The discharge shall be controlled from the side operator's panel.

d. The waterway shall be plumbed with 3" piping that terminates 3" above the top of the pump compartment unless otherwise specified or required by a specific deck gun selection as noted.

e. The plumbing shall be drained with an auto-drain located at the lowest point of the waterway plumbing if required.

f. There will be a Task Force Tips 18" Extenda-Gun installed on the deluge pipe. The Extenda-Gun will be wired to the cab "Door Open" indicator light that will notify occupants the gun is not in the stowed position.

g. A Thuemling 2½" (63mm) heated gauge shall be supplied for the discharge pressure reading of 0-400 psi. The gauge shall be a model FA-LFP-210 with a white face and black lettering.

h. The deluge pipe shall be located up through the pump compartment, centered from left to right.

Does your bid comply? YES_____ NO _____

29. Safe-Tak Portable Monitor Package:

a. Task Force Tips Crossfire model # XFC-42 portable lightweight monitor package consisting of monitor top, stacked tips, stream straightener, portable ground base, and base storage bracket shall be supplied.

b. The package shall be configured as follows:

c. Task Force Tips Safe-Tak 1250, model # XFH-2NJ portable monitor base shall be provided. The monitor shall include a Safe-Tak, spring loaded butterfly valve designed to rapidly reduce the water flow by 90 percent in the event that contact with the ground is lost.

d. The device shall include an integral carrying handle, four folding stainless steel legs with replaceable tungsten carbide spikes and an anchoring strap (attached to a protective cap) designed to be stored inside the waterway.

e. The butterfly valve shall have a reset handle located near the inlet to allow the water flow to be reestablished once the base is properly stabilized.

f. The base shall be constructed from hard coat anodized aluminum and have a red powder coat interior and exterior finish. The inlet shall be configured with two (2) 2½" female NH swivel rocker lug couplings with two-way clapper valve. The unit shall be covered by a five-year warranty.

g. Task Force Tips Crossfire, model # XFT-NJ portable monitor shall be provided. This top only portion with quick release swivel joint shall be designed for use on truck mounted risers and TFT Safe-Tak or Stow-A-Way 800 series portable bases. The monitor shall include safety devices that include a locking button which locks the quick release lever when monitor is pressurized, and a ¼ turn rotational lever lock that secures the horizontal rotation and provides a visual indication that the monitor rotation is locked. For corrosion resistance the monitor shall be constructed from hard coat anodized aluminum with a red powder coat interior and exterior finish.

h. The monitor shall have a 3¼" waterway for delivery of up to 1250 GPM with low friction loss. Vertical elevation shall be controlled through use of a hand wheel controlled stainless steel worm gear which allows full travel to the safety stop point of 35 degrees above

horizontal with seven rotations of the wheel. When positioned on a truck mounted riser the monitor shall be able to be used below the 35 degree stop point through release of the spring loaded safety pin.

i. An automatic drain to remove remaining water and avoid freezing shall be included. Integral stainless steel stream straightener and pressure gauge shall be included. The monitor shall be configured with a Crossfire inlet and 2½" male NH outlet. The unit shall be covered by a five-year warranty.

Does your bid comply? YES_____ NO _____

30. Monitor Storage Bracket:

a. Task Force Tips model # XF-B storage bracket shall be installed. The bracket shall be constructed from stainless steel include a quick release retention strap and be designed for horizontal or vertical installation. The bracket is designed for storage of the Task Force Tips Crossfire SAFE-TAK and STOWAWAY 800 series portable monitor base with or without monitor top attached.

Does your bid comply? YES_____ NO _____

31. Master Stream Stack Tip Set:

a. Task Force Tips model # MST-4NJ smooth bore stacked tip set shall be provided. For corrosion resistance the tip set shall be constructed from hard coat anodized aluminum alloy. The set shall consist of four (4) tips with the base tip having a 2 ½" female NH swivel inlet and 2" outlet. The other tip sizes shall be 1 ¾", 1 ½" and 1-3/8". Each tip shall be laser engraved with a flow/pressure chart, orifice size, and thread size.

Does your bid comply? YES_____ NO _____

32. Stream Straightener:

a. Task Force Tips model # XF-SS10 stream straightener shall be supplied. The straightener shall be constructed from extruded aluminum with internal vanes designed to reduce turbulence and increase the reach of smooth bore water streams. The device shall be ten (10) inches in length and have 2½" female NH rigid inlet and 2½" male NH rigid outlet.

Does your bid comply? YES_____ NO _____

33. Single Stack Crosslays:

a. The cross lay hose beds shall be located in the upper portion of the pump compartment.

b. The cross lay shall be constructed with a twenty-five 25.00 inch (635mm) approximate depth for laying a single stack of each hose size as specified below.

c. The cross lay area shall be located at the front of the side control module and at the rear of top control module.

d. The cross lay area shall span the entire width of the apparatus pump module. Removable slotted aluminum flooring shall be provided for hose bed area and for drainage.

e. Chicksan swivels shall be installed just below the floor of each cross lay bed just high enough for hose couplings to be accessed and tightened onto the chicksans. Chicksan swivels shall swing from left to right to allow attached hose to be deployed from either side.

f. Two (2) cross lay(s) shall be provided for up to 200 feet (60m) of 1.88 inch hose and TFT nozzle handle.

g. A 2"Akron Brass 8800 series swing-out valve with a stainless steel ball.

h. The discharge shall be controlled from the side operator's panel.

i. The plumbing shall consist of 2" piping, and shall incorporate a manual drain control installed below the pump area for ease of access.

j. The discharge termination shall include the following components:

    i. One (1) 2" NPT x 1½" NST brass chicksan swivel

k. A Thuemling 2½" (63mm) heated gauge shall be supplied for the discharge pressure reading of 0-400 psi.

l. The gauge shall be a model FA-LFP-210 with a white face and black lettering.

Does your bid comply? YES_____ NO _____

34. Crosslay Trim:

a. Brushed stainless steel trim shall be installed at the openings on each side of the cross lay hose bed area.

b. The trim shall reduce the chaffing of the hose jacket on the edges of the bay area.

Does your bid comply? YES_____ NO _____

35. Crosslay Cover:

a. The cross lay hose bed area shall have a hinged 1/8" embossed aluminum diamond plate cover installed.

b. A device shall be installed to prevent the cross lay cover from scratching or damaging the cab when opened.

c. The cross lay hose bed side covers shall be black, heavy duty, cargo webbing, sewn in a box pattern.

Does your bid comply? YES_____ NO _____

36. Pump Compartment:

a. The structural framework of the pump compartment shall be self-supportive and independent of the apparatus body.

b. The width of the apparatus as measured longitudinally (measured within the wheelbase dimension of the apparatus) shall be specified in the remainder of the specifications.

c. The width of the pump compartment (front to back) shall be 48".

d. The complete apparatus pump compartment shall be constructed of a combination of structural tubing and formed stainless steel. The same materials used in the body shall be utilized in the construction of the pump compartment. The structure shall be welded utilizing the same A.W.S. Certified welding procedure as used on the structural body module. These processes shall ensure the quality of structural stability of the pump compartment module.

e. The pump compartment module shall be separated from the apparatus body with a gap. This gap is necessary to accommodate the flexing of the chassis frame rails that is encountered while the vehicle is in transit so that harmful torsional forces are not transmitted into the structural framework.

f. The entire pump module assembly shall be mounted so that it “floats” above the chassis frame rails. The body substructure shall be mounted above the frame to allow independent flexing to occur between the body and the chassis.

g. Each assembly shall be mounted to the chassis frame rails with steel, gusseted mounting brackets. Each bracket shall be powder coated for corrosion resistance. Each body mount bracket shall be mounted to the side chassis frame flange with two 5/8”-UNC Grade 5 HHCS.

h. There shall be no welding to the chassis frame rail sides, web or flanges, or drilling of holes in the top or bottom frame flanges between axles. All body to chassis connections shall be bolted so that in the event of an accident, the body shall be easily removable from the truck chassis for repair or replacement.

i. Because of the constant vibration and twisting action that occurs in chassis frame rails and suspension, a torsion type mounting system or equivalent is required to minimize the possibility of premature body structural failures.

Does your bid comply? YES_____ NO _____

37. Pump Control Panels (Side Control):

a. The pump operator's panel shall be located on the left, upper side of the apparatus pump compartment.

b. The panel shall be split into an upper and lower section.

c. The upper panel shall house all gauges and controls and be hinged to allow easy access to those components.

d. The door shall have a stainless steel piano hinge, dual point chrome push button latches and a rubber seal provided to prevent excessive moisture from entering or leaving the pump house.

e. The lower panel shall be a removable panel attached with dual point push button latches.

f. Valve controls shall be immediately adjacent to its respective gauge.

g. The valve controls shall be properly labeled, color coded, and matched with corresponding discharge.

h. All markings shall be permanent in nature.

Does your bid comply? YES_____ NO _____

38. Soft Suction Storage Compartment:

a. An open storage compartment, for 25' of 5" LDH soft suction hose shall be installed in the left side pump panel, below the pre-connects, low on the panel, rearward of the front edge of the pump module.

b. The compartment shall be as deep as possible and as high as possible.

c. There shall be a Velcro strap installed to secure the soft suction in the compartment.

Does your bid comply? YES_____ NO _____

39. Pump Panel Configuration:

a. The pump panel configuration shall be neat and orderly.

Does your bid comply? YES_____ NO _____

40. Pump Compartment Service Access:

a. The front portion of the pump compartment structure (directly behind the chassis cab) shall not be overlaid to provide an opening for access to the mid-ship fire pump.

b. There shall be one (1) white 12 volt DC LED light(s) with flange installed in the pump compartment. A switch accessible through a door on the pump panel shall be included with this installation.

Does your bid comply? YES_____ NO _____

41. Pump Compartment Top Overlay:

a. The top of the pump compartment shall be overlaid with 1/8" embossed aluminum diamond plate, meeting the minimum NFPA standard requirements for slip resistance.

Does your bid comply? YES_____ NO _____

42. Gauges, Vacuum and Pressure:

a. The master intake and master discharge gauges shall be manufactured by Thuemling and shall be installed on the pump operator's panel.

b. They shall be liquid filled to keep the dial from pulsating and also to prevent condensation from forming inside the gauges. The master gauges shall be 6 inches in diameter.

c. The master intake gauge shall read from -30 to 400 psi with the master discharge gauge reading from 0 to 400 psi. The gauges shall be Thuemling model FA-LFP-610 with a white face and black lettering.

d. Both gauges shall be heated.

Does your bid comply? YES_____ NO _____

43. Line Pressure Gauges:

a. The individual “line” pressure gauges for the discharges shall be liquid filled.

b. The individual gauges shall be installed as close to the outlet control as possible.

c. A Thuemling 2½” (63mm) heated gauge shall be supplied for each discharge with a pressure reading of 0-400 psi.

d. Deluxe metal bezels shall be supplied around the discharge pressure gauges.

Does your bid comply? YES_____ NO _____

44. Testing Ports:

a. Test port connections for pressure and vacuum shall be provided at the pump operator's panel. One shall be connected to the intake side of the pump, and the other to the discharge manifold side of the pump.

b. They shall have 0.25 in. standard pipe thread connections and be manufactured of non-corrosive polished stainless steel or brass plugs.

Does your bid comply? YES_____ NO _____

45. Pump Compartment Heater:

a. One (1) 30,000 BTU auxiliary heater shall be provided and installed inside the pump compartment.

b. The heater shall be connected to the engine cooling system with gated valves located inside the engine compartment.

c. Dual 12 volt electric fans shall be installed and controlled with single toggle switch and a LED indicator light on the operator's pump control panel. The switch shall be of a weather resistant type.

d. The switch shall be labeled "PUMP HOUSE HEATER".

Does your bid comply? YES_____ NO _____

46. Tank Level Gauge:

a. A Fire Research Tank Vision model WLA200-A00 tank indicator kit shall be installed on the apparatus. The kit shall include an electronic indicator module, a pressure sensor, and a 10' sensor cable. The indicator shall show the volume of water in the tank on nine (9) easy to see super bright LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of aluminum, and have a distinctive blue label.

b. The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, and a data link to connect remote indicators. Low water warnings shall include flashing LEDs at ¼ tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

c. The indicator shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the water tank near the bottom. No probe shall be placed on the interior of the tank. Wiring shall be weather resistant and have automotive type plug-in connectors.

Does your bid comply? YES_____ NO _____

47. Light Shield(S):

a. There shall be one (1) aluminum tread plate light shield installed on the driver's side pump panel.

i. This shield shall be properly reinforced to support the cross lay hose weight and/or a man's weight.
ii. The shield shall extend the entire length of the pump panel and below both cross lays.
iii. The step shall have a minimum of an 8.00" stepping surface and it shall be properly reinforced to support a man's weight.
iv. The light shield shall include AMDOR™ white 12 volt DC LED light strip(s) per NFPA illumination standards.
v. This light shield shall include one (1) white 12 volt DC LED light if the light shield is less than 20.00" in length.
vi. These lights shall be activated when the battery switch is on and the pump panel light switch is on.
vii. There shall be a white 12 volt LED light strip activated above the pump panel light switch when the parking brake is set and shall be activated when the pump is in "ok to pump" mode. This is to afford the operator some illumination when first approaching the control panel.
viii. There shall be two (2) white LED step lights provided above the shield to illuminate the top of the step for night time vision. In order to ensure exceptional illumination, each step 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 step light shall be activated by the pump panel light switch.

b. There shall be an additional step/light shield shall be provided above passenger's side pump panel.

i. This shield shall be properly reinforced to support the cross lay hose weight and/or a man's weight.
ii. The shield shall extend the entire length of the pump panel and below both cross lays.
iii. The light shield shall include AMDOR™ white 12 volt DC LED light strip(s) per NFPA illumination standards.
iv. The step shall have a minimum of an 8.00" stepping surface and it shall be properly reinforced to support a man's weight.
v. There shall be two (2) 12.00" 12 volt DC LED light provided above the step. The step light shall be installed to illuminate the top of the step for night time vision. The step light shall be activated by the pump panel light switch.
vi. The lights under the step and above the step shall be activated by a switch on the pump operator's panel.

Does your bid comply? YES_____ NO _____

48. Air Horn(s):

a. The apparatus shall include two (2) Grover brand Stutter Tone air horns which shall measure 24.50 inches long with a 6.00 inch round flare.

b. The air horns shall be trumpet style with a chrome finish.

c. The air horns shall be recess mounted in the front bumper fascia between the frame rails in the right and left outboard positions.

d. The air horn activation shall be accomplished by two (2) lanyard cables or rope, one (1) on the left hand side accessible to the driver and one (1) on the right hand side accessible to the officer.

Does your bid comply? YES_____ NO _____

49. Air Horn Reservoir:

a. One (1) air reservoir, with a 1200 cubic inch capacity, shall be installed on the chassis to act as a supply tank for operating air horns.

b. The reservoir shall be isolated with a 90 PSI pressure protection valve on the reservoir supply side to prevent depletion of the air to the air brake system.

Does your bid comply? YES_____ NO _____

50. Mechanical Siren:

a. The front bumper shall include an electronic mechanical Federal Q2B™ siren, which shall be streamlined, chrome-plated and shall produce 123 decibels of sound at 10.00 feet.

b. The siren shall be recess mounted in the center on the front fascia of the bumper between the frame rails.

c. The front of the siren shall include (2) stainless steel flat bars approximately 1.00 inch wide by 19.00 inches long. Each bar shall be placed vertically on the right and left side of the siren face wrapping around towards the back of the siren into the bumper extension offering protection to the Q2B siren.

d. The mechanical siren shall be actuated by two (2) foot switches mounted in the front section of the cab for use by the driver and officer.

e. Two (2) red momentary siren brake rocker switches shall be provided in the switch panel on the dash, one for the officer and one for the driver.

f. The siren shall only be active when master warning switch is on to prevent accidental engagement.

Does your bid comply? YES_____ NO _____

51. Cab Front Lightbar & Opti-Com - Upper Zone A:

a. The NFPA upper zone A shall be a Whelen brand Freedom FN88VLED light bar permant center mounted on the front of the cab roof.

   i. The light bar shall extend the entire width of the cab.
   ii. The light bar shall feature ten (10) forward facing LED modules. Eight (8) red LED lights and two (2) clear/white LED lights.
   iii. The light bar shall have four (4) corner modules, two (2) on each side.
   iv. The light bar shall have fully populated corners.

b. The light bar white LED lights will deactivate when the parking brake is set.

c. The light bar shall be controlled by a rocker switch located on the switch panel. This switch shall be clearly labeled for identification

d. The light bar shall also include one (1) Opti-com mounted in the center section of the light bar.

e. Per NFPA, the clear Opti-com light shall be disabled when the parking brake is engaged.

f. The Opti-com traffic control optical emitter shall be activated by a lighted rocker switch on dash and shall be deactivated when the parking brake is applied

Does your bid comply? YES_____ NO _____

52. Front Mars™ 888 Lights – Lower Zone A:

a. One (1) Mars™ 888, white/clear LED traffic clearing, pedestal mount, light shall be installed on a stainless steel mount, center of the cab below the windshield.

b. Per NFPA the light will deactivate when the parking brake is set.

c. The light shall be activated by rocker switch located on the switch panel. The rocker switch shall be clearly labeled for identification.

Does your bid comply? YES_____ NO _____

53. Headlight Flasher – Lower Zone A:

a. An alternating headlight flashing system shall be installed into the headlight circuit which shall allow the LED beams to flash alternately from left to right.

b. Deliberate operator selection of high beams will override the flashing function until low beams are again selected. Per NFPA, these clear flashing lights will also be disabled "On Scene" when the park brake is applied.

c. The flashing headlights shall be activated by a rocker switch on the switch panel. The rocker switch shall be clearly labeled for identification.

URBANA FIRE DEPT. PUMPER SPECIFICATION

Does your bid comply? YES_____ NO _____

54. Inboard Front Warning Lights – Lower Zone A:

a. There shall be two (2) Whelen, M6, Super LED, red with clear lens, inboard cab front fascia warning lights.

b. The front facing warning lights shall be located in the left and right inboard positions.

c. The lights shall be synchronized and feature multiple flash patterns including steady burn.

d. The lights shall be mounted to the front fascia of the cab within a chrome bezel.

Does your bid comply? YES_____ NO _____

55. Outboard Front Warning Lights – Lower Zone A:

a. There shall be two (2) Whelen, M6, Super LED, red with clear lens, outboard cab front fascia warning lights.

b. The front facing warning lights shall be located in the left and right outboard positions.

c. The lights shall be synchronized and feature multiple flash patterns including steady burn.

d. The lights shall be mounted to the front fascia of the cab within a chrome bezel.

Does your bid comply? YES_____ NO _____

56. Lower Front Warning Switch:

a. The lower front warning lights shall be controlled by a rocker switch on the panel.

b. This switch shall be clearly labeled for identification.

Does your bid comply? YES_____ NO _____

57. Side Warning Lights - Lower Zone B:

a. There shall be six (6) side warning lights located in the lower zone B area.

b. The lights shall feature multiple flash patterns including steady burn.

c. The lights shall be red with a clear lens within a chrome bezel.

d. The location and type are as follows:

- One (1) Whelen M6 Super LED, mounted on the side of the bumper extension.

- One (1) Whelen M6 Super LED, mounted over the front wheel well directly over the center of the front axle.
- One (1) Whelen M6 Super LED, mounted on the pump panel, above the soft suction storage area.
- Two (2) Whelen 500 Series TIR6, Super LED lights shall be installed: one (1) forward of the rear wheels centerline and one (1) rearward of the rear wheel centerline.
- One (1) Whelen M6 Super LED, mounted on the lower side rear, in cast aluminum housings.

Does your bid comply? YES_____ NO _____

58. Side Warning Lights - Upper Zone B:

a. There shall be two (2) side warning lights in the upper zone B area.

b. The lights shall feature multiple flash patterns including steady burn.

c. The lights shall be red with a clear lens within a chrome bezel.

d. The location and type are as follows:

- One (1) Whelen M9 Super LED, installed on the front upper corner of the fire body.
- One (1) Whelen M9 Super LED, installed on the rear upper corner of the fire body.

Does your bid comply? YES_____ NO _____

59. Rear Warning Lights – Lower Zone C:

a. There shall be four (4) rear warning lights in the lower zone C area.

b. The rear lights shall be synchronized and feature multiple flash patterns including steady burn.

c. The lights shall be a combination red with a clear lens or red & amber split with clear lens.

d. The lights shall have a chrome bezel.

e. The location and type are as follows:

- Two (2) Whelen, M9, Red/Amber Split, Super LED, shall be installed at the mid-point from the top of the rear face to the top of the quad cluster, one (1) on each side of the rear fire body.
- Two (2) Whelen, M6, Red, Super LED, mounted in the first position of the rear quad cluster.

URBANA FIRE DEPT. PUMPER SPECIFICATION

Does your bid comply? YES_____ NO _____

60. Rear Warning Lights – Upper Zone C:

a. There shall be two (2) rear warning lights in the upper zone C area.

b. The rear lights shall be synchronized and feature multiple flash patterns including steady burn.

c. The lights shall be red with a clear lens and have a chrome bezel.

d. The location and type are as follows:

- Two (2) Whelen, M9, Red, Super LED, shall be installed at the top of the rear face, one (1) on each side of the rear fire body.

Does your bid comply? YES_____ NO _____

61. Rear Directional Traffic Light Bar:

a. There shall be six (6) rear directional lights provided and installed on the rear of the hose bed cover cap.

b. The lights shall be Whelen model #WIONSMCA LED ION amber lights with clear lenses and chrome bezels.

c. Each light shall be surface mounted and equally spaced, spanning horizontally across the rear of the hose bed cover cap.

d. The lights shall be controlled by a Whelen #TACTLD1 control head.

Does your bid comply? YES_____ NO _____

62. Side Warning Lights - Lower Zone D:

a. There shall be six (6) side warning lights located in the lower zone D area.

b. The lights shall feature multiple flash patterns including steady burn.

c. The lights shall be red with a clear lens within a chrome bezel.

d. The location and type are as follows:

- One (1) Whelen M6 Super LED, mounted on the side of the bumper extension.
- One (1) Whelen M6 Super LED, mounted over the front wheel well directly over the center of the front axle.
- One (1) Whelen M6 Super LED, mounted on the pump panel.
- Two (2) Whelen 500 Series TIR6, Super LED lights shall be installed: one (1)

forward of the rear wheels centerline and one (1) rearward of the rear wheel centerline.
- One (1) Whelen M6 Super LED, mounted on the lower side rear, in cast aluminum housings.

Does your bid comply? YES_____ NO _____

63. Side Warning Lights - Upper Zone D:

a. There shall be two (2) side warning lights in the upper zone D area.

b. The lights shall feature multiple flash patterns including steady burn.

c. The lights shall be red with a clear lens within a chrome bezel.

d. The location and type are as follows:

- One (1) Whelen M9 Super LED, installed on the front upper corner of the fire body.
- One (1) Whelen M9 Super LED, installed on the rear upper corner of the fire body.

Does your bid comply? YES_____ NO _____

64. Lower Zones B&D Cast Aluminum Light Housing:

a. A cast aluminum warning light housing shall be used for the rearmost warning light in zones B&D. The housing shall be located on the rear side tailboard to ensure the light is mounted as far rearward as possible.

Does your bid comply? YES_____ NO _____

65. Side Warning Light Switch:

a. The side warning lights shall be controlled by a rocker switch on the switch panel. This switch shall be clearly labeled for identification.

Does your bid comply? YES_____ NO _____

F. ELECTRICAL SYSTEM GENERAL DESIGN for ALTERNATING CURRENT SPECIFICATIONS:

1. 120/240 VAC Specifications:

The following guidelines shall apply to the 120/240 VAC system installation:

a. <u>General</u>

i. Any fixed line voltage power source producing alternating current (ac) line voltage shall produce electric power at 60 cycles plus or minus five (5) cycles.

ii. Except where superseded by the requirements of NFPA 1901, all components, equipment and installation procedures shall conform to NFPA 70, National Electrical Code (herein referred to as the NEC).

iii. Line voltage electrical system equipment and materials included on the apparatus shall be listed and installed in accordance with the manufacturer's instructions. All products shall be used only in the manner for which they have been listed.

b. Grounding

i. Grounding shall be in accordance with Section 250-6 "Portable and Vehicle Mounted Generators" of the NEC.

ii. Ungrounded systems shall not be used. Only stranded or braided copper conductors shall be used for grounding and bonding.

iii. An equipment grounding means shall be provided in accordance with Section 250-91 (Grounding Conductor Material) of the NEC.

iv. The grounded current carrying conductor (neutral) shall be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. The neutral conductor shall be colored white or gray in accordance with Section 200-6 (Means of Identifying Grounding Conductors) of the NEC.

v. In addition to the bonding required for the low voltage return current, each body and driving or crew compartment enclosure shall be bonded to the vehicle frame by a copper conductor. This conductor shall have a minimum amperage rating of 115 percent of the nameplate current rating of the power source specification label as defined in Section 310-15 (amp capacities) of the NEC. A single conductor properly sized to meet the low voltage and line voltage requirements shall be permitted to be used.

vi. All power source system mechanical and electrical components shall be sized to support the continuous duty nameplate rating of the power source.

c. Operation

i. Instructions that provide the operator with the essential power source operating instructions, including the power-up and power-down sequence, shall be permanently attached to the apparatus at any point where such operations can take place.

ii. Provisions shall be made for quickly and easily placing the power source into operation. The control shall be marked to indicate when it is correctly positioned

for power source operation. Any control device used in the drive train shall be equipped with a means to prevent the unintentional movement of the control device from its set position.

iii. A power source specification label shall be permanently attached to the apparatus near the operator's control station. The label shall provide the operator with the information detailed in Figure 19-4.10.

iv. Direct drive (PTO) and portable generator installations shall comply with Article 445 (Generators) of the NEC.

d. Overcurrent protection

i. The conductors used in the power supply assembly between the output terminals of the power source and the main over current protection device shall not exceed 144 inches (3658 mm) in length.

ii. For fixed power supplies, all conductors in the power supply assembly shall be type THHW, THW, or use stranded conductors enclosed in nonmetallic liquid tight flexible conduit rated for a minimum of 194 degrees Fahrenheit (90 degrees Celsius).

iii. For portable power supplies, conductors located between the power source and the line side of the main overcurrent protection device shall be type SO or type SEO with suffix WA flexible cord rated for 600-volts at 194 degrees Fahrenheit (90 degrees Celsius).

e. Wiring Methods

i. Fixed wiring systems shall be limited to the following:

a) Metallic or nonmetallic liquid tight flexible conduit rated at not less than 194 degrees Fahrenheit (90 degrees Celsius)

Or

b) Type SO or Type SEO cord with a WA suffix, rated at 600 volts at not less than 194 degrees Fahrenheit (90 degree Celsius)

ii. Electrical cord or conduit shall not be attached to chassis suspension components, water or fuel lines, air or air brake lines, fire pump piping, hydraulic lines, exhaust system components, or low voltage wiring. In addition the wiring shall be run as follows:

a) Separated by a minimum of 12 inches (305 mm), or properly shielded, from exhaust piping

b) Separated from fuel lines by a minimum of six (6) inches (152 mm) distance.

iii. Electrical cord or conduit shall be supported within six (6) inches (152 mm) of any junction box and at a minimum of every 24 inches (610 mm) of continuous run. Supports shall be made of nonmetallic materials or corrosion protected metal. All supports shall be of a design that does not cut or abrade the conduit or cable and shall be mechanically fastened to the vehicle.

f. Wiring Identification

i. All line voltage conductors located in the main panel board shall be individually and permanently identified. The identification shall reference the wiring schematic or indicate the final termination point. When prewiring for future power sources or devices, the unterminated ends shall be labeled showing functions and wire size.

g. Wet Locations

i. All wet location receptacle outlets and inlet devices, including those on hardwired remote power distribution boxes, shall be of the grounding type provided with a wet location cover and installed in accordance with Section 210-7 "Receptacles and Cord Connections" of the NEC.

ii. All receptacles located in a wet location shall be not less than 24 inches (610 mm) from the ground.

iii. Receptacles on off-road vehicles shall be a minimum of 30 inches (762 mm) from the ground.

iv. The face of any wet location receptacle shall be installed in a plane from vertical to not more than 45 degrees off vertical. No receptacle shall be installed in a face up position.

h. Dry Locations

i. All receptacles located in a dry location shall be of the grounding type. Receptacles shall be not less than 30 inches (762 mm) above the interior floor height.

ii. All receptacles shall be marked with the type of line voltage (120-volts or 240-volts) and the current rating in amps. If the receptacles are direct current, or other than single phase, they shall be so marked.

i. Listing

i. All receptacles and electrical inlet devices shall be listed to UL 498, Standard for Safety Attachment Plugs and Receptacles, or other appropriate performance standards.

ii. Receptacles used for direct current voltages shall be rated for the appropriate service.

j. Electrical System Testing

i. The wiring and associated equipment shall be tested by the apparatus manufacturer or the installer of the line voltage system.

ii. The wiring and permanently connected devices and equipment shall be subjected to a dielectric voltage withstand test of 900-volts for one (1) minute. The test shall be conducted between live parts and the neutral conductor, and between live parts and the vehicle frame with any switches in the circuit(s) closed. This test shall be conducted after all body work has been completed.

iii. Electrical polarity verification shall be made of all permanently wired equipment and receptacles to determine that connections have been properly made.

k. Operational Test per Current NFPA 1901 Standards

i. The apparatus manufacturer shall perform the following operation test and ensure that the power source and any devices that are attached to the line voltage electrical systems are properly connected and in working order. The test shall be witnessed and the results certified by an independent third-party certification organization.

ii. The prime mover shall be started from a cold start condition and the line voltage electrical system loaded to 100 percent of the nameplate rating.

iii. The power source shall be operated at 100 percent of its nameplate voltage for a minimum of two (2) hours unless the system meets category certification as defined in the current NFPA 1901 standard.

iv. Where the line voltage power is derived from the vehicle's low voltage system, the minimum continuous electrical load as defined in the current NFPA 1901 standard shall be applied to the low voltage electrical system during the operational test.

Does your bid comply? YES_____ NO _____

2. Harrison™ Generator:

a. The generator shall be one (1) Harrison™ MAS Hydraulic Driven Generator rated at 10,000 watts, 82/84 amps, 120/240 VAC, 60Hz, 1-phase.

b. The apparatus shall be equipped with a complete electrical power system. The generator shall be a 10.0 kW hydraulic unit. The wiring and generator installation shall conform to the present National Electrical Codes Standards of the National Fire Protection Association. The installation shall be designed for continuous operation without overheating and undue stress on components.

c. Generator Performance

i. Continuous Duty Rating: 10,000 watts
ii. Nominal Volts: 120/240
iii. Amperage: 83 @ 120 volts, 42 @ 240 volts
iv. Phase: Single
v. Cycles: 60 hertz
vi. Engine Speed at Engagement: Idle
vii. RPM range: 900 to 3,000 (hydraulic pump)

d. Generator Dimensions

i. Length: 40.50"
ii. Width: 19.00"
iii. Height: 22.00"
iv. Weight: 485 pounds (dry)
v. The output of the generator shall be controlled by an internal hydraulic system. An electrical instrument gauge panel shall be provided for the operator to monitor and control all electrical operations and output.

i. The generator shall be driven by a transmission power take off unit, through a hydraulic pump and motor.
ii. The generator shall include an electrical control inside the cab. The hydraulic engagement supply shall be operational only after the chassis parking brake is applied.
iii. An electric/hydraulic valve shall supply hydraulic fluid to the clutch engagement unit provided on the chassis PTO drive.

e. Generator Instruments and Controls

To properly monitor the generator performance a digital meter panel shall be furnished and mounted next to the circuit breaker panel. The meter shall indicate the following items:

i. Voltage
ii. Amperage for both lines
iii. Frequency
iv. Generator run hours
v. Over current indication
vi. Over temperature indication
vii. "Power On" indication
viii. Two (2) fuse holders with two (2) amp fuses (for indicator light protection)
ix. The meter and indicators shall be installed near eye level in the compartment. Instruments shall be flush mounted in an appropriate sized weatherproof electrical enclosure. All instruments used shall be accurate within +/- two (2) percent.

f. Generator Wiring:

i. The system shall be installed by certified electrical technicians to assure the required level of safety and protection to the fire apparatus operators. The wiring,

electrical fixtures and components shall be to the highest industry quality standards available on the domestic market. The equipment shall be the type as designed for mobile type installations subject to vibration, moisture and severe continuous usage. The following electrical components shall be the minimum acceptable quality standards for this apparatus:

g. Wiring:

i. All electrical wiring shall be fine stranded copper type. The wire shall be sized to the load and circuit breaker rating; ten (10) gauge on 30 amp circuits, 12 gauge on 20 amp circuits and 14 gauge on 15 amp circuits. The cable shall be run in corner areas and extruded aluminum pathways built into the body for easy access.

h. Load Center:

i. The main load center shall be Square D or Cutler Hammer with circuit breakers rated to load demand.

i. Circuit Breakers:

i. Individual breakers shall be provided for all on-line equipment to isolate a tripped breaker from affecting any other on-line equipment.

Does your bid comply? YES_____ NO _____

3. Generator Location:

a. The unit shall be located in the passenger's side, hose bed/dunnage area, near the front of the apparatus above the water tank.

b. The flooring in this area shall be either reinforced or constructed, in such a manner, that it shall handle the additional weight of the generator.

Does your bid comply? YES_____ NO _____

4. Generator Start:

a. There shall be a green "OK to engage PTO" light located on the switch panel which shall indicate when conditions are met to engage the PTO.

b. There shall be two (2) switch locations to engage the generator:

i. One (1) shall be located on the cab instrument panel
ii. One (1) shall be located on the switch panel in compartment L1

Does your bid comply? YES_____ NO _____

5. Generator Display:

a. A FROG (Frequency Regulation of Generator) display kit shall be installed to monitor the generator.

b. The display shall be installed in compartment L1 adjacent to the load center.

c. The kit shall include:

i. One (1) Display module.
ii. One (1) Voltage transformer.
iii. Two (2) Current transformers and cables.

d. The display module shall consolidate five (5) generator monitoring instruments into one device. The display case shall be waterproof and have dimensions not to exceed 4 ¼" high by 4 ¼" wide by 3 ¼" deep.

e. The following continuous displays shall be provided with super bright LED digits more than ½""" high:

i. Generator frequency in hertz
ii. Line 1 current in ampere
iii. Line 2 current in amperes
iv. Generator voltage in volts

f. The program shall support the accumulation of elapsed generator hours and the monitoring of hydraulic oil temperature. Generator hours and oil temperature shall be displayed at the push of a button. Audible warning alarm outputs are provided for generator overload, over/under voltage fluctuations, and high oil temperature.

Does your bid comply? YES_____ NO _____

6. Circuit Breaker Panel:

a. There shall be an electrical load panel furnished and installed in a protected environment.

b. The load center shall have provisions for eight (8) 20 amp manual reset type circuit breakers.

c. The load center shall be surface mounted to the upper -outward facing- back wall of the L1 compartment.

d. The box shall be located as far forward to the bulkhead wall of the L1 compartment as possible.

Does your bid comply? YES_____ NO _____

7. Electric Cord Reel:

a. Furnished with the 120 volt AC electrical system shall be a cord reel.

b. The reel shall be provided with a 12-volt electric rewind switch, that is guarded to prevent accidental operation and labeled for its intended use.

c. The switch shall be protected with a fuse and installed at a height not to exceed 72 inches above the operators standing position.

d. A ball stop shall be provided to prevent the cord from being wound on the reel.

e. A label shall be provided in a readily visible location adjacent to the reel. The label shall indicate current rating, current type, phase, voltage and total cable length.

f. A total of one (1) cord reel shall be provided and mounted in the front bumper extension compartment.

g. The cord reel should be configured with three (3) conductors.

Does your bid comply? YES_____ NO _____

8. Cord:

a. Provided for electric distribution shall be one (1) length installed on the reel of 100 feet of yellow 10/3 electrical cord, weather resistant 105 degree C to -50 degree C, 600 volt jacketed SOOW cord. A Hubbell, 30 amp, 120 volt, and a straight blade connector body shall be installed on the end of the cord.

Does your bid comply? YES_____ NO _____

9. Portable Junction Box:

a. There shall be four (4) 120 vac, 20 amp straight blade receptacles provided in a portable junction box.

b. The junction box shall be of weatherproof construction and have flip up lids lined with soft neoprene rubber at each outlet opening.

c. A Hubbell, 30 amp, 120 volt, straight blade connector body.

d. A total of one (1) shall be provided.

Does your bid comply? YES_____ NO _____

10. Harrison™ Integrated Hydraulic Technology IHT System:

a. The apparatus shall be equipped with a Harrison™ IHT system to supply hydraulic power to the following components:

i. Auxiliary Circuit #1: Harrison MAS Hydraulic Driven Generator
ii. Auxiliary Circuit #2: Genesis Rescue Tool Pump

b. The components for Auxiliary Circuit #1 and Auxiliary Circuit #2 shall be purchased separately and are not included with the Harrison IHT system.

c. The Harrison IHT system shall be comprised of, but not limited to the following components:

i. Variable displacement piston pump; (provided with the Harrison Generator or with the Harrison IHT system when a generator is not used)
ii. Hydraulic Function Manifold; (Provided with the Harrison IHT system)
iii. Hydraulic Reservoir; (provided with the Harrison Generator or with the Harrison IHT system when a generator is not used)
iv. Proportional Meter Head; as required.
v. Heat Exchanger(s); (provided with the Harrison Generator or with the Harrison IHT system when a generator is not used)
vi. Upgraded Standard Generator Components as needed to work with the Harrison IHT system; as required.

d. The variable displacement piston pump shall be capable of supplying all required flows and pressures for the system. Gear pumps shall not be allowed.

e. The custom designed hydraulic function manifold shall route the fluid to the required Auxiliary Circuits as selected by the apparatus operator.

f. The custom designed hydraulic function manifold shall be designed, engineered, and manufactured for the specific apparatus application and not a general use, generic, or third party manifold.

g. The Harrison™ IHT system shall be fully operable with the vehicle in motion or stationary.

h. There shall be one (1) "Master Hydraulic" power switch located on the cab instrument switch panel. When activated, the switch will engage the transmission mounted PTO for the variable displacement piston pump.

i. There shall be two (2) control switches for "Auxiliary Circuit #1":

i. One (1) located on the cab instrument panel and
ii. One (1) located on the switch panel inside compartment L1

j. There shall be two (2) control switches for "Auxiliary Circuit #2":

i. One (1) located on the cab instrument panel and
ii. One (1) located on the switch panel inside compartment L1

k. The switches for both auxiliary circuits will only be active once the "Master Hydraulic" power switch is on.

l. The "Auxiliary Circuit #1" and "Auxiliary Circuit #2" switches will be properly labeled, identifying the exact function, and will provide independent operation for each circuit.

m. All components of the integrated hydraulic system shall be designed and engineered for ease of maintenance and service. All hydraulic filters utilized shall be fully accessible and removable from the top of the reservoir, no exceptions.

n. The drain line for the hydraulic fluid reservoir shall be fitted with a stainless steel ball valve, sealed in the closed position with a cable tie to prevent accidental opening. Drain lines shall be routed to the bottom of the apparatus for easy removal of hydraulic oil. The drain lines shall be fitted with a sealing plug to keep out contaminants and road debris.

o. Only Harrison™ Hydraulic Solutions IHT "Certified" component suppliers shall be allowed to be powered by the Harrison™ IHT system. Components that have not received "Certification" from Harrison™ Hydraulic Solutions will not be allowed.

p. The Harrison™ IHT system shall be designed, engineered, and manufactured by a single manufacturer with a minimum of 40 years of hydraulic experience, no exceptions.

q. Hydraulic system suppliers who do not manufacturer their own pumps and manifolds shall not be considered.

Does your bid comply? YES_____ NO _____

11. Hydraulic & Electric Reel(S) - Front Bumper Mounted:

a. There shall be two (2) CMW™ Products, electric rewind hose reels provided. One (1), model 6011, dual reel, shall be mounted on the driver's side and one (1), single reel, model 6015, mounted on the officer's side.

b. Each reel shall have an individual push button rewind switch with a protected guard.

c. The dual reel assembly on the driver's side of the front bumper shall have a capacity 100', twin hydraulic hose, capacity installed on the inboard reel and 100' of 10/3 (previously spec'd) yellow electrical cord installed on the outboard reel.

d. The single reel on the officer's side assembly shall have 100' twin hydraulic hose capacity.

e. A total of two (2), Genesis approved, color coded, twin hydraulic hoses shall be provided.

f. All hydraulic hoses and components used in the Harrison/Genesis Rescue Tool System shall be approved by Genesis, including pressure ratings, fittings, and hose construction.

g. The hose provided shall be one (1) continuous length, without unions.

h. The hydraulic rescue tool hoses shall be pre-filled and charged with Genesis approved hydraulic fluid.

i. The provided twin high pressure, hydraulic rescue hoses, shall be compatible with the customers rescue tool system.

j. The hose shall be equipped with a single connection coupling on one (1) end, which allows a twin hose hydraulic system to be converted into a single coupling. The opposite end of the hose shall be equipped with swivel fittings.

k. Each hose shall be 70 feet in length, color coded, ¼" twin hydraulic with a 10,500 psi (720 bar) rating.

l. A ball stop shall also be provided.

Does your bid comply? YES_____ NO _____

G. MISCELLANEOUS:

1. Loose Equipment:

a. The following equipment shall be furnished with the completed unit:

i. One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts, and washers, as used in the construction of the unit.
ii. 600' of 3"x 50', DJ800, blue fire hose
iii. 800' of 2 ½" x 50', DJ800, white fire hose
iv. 400' of 1.75" x 50', Combat Ready, white fire hose
v. Two (2) 6' FDNY roof hooks
vi. One (1) 8' FDNY roof hook
vii. One (1) 10' FDNY roof hook
viii. One (1) 2 ½" x 2 ½", long handle, ball valve with NST threads shall be provided for a second control of the deluge gun by a firefighter stationed on the top of the pump module.
ix. One (1) set(s) of NFPA compliant Ziamatic folding wheel chocks model # SAC-44-E shall be supplied with the apparatus.
x. One (1) set(s) Ziamatic folding wheel chock underbody horizontal mounts model #SQCH-44-H shall be installed on the apparatus under the body in front of the rear wheels.
xi. Two (2) Akron, Electric Cord Reel with LED Light

Does your bid comply? YES_____ NO _____

2. Paint:

a. The exterior custom cab and body shall be painted prior to the installation of glass accessories and all other cab trim to ensure complete paint coverage and the maximum in corrosion protection of all metal surfaces.
b. All metal surfaces on the entire cab and body shall be ground by disc to remove any surface oxidation or surface debris which may hinder the paint adhesion. Once the surface is machine ground a high quality acid etching of base primer shall be applied. Upon the

application of body fillers and their preparation, the cab and body shall be primed with a coating designed for corrosion resistance and surface paint adhesion. The maximum thickness of the primer coat shall be 2.00 mils or equivalent.

c. The entire cab and body shall then be coated with an intermediate solid or epoxy surfacing agent that is designed to fill any minor surface defects, provide an adhesive bond between the primer and the paint and improve the color and gloss retention of the color. The finish to this procedure shall be a sanding of the cab and body with 360 grit paper followed by sealing the seams with SEM brand seam sealer.

d. The cab and body shall then be painted the specific color designated by the customer with an acrylic urethane type system designed to retain color and resist acid rain and most atmospheric chemicals found on the fire ground or emergency scene.

e. The paint shall have a minimum thickness of 2.00 mils, followed by a clear top coat not to exceed 2.00 mils.

f. The entire cab and body shall then be baked at 180 degrees for one (1) hour to speed the curing process of the coatings.

Does your bid comply? YES_____ NO _____

3. Body Paint Color:

a. The apparatus body shall be painted and color matched to the department's current fleet.

Does your bid comply? YES_____ NO _____

4. Paint/Seal Chassis Frame Assembly:

a. The following components shall be treated with an epoxy heavy duty coating protection prior to finish paint:

b. Two (2) C-channel frame rails

c. Before the frame rails are finish painted, all areas shall be sealed with a 3M 2084 metal sealant after the components are torqued to the frame rails:

i. The joint between all cross members and the frame.
ii. The joint between all spring hangers and the frame.

d. The chassis frame assembly shall be finish painted, black, before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.

e. Components that are included with the chassis frame assembly that shall be finish painted are:

i. Frame rails
ii. Cross members
iii. Axles
iv. Suspensions
v. Steering gear
vi. Battery boxes
vii. Bumper extension weldment
viii. Frame extensions
ix. Body mounting angles
x. Rear Body support substructure (front and rear)
xi. Pump house substructure
xii. Air tanks
xiii. Fuel tank
xiv. Castings
xv. Individual piece parts used in chassis and body assembly

f. After the chassis frame assembly is finish painted, the following non-torqued joints shall be sealed with a rust-proofing compound:
g. All bolted on chassis components that could be vulnerable to rust, i.e. body mounting angles, air tanks, etc.

h. To summarize, all metal to metal contact components that are prone to rust, shall be protected.

Does your bid comply? YES_____ NO _____

5. Cab Undercoat:

a. There shall be a rubberized undercoating applied to the underside of the cab that provides abrasion protection, sound deadening and corrosion protection.

Does your bid comply? YES_____ NO _____

6. Compartment Interior Paint:

a. The interior of the body compartments shall be painted with light gray spatter type paint.

Does your bid comply? YES_____ NO _____

7. Reflective Band:

a. There shall be a 10" high reflective Scotchlite™ stripe applied to the chassis and apparatus body as specified:

b. The reflective striping shall be applied around the perimeter of the front of the apparatus in a straight line. In addition, when the stripe reaches the front area of the body, the stripe shall jog in a 'Hockey Stick' shape pattern, then continuing around the rear of the apparatus at a slightly higher level.

c. The reflective striping shall be white in color with a ¼" black separation stripe on the top and bottom of the stripe.

d. The Bidder shall match the customer's current stripe.

Does your bid comply? YES_____ NO _____

8. Chevron Striping – Rear:

a. A minimum of fifty percent of the rear vertical surface of the unit shall be overlaid with a diamond grade reflective material, installed in an alternating "Chevron" pattern (sloping down and away from the centerline) at a 45-degree angle.

b. Each stripe shall be 6" wide and the colors of striping shall be in compliance with the current edition of NFPA 1901.

c. The colors of the stripes shall be florescent lime yellow and red.

Does your bid comply? YES_____ NO _____

9. Reflective Stripe, Cab Doors:

a. The interior of each door shall include reflective tape.

b. A black, Scotchlite™ reflective tape shall be provided vertically along the outer rear edge of each cab door.

c. The lowest portion of each door skin shall include a black reflective, Scotchlite™, tape.

d. The tape shall measure 6.00 inches in height.

Does your bid comply? YES_____ NO _____

10. Lettering:

a. The lettering shall be totally encapsulated between two (2) layers of clear vinyl.

b. One hundred one (101) to one hundred twenty (120) printed effect gold leaf lettering, 3.00" high, with outline and shade be provided.

Does your bid comply? YES_____ NO _____

11. Fire Apparatus Parts Cd Manual:

a. There shall be two (2) custom parts manuals for the complete fire apparatus provided in CD format with the completed unit.

b. The manuals shall contain the following:

i. Job number
ii. Part numbers with full descriptions
iii. Table of contents
iv. Parts section sorted in functional groups reflecting a major system, component, or assembly
v. Parts section sorted in Alphabetical order
vi. Instructions on how to locate parts

c. The manuals shall be specifically written for the chassis and body model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.

Does your bid comply? YES_____ NO _____

12. Service Parts Internet Site:

a. The service parts information included in these manuals 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 _____

13. Chassis Service Cd Manuals:

a. There shall be two (2) CD format chassis service manuals containing parts and service information on major components provided with the completed unit.

b. The manual shall contain the following sections:

i. Job number
ii. Table of contents
iii. Troubleshooting
iv. Front Axle/Suspension
v. Brakes
vi. Engine
vii. Tires
viii. Wheels
ix. Cab
x. Electrical, DC
xi. Air Systems
xii. Plumbing
xiii. Appendix

c. The manual shall be specifically written for the chassis model being purchased. It shall not be a generic manual for a multitude of different chassis and bodies.

Does your bid comply? YES_____ NO _____

URBANA FIRE DEPT. PUMPER SPECIFICATION

14. Chassis Operation Cd Manuals:

a. There shall be two (2) CD format chassis operation manuals provided.

Does your bid comply? YES_____ NO _____

15. Two (2) Year Material And Workmanship Warranty:

a. A two (2) year warranty shall be offered from the date of delivery.

b. The warranty shall cover such portions of the chassis & body built by the manufacturer as being free from a structural failures caused by defects in material and workmanship that would arise under normal use and service.

c. Warranties qualified to the chassis and body design construction (excluding vender component warranties such as engine, axles, transmission, pumps, and etc.) will be from a single source manufacturer and not separated between manufacturers (i.e. body and chassis). The bidder shall provide evidence of maintaining compliance to this requirement.

d. This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities.

e. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

16. Engine Warranty:

a. The Cummins engine shall be warranted for a period of five (5) years or 100,000 miles, whichever occurs first.

b. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

17. Steering Gear Warranty:

a. A three (3) year limited steering gear warranty shall be provided.

b. A copy of the warranty certificate shall be submitted with the bid package.

Does your bid comply? YES_____ NO _____

18. Fifty (50) Year Structural Integrity:

a. The chassis frame and cross members shall be provided with a fifty (50) year material and workmanship limited warranty.

b. The warranty shall cover the chassis frame and cross members as being free from defects in material and workmanship that would arise under normal use and service.

c. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

19. Front Axle Three (3) Year Material and Workmanship Warranty:

a. The independent front suspension shall be provided with a three (3) year material and workmanship limited warranty.

b. The manufacturer's warranty shall provide that the independent front suspension and steering gears be free from any defect related to material and workmanship on the portion of the apparatus built by the manufacturer that would arise under normal use and service.

c. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

20. Rear Suspension Axle Three (3) Year Material and Workmanship Warranty:

a. A three (3) year rear suspension limited warranty shall be provided.

b. The manufacturer's warranty shall provide that the complete rear air suspension system be free from any defect related to material and workmanship on the portion of the apparatus built by the manufacturer that would arise under normal use and service.

Does your bid comply? YES_____ NO _____

21. Brake System Three (3) Year Material and Workmanship Warranty:

a. A three (3) year brake system limited warranty shall be provided.

Does your bid comply? YES_____ NO _____

22. Cab Structural Warranty:

a. The cab structure shall be warranted for a period of ten (10) years or one hundred thousand (100,000) miles which ever may occur first.

b. The warranty period shall commence on the date the completed apparatus is delivered.

c. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

23. Structural Body Warranty:

a. A structural Stainless Steel body warranty shall be provided by the apparatus manufacturer for products of its manufacture to be free from defects in material and workmanship, under normal use and service, for a period of twenty (20) years.

b. The warranty period shall commence on the date the completed apparatus is delivered.

c. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

24. Paint Warranty:

a. A ten (10) year, non-prorated paint warranty shall be included with the apparatus.

b. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

25. Five (5) Year Material and Workmanship:

a. The electronic modules and/or display(s) shall be provided with a five (5) year material and workmanship limited warranty.

b. The warranty shall cover electronic modules to be free from failures caused by defects in material and workmanship.

c. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

26. Compartment Light Warranty:

a. A ten (10) year material and workmanship limited warranty shall be provided for the AMDOR™ 12 volt DC LED strip lights.

b. The warranty shall cover the LED strip lights to be free from defects in material and workmanship that would arise under normal use.

c. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

27. Transmission Warranty:

a. The Allison EVS series transmission shall be warranted for a period of five (5) years with unlimited mileage.

b. 100% parts and labor shall be included in the warranty.

c. The warranty is to be provided by the transmission supplier and not the apparatus builder.

Does your bid comply? YES_____ NO _____

28. Water Tank Warranty:

a. A lifetime water tank warranty will be provided by the tank manufacturer, Pro Poly.

b. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

29. Roll Up Door Material And Workmanship Warranty:

a. A roll-up door limited warranty shall be provided.

b. The roll-up door shall be warranted against manufacturing defects for a period of ten (10) years.

c. A five (5) year limited warranty shall be provided on painted roll up doors.

d. A copy of the warranty certificate shall be submitted with the bid package.

Does your bid comply? YES_____ NO _____

30. Pump Warranty:

a. Waterous Co shall provide a limited manufacturer's pump warranty to be free from defects in material and workmanship, under normal use and service, for a period of five (5) years from the date placed into service.

b. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

31. Pump Plumbing Warranty:

a. A Stainless Steel Plumbing/Piping and ancillary brass fittings used in the construction of the water plumbing system shall be warranted for a period of ten (10) years from the date of delivery.

b. 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.

c. A copy of the warranty certificate shall be submitted with the bid package (No Exception).

Does your bid comply? YES_____ NO _____

32. Vehicle Stability Certification:

a. The fire apparatus manufacturer shall provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability.

b. The certification shall be provided at the time of bid.

Does your bid comply? YES_____ NO _____

33. Engine Installation Certification:

a. The fire apparatus manufacturer shall provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the Bidder's chassis.

b. The certification shall be provided at the time of bid.

Does your bid comply? YES_____ NO _____

34. Power Steering Certification:

a. The fire apparatus manufacturer shall provide a certification stating the power steering system as installed meets the requirements of the component supplier.

b. The certification shall be provided at the time of bid.

Does your bid comply? YES_____ NO _____

35. Cab Integrity Certification:

a. The fire apparatus manufacturer shall provide, at the time of delivery, a cab integrity certification.

b. Testing shall meet or exceed the requirements below:

i. European Occupant Protection Standard ECE Regulation No.29
ii. SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks
iii. SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks

c. There shall be no exception to any portion of the cab integrity certification.

Does your bid comply? YES_____ NO _____

36. Cab Door Durability Certification:

a. Robust cab doors help protect occupants. Cab doors shall survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration.

b. The Bidder shall certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.

Does your bid comply? YES_____ NO _____

37. Windshield Wiper Durability Certification:

a. Visibility during inclement weather is essential to safe apparatus performance.

b. Windshield wipers shall survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 *Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles.*

c. The Bidder shall certify that the wiper system design has been tested and that the wiper system has met these criteria.

Does your bid comply? YES_____ NO _____

38. Electric Window Durability Certification:

a. Cab window roll-up systems can cause maintenance problems if not designed for long service life.

b. The window regulator design shall complete 30,000 complete up-down cycles and still function normally when finished.

c. The Bidder shall certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.

Does your bid comply? YES_____ NO _____

39. Seat Belt Anchor Strength:

a. Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing.

b. Each seat belt anchor design shall withstand 3000 lbs. of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages.

c. The Bidder shall certify that each anchor design was pull tested to the required force and met the appropriate criteria.

Does your bid comply? YES_____ NO _____

40. Seat Mounting Strength:

a. Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing.

b. Each seat mounting design shall be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems.

c. The Bidder shall certify that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.

Does your bid comply? YES_____ NO _____

41. Cab Defroster Certification:

a. Visibility during inclement weather is essential to safe apparatus performance.

b. The defroster system shall clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure and Performance Requirements - Trucks, Buses, and Multipurpose Vehicles.

c. The Bidder shall certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.

Does your bid comply? YES_____ NO _____

42. Cab Heater Certification:

a. Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene.

b. The cab heaters shall warm the cab 75 F from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381.

c. The Bidder shall certify that a substantially similar cab has been tested and has met these criteria.

Does your bid comply? YES_____ NO _____

43. Cab Air Conditioning Performance Certification:

a. Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene.

b. The cab air conditioning system shall cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 67 degrees Fahrenheit in 30 minutes.

c. The Bidder shall certify that a substantially similar air conditioning system has been tested and has met these criteria. The certification shall be available at the time of delivery.

URBANA FIRE DEPT. PUMPER SPECIFICATION

Does your bid comply? YES_____ NO _____

44. Pump Certification And Testing:

a. The apparatus upon completion will be tested and certified by Underwriters Laboratories, Inc. The certification tests will follow the guide lines outlined in NFPA 1901 "Standard for Fire Apparatus".

b. There shall be multiple tests performed by the contractor and Underwriter's Laboratories when the apparatus has been completed. The manufacturer shall provide the completed Test Certificate(s) to the purchaser at time of delivery. The inspection services of Underwriters Laboratories are available to all Bidders on an equal basis; therefore, no third party certification of testing results shall be acceptable.

c. The fire pump shall be mounted on the apparatus and shall have a minimum rated capacity of 250 gpm (1000 L/min) at 150 psi (1000 kPa) net pump pressure.

d. Where the apparatus is designed for pump in-motion operations, the vehicle drive engine and drive train shall be arranged so that the pump can deliver at least 20 gpm (76 L/min) at a gage pressure of 80 psi (550 kPa), while the fire apparatus is moving.

e. If the pumping system provided is rated at 3000gpm (12,000 L/min) or less, the pump shall be capable of delivering the following:

   i. One hundred percent of rated capacity at 150 psi (1000 kPa) net pump pressure
   ii. Seventy percent of rated capacity at 200 psi (1400 kPa) net pump pressure
   iii. Fifty percent of rated capacity at 250 psi (1700 kPa) net pump pressure

f. If the pumping system provided is rated at greater than 3000 gpm (12,000 L/min), the pump shall be capable of delivering the following:

   i. One hundred percent of rated capacity at 100 psi (700 kPa) net pump pressure
   ii. Seventy percent of rated capacity at 150 psi (1000 kPa) net pump pressure
   iii. Fifty percent of rated capacity at 200 psi (1400 kPa) net pump pressure

g. If the fire pump has a rated capacity of 750 gpm (3000 L/min) or greater, the pump shall be tested after the pump and all its associated piping and equipment have been installed on the apparatus.

h. The tests shall include at least the pumping test, the pumping engine overload test, the pressure control system test, the priming device tests, and the vacuum test.

i. A test plate shall be provided at the pump operator’s panel that gives the rated discharges and pressures together with the speed of the engine as determined by the certification test for each unit, the position of the parallel/series pump as used, and the governed speed of the engine as stated by the engine manufacturer on a certified brake horsepower curve. The plate shall be completely stamped with all information at the factory and attached to the vehicle prior to shipping.

URBANA FIRE DEPT. PUMPER SPECIFICATION

Does your bid comply? YES_____ NO _____

45. Low-Voltage Electrical System Performance Testing:

a. The apparatus low-voltage electrical system will be tested and certified. Tests shall be performed when the air temperature is between 0°F and 110°F (–18°C and 43°C). The three tests defined in NFPA shall be performed in the order in which they appear. Before each test, the batteries shall be fully charged until the voltage stabilizes at the voltage regulator set point and the lowest charge current is maintained for 10 minutes. Failure of any of these tests shall require a repeat of the sequence.

Does your bid comply? YES_____ NO

46. Reserve Capacity Test:

a. The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged.

b. The engine shall be shut off and the minimum continuous electrical load shall be activated for 10 minutes.

c. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a test failure of the battery system.

Does your bid comply? YES_____ NO

47. Alternator Performance Test at Idle:

a. The minimum continuous electrical load shall be activated with the engine running at idle speed.

b. The engine temperature shall be stabilized at normal operating temperature.

c. The battery system shall be tested to detect the presence of battery discharge current.

d. The detection of battery discharge current shall be considered a test failure.

Does your bid comply? YES_____ NO

48. Alternator Performance Test at Full Load:

a. The total continuous electrical load shall be activated with the engine running up to the engine manufacturer's governed speed.

b. The test duration shall be a minimum of 2 hours.

c. Activation of the load management system shall be permitted during this test.

d. An alarm sounded by excessive battery discharge, as detected by the system required in NFPA 13.3.4, or a system voltage of less than 11.8 V dc for a 12 V nominal system or 23.6 V dc for a 24 V nominal system, for more than 120 seconds, shall be considered a test failure.

Does your bid comply? YES_____ NO

49. Low Voltage Alarm Test:

a. Following the above test, a Low Voltage Alarm Test will be performed in the manner prescribed:

b. With the engine shut off, the total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm activates.

c. The battery voltage shall be measured at the battery terminals.

d. The test shall be considered a failure if the alarm has not yet sounded 140 seconds after the voltage drops to 11.70V for a 12 V nominal system or 23.4 V for a 24 V nominal system.

e. The battery system shall then be able to restart the engine. Failure to restart the engine shall be considered a test failure.

Does your bid comply? YES_____ NO _____

50. Chassis Required Labeling:

a. Signs that state "Occupants must be seated and belted when apparatus is in motion" shall be provided and installed in the cab and be visible from all seating positions.

b. There shall be a lubrication plate mounted inside cab listing the type and grade of lubrication used in the following areas on the apparatus and chassis:

i. Engine oil
ii. Engine Coolant
iii. Transmission Fluid
iv. Pump Transmission Lubrication Fluid (if applicable)
v. Drive Axle Lubrication Fluid
vi. Generator Lubrication Fluid (if applicable)
vii. Tire Pressures

Does your bid comply? YES_____ NO _____

51. Apparatus Information Label:

a. A high-visibility label shall be provided and installed in a location clearly detectable to the driver while in the seated position indicating the following:

b. The label shall indicate the following specified information.

i. Overall Height listed in feet and inches.
ii. Overall Length listed in feet and inches.
iii. Overall GVWR listed in tons.

Does your bid comply? YES_____ NO _____

52. Apparatus Labeling:

a. The apparatus shall be descriptively tagged with color coded metal labels. The labels shall be applied near the apparatus features that require a user function description.

b. Wherever necessary, the labels shall be color coded to differentiate controls and their respective functions to simplify and clarify complex configurations.

Does your bid comply? YES_____ NO _____

53. Supplied Information & Extras:

a. The apparatus manufacturer shall supply two (2) copies of apparatus manuals with all manufactured apparatus.

b. The manuals shall include, but not be limited to: all component warranties, users' manuals and information for supplied products, apparatus engineering information including drawings and build prints, and whatever other pertinent information the manufacturer can supply to its customer regarding the said apparatus.

c. Included in the delivery of the unit, the manufacturer shall also include spare hardware and extra fasteners, paint for touch-up, information regarding washing and care procedures, as well as other recommendations for care and upkeep of the general apparatus.

d. The manufacturer shall also supply a manufacturer's record of apparatus construction details, including the following information:

i. Owner name and address;
ii. Apparatus manufacturer, model, and serial number;
iii. Chassis make, model, and serial number;
iv. GAWR of front and rear axles;
v. Front tire size and total rated capacity in pounds;
vi. Rear tire size and total rated capacity in pounds;
vii. Chassis weight distribution in pounds with water (if applicable) and manufacturer mounted equipment (front and rear)
viii. Engine make, model, serial number, rated horsepower, related speed and no load governed speed;

ix. Type of fuel and fuel tank capacity;
x. Electrical system voltage and alternator output in amps;
xi. Battery make and model, capacity in CCA:
xii. Paint numbers;
xiii. Weight documents from a certified scale showing actual loading on the front axle, rear axle(s), and overall vehicle (with the water tank full (if applicable) but without personnel, equipment, and hose):
xiv. Written load analysis and results of the electrical system performance tests;
xv. Transmission make, model, and type;
xvi. Pump to drive through the transmission (yes or no);
xvii. Engine to pump gear ratio and transmission gear ratio used;
xviii. Pump make and model, rated capacity in gallons per minute, serial number, and number of stages;
xix. Pump manufacturer's certification of suction capability;
xx. Pump manufacturer's certification of hydrostatic test;
xxi. Pump manufacturer's certification of inspection and test for the fire pump;
xxii. Copy of the apparatus manufacturer's approval for stationary pumping applications;
xxiii. Pump transmission make, model and serial number;
xxiv. Priming device type;
xxv. Type of pump pressure control system;
xxvi. The engine manufacturer's certified brake horsepower curve for the engine furnished, showing the maximum no load governed speed;
xxvii. Certification of water tank capacity;

Does your bid comply? YES_____ NO _____

54. Addition Pricing Options:

The Bidder will provide two (2) additional price option plans for construction materials. These options will be in addition to the above detailed specifications.

a. The Bidder will provide two (2) additional price option plans for construction materials. These options will be in addition to the above detailed specifications.

i. Option 1 – the Bidder shall include the cost increase or reduction for supplying an all-aluminum apparatus body and related components.

ii. Option 2 – The Bidder shall include the cost increase or reduction for supplying a stainless steel cab option.

Does your bid comply? YES_____ NO _____

55. Proprietary Parts:

a. The Bidder shall provide the percentage of proprietary parts used to manufacture the specified apparatus.

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Does your bid comply? YES_____ NO _____

56. Bid Offer Period:

a. The submitted bid shall be good for a term of 90 days starting from the day of bid opening.

Does your bid comply? YES_____ NO _____

57. Changes:

a. The City of Urbana reserves the right to make any desired change to specifications after same has been put under contract, with the change and price of said change to be added or deducted from bid contract price.

b. All changes are to be agreed upon in writing between the City of Urbana and the successful Bidder before such changes become effective.

Does your bid comply? YES_____ NO _____

END