

**TOWN OF GUILFORD  
REQUEST FOR PROPOSAL  
RFP #1-1718  
HEAVY RESCUE VEHICLE  
FOR THE FIRE DEPARTMENT**

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**REQUIREMENTS**

- |   |                |                                |
|---|----------------|--------------------------------|
| <b>1.) Certificate of Insurance</b>   | <u>  Yes  </u> | <i>Submit upon award</i>       |
| <b>2.) Bid Bond/cashier's check</b>   | <u>  Yes  </u> | <i>Include in bid proposal</i> |
| <b>3.) 100% Performance Bond</b>  | <u>  Yes  </u> | <i>Include in bid proposal</i> |
| <b>4.) Labor &amp; Materials Bond</b>   | <u>  NO  </u>  | <i>Not Applicable</i>          |
| <b>5.) Vendor References</b>  | <u>  Yes  </u> | <i>Include in bid proposal</i> |
| <b>6.) Affidavits</b>   | <u>  Yes  </u> | <i>Include in bid proposal</i> |
| <b>7.) Required completion of questionnaire referenced in article 3 above</b> | <u>  Yes  </u> | <i>Include in bid proposal</i> |

I.

**LEGAL NOTICE  
TOWN OF GUILFORD  
REQUEST FOR PROPOSAL #1 – 1718  
HEAVY RESCUE VEHICLE  
FOR THE FIRE DEPARTMENT**

The Town of Guilford, on behalf of the Fire Department, is seeking competitive bids for a heavy-duty rescue vehicle for the Fire Department. Sealed proposals labeled “RFP #1-1718 Heavy Rescue Vehicle” and marked “time sensitive”, will be due no later than Friday December 8, 2017 at 2:00 p.m. at the office of the First Selectman, Town Hall Second Floor, 31 Park Street, Guilford CT 06437 at which time they will be opened publically. Proposals received after this date and time will be rejected. Request for Proposal packages may be downloaded from the Town of Guilford’s website at [www.ci.guilford.ct.us](http://www.ci.guilford.ct.us) and the Connecticut Department of Administrative Services Procurement website.

Any questions regarding the specifications shall be submitted in writing by Monday December 4, 2017 at 12:00 p.m. to Charles E. Herrschaft, Jr., Guilford Fire Chief at [gfd10@guilfordfire.com](mailto:gfd10@guilfordfire.com) with a copy to the Purchasing Department at [millmanp@ci.guilford.ct.us](mailto:millmanp@ci.guilford.ct.us) .

Each bidder will be required to submit to the Office of the First Selectman, their original proposal with two (2) copies, and a bid bond, cashier’s or certified check in the amount of 10% of the base bid. Each bidder shall honor the bid price for ninety (90) business days from the date of the bid opening, without modification. Upon award of the RFP, the winning bidder shall be bound by the proposal price throughout the contract period.

The Town of Guilford reserves the right to reject any or all proposals; or to waive defects in same, if it deems such to be in the best interest of the Town.

\_\_\_\_\_  
Joseph S. Mazza  
First Selectman

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Publish one time only in the New Haven Register under LEGAL NOTICES on Thursday **November 9, 2017.**

## II.

### TOWN OF GUILFORD GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

The general rules and conditions outlined below apply to all purchases authorized by the Town of Guilford. The conditions outlined become a formal part of each Request for Proposals unless otherwise specified. All Bidders are expected to fully inform themselves as to the conditions, requirements and specifications before submitting bids. Failure to do so will be at the Bidder's own risk. The term bidder and bid shall have the same meaning as respondent and RFP and are used interchangeably throughout the RFP document.

The terms and conditions outlined in the Request for Proposal become part of the formal contract following award, unless specified otherwise. *In the event of any conflict between the terms of the General Conditions and Instructions to Bidders and the terms of the Fire Department Supplemental Instructions to Bidders, the Fire Department Supplemental Instructions to Bidders shall control.*

#### 1. BIDDING PROCEDURE

- 1.1 Bidder shall submit two (2) complete sets of the bid documents and all supporting material (one original and one copy) and one electronic copy, unless otherwise stated in the Invitation to Bid. All appropriate blanks shall be completed. The signer of the bid shall initial any interlineations, alteration or erasure on the specification document. Bidders shall not change the Proposal Form nor make additional stipulations on the specifications document.
- 1.2 Bid prices shall be submitted on the Proposal Form included in the bid document.
- 1.3 The Base Bid is the sum stated in the bid for which the Bidder offers to perform the work or provide merchandise or equipment described in the bid package as the base, to which work or materials may be added or from which work or materials may be deleted from sums stated in alternate bids.
- 1.4 Conditional bids are subject to rejection in whole or in part. A conditional bid is defined as one which limits or modifies any of the terms and conditions and/or specifications of the Invitation to Bid.
- 1.5 Alternate bids will not be considered unless specifically requested in the original bid package. An alternate bid is defined as one which is submitted in addition to the Bidder's Base Bid set forth in the Invitation to Bid. Town shall have the right to accept alternates in any order or combination, unless otherwise specifically provided in the bid documents, and to determine the low Bidder on the basis of the sum of the Base Bid and alternates accepted.
- 1.6 Unit prices will not be considered unless specifically requested in the original bid package. Unit price is defined as an amount proposed by Bidders, stated on the Proposal Form, as a price per unit of measurement for material or services added to or deducted from the base bid by appropriate modification, if estimated quantities of work required by the contract documents are increased or decreased.
- 1.7 Each bid must be legible (no pencil), include the full name, business and e-mail address, and telephone number of the Bidder and be signed in ink by the Bidder.

- 1.8 A bid by a firm or organization other than a corporation must include the name and address of each member.
- 1.9 A duly authorized representative of a Bidder entity must sign the bid and any applicable bond(s) in the name of such entity. Such representative must attest that he/she is duly authorized to bind such entity or submit a corporate resolution or limited liability/partnership consent evidencing such authority.
- 1.10 Bids received after the time and date established for receiving bids will be rejected.
- 1.11 At bid opening all bids are publicly opened and received. The bids will be considered unverified and subject to further review for acceptance/disqualification. Upon determination of acceptable bids to be considered for award, the Town shall prepare a bid summary by the Town of Guilford, which summary shall be available to all Bidders upon their request.
- 1.12 Estimated quantities may be listed as part of a bid package in order to assist Bidders, but Bidders are reminded that actual quantities ordered may vary from figures listed and the Town will not be held liable for any difference. On “as required” bids, acceptance of this bid will bind the Town to pay for, at unit price only, quantities ordered and delivered. The Town will not be required to accept delivery of any balances unordered as of the contract expiration date.
- 1.13 Bidders shall submit catalogues, descriptive literature and detailed drawings, fully detailing features, designs and construction necessary to fully describe the material or work proposed in the bid.

## **2. BIDDER’S SECURITY**

- 2.1 Bid Security, as a guarantee of good faith, in the amount of ten percent (10%) of the base bid in the form of a certified check, cashier’s check, or Bidder’s bond, shall be required to be submitted with the bid package for all bids.
- 2.2 Such bid security will be returned to the unsuccessful Bidders when the award of bid is made.
- 2.3 Bid security will be returned to the successful Bidder as follows:
  - 2.3.1 For bids with specified quantities for which the awarded bid package and delivery of award notice constitute the contract; upon the delivery of all equipment or merchandise (and/or performance of services, if applicable), and upon final acceptance by the Town.
  - 2.3.2 For all other contracts; upon receipt by the Town of the executed contract and applicable bonds, if any.
- 2.4 Town shall have the right to retain the bid security of Bidders to whom an award is being considered until either:
  - 2.4.1 A contract has been executed and bonds have been furnished.
  - 2.4.2 The specified time has elapsed so that the bids may be withdrawn.
  - 2.4.3 All bids have been rejected.
- 2.5 Bid security will be forfeited to the Town as full liquidated damages, but not as a penalty, for any of the following reasons:
  - 2.5.1 If the Bidder fails to deliver the equipment or merchandise in full compliance with the accepted proposal and specifications.
  - 2.5.2 If the Bidder fails or refuses to enter into a contract on forms provided by the Town, and/or if the Bidder fails to provide sufficient bonds or insurance within applicable time periods set forth in the bid package.
- 2.6 The surety company executing the bond must be licensed to do business in the state, or the bond must be countersigned by a company so licensed. The bond must be signed by an official of the

surety company and corporate seal must be affixed over his/her signature. Signatures of two witnesses for both the principal and surety must appear on the bond, if required by law. A power of attorney for the official signing the bond for the surety company must be submitted with the bond.

**3.) CLARIFICATION OF SPECIFICATIONS/ADDENDA**

- 3.1 Bidders shall promptly notify the Purchasing Agent of any ambiguity, inconsistency or error, which they may discover upon examination of the specification documents.
- 3.2 Bidders desiring clarification or interpretation of the specification documents shall make a written request which must reach the Purchasing Agent **by December 4, 2017 at noon**. Failure to request a clarification or interpretation within said time frame shall be deemed a waiver of the right to assert these issues and claims in the future.
- 3.3 Interpretations, corrections and changes made to the specification documents will be made by written addenda.
- 3.4 Oral interpretations or changes to the specifications documents made in any other manner, will not be binding on the Town and Bidders will not rely upon such interpretations or changes.
- 3.5 Addenda are written instruments issued by the Town prior to the bid opening date, which modify or interpret the specification document by addition, deletion, clarification or correction.
- 3.6 It is the Bidder's responsibility to check for addenda prior to submitting proposals.
- 3.7 Copies of addenda will be made available for inspection at the office of the Purchasing Agent and on the Town website [www.ci.guilford.ct.us](http://www.ci.guilford.ct.us) .
- 3.8 No addenda will be issued later than forty-eight (48) hours prior to the bid opening date, except addenda withdrawing the Invitation to bid or addenda which includes postponement of the bid.
- 3.9 Bidders shall ascertain prior to submitting their bid that they have received all addenda issued, and they shall acknowledge receipt of addenda on the Proposal Form.

**4. BIDDER REPRESENTATION**

- 4.1 Each Bidder by signing and submitting a bid, represents that the Bidder has read and understands the specifications documents, and the bid has been made in accordance therewith.
- 4.2 Each Bidder for services further represents that the Bidder has visited the site and has become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance, furnishing and completion of the services. Bidder acknowledges that it is solely responsible for investigating and satisfying itself as to all actual and existing site conditions.
- 4.3 Bidder recognizes and agrees that the Town is subject to the Freedom of Information Act of the Connecticut General Statutes and, as such, any information contained in or submitted with or in connection with Bidder's bid is subject to disclosure if required by law or otherwise. Bidder expressly waives any claims that Bidder or any of its successors and/or assigns has or may have against the Town or any of its directors, officers, employees or authorized agents as a result of any such disclosure.

## **5. SUBSTITUTIONS**

- 5.1 Wherever in the specifications or Bid Proposal form brand names, manufacturer, trade name, or catalog numbers are specified, it is for the purpose of establishing standard of required function, dimension, appearance and quality to be met by any proposed substitution.
- 5.2 No substitution will be considered prior to receipt of bids unless written request for approval has been received by Town at least five (5) business days prior to date of receipt of bids. It is the Bidder's responsibility to identify any alternate items offered in the bid, and prove to the satisfaction of the Town that said item is equal to, or better than, the product specified. Bidder shall identify the manufacturer and brand name of each proposed alternate, plus a complete description of the alternate items including illustrations, performance test data and any other information necessary for an evaluation. The Bidder must indicate any variances by item number from the specification document. Bidder must fully explain the variances from the specification document, since brochure information may not be sufficient. Town reserves the right to approve as an equal or to reject as not being equal any article the Bidder proposes to furnish which contains major or minor variations from the specifications requirements. Any deviation from the Town's specifications not previously submitted as required by the above will be grounds for rejection of the material and/or equipment.

## **6. SAMPLES**

- 6.1 When samples are required from Bidders, the samples may be retained by the Town of Guilford until the delivery of contracted items by the awarded Bidder; and, with respect to the rejected Bidders, upon notification of such rejection. Bidders shall be responsible for delivery and removal of samples, at Bidders' sole cost. All samples are to be marked samples and delivered to Guilford. The package must indicate the name of the Bidder, item enclosed and bid number. Failure to adequately identify samples as indicated may be considered sufficient grounds for rejection of the bid.

## **7. BID AWARD**

- 7.1 The signed bid proposal shall be considered an offer on the part of the Bidder. Such offer shall be deemed accepted upon (i) receipt of proper Town authorization from the Board of Selectmen; and (ii) delivery by the Town of a notice of award letter to the winning bidder, or if applicable, execution by the Town and Bidder of a separate contract, in the form included in the bid package, or if not included in the bid package, in a form mutually acceptable to both parties. In either case the terms and provisions of the Town's bid package shall be deemed incorporated into the contract. *Notwithstanding anything to the contrary stated herein, the contract shall be deemed executory only to the extent of appropriation available to each agency for the purchase of such articles/services, if the purchase is to be funded by such appropriation and not otherwise through Town bond authorization. The Town's extended obligation on those contracts which envision extended funding, through successive fiscal periods shall be contingent upon actual appropriations for the following year. In the event that funding is not available at the time of award and/or execution of the contract and/or if the Town budget is approved for the fiscal year*

*in which the contract is to be performed after contract execution or time of award but prior to the performance of the contract, the Town reserves the right to cancel the contract.*

- 7.2 Contracts shall be executed by the Bidder and delivered to the Town for counter-execution within five (5) business days of award notification.
- 7.3 No bid shall be modified or withdrawn for a period of ninety ( 90) calendar days after the time and date established for receiving bids, and each Bidder so agrees in submitting the bid. Upon award of the bid, the winning bidder shall be bound by the bid proposal price throughout the contract period.
- 7.4 If two or more Bidders submit identical bids and are equally qualified, the decision of the Town to make award to one or more of such Bidders shall be final
- 7.5 The contract will be awarded to the lowest responsible Bidder complying with all the provisions of the invitation, provided the bid price is reasonable and in the best interest of the Town of Guilford to accept it. The Town reserves the right to reject any or all bids. The Town specifically reserves the right to reject the low Bidder.

In determining responsibility the following qualifications in addition to price will be considered.

- a. The ability, capacity and skill of the Bidder to perform required services.
  - b. The ability of the Bidder to perform the contract or provide the service promptly within the time specified.
  - c. The quality of performance of previous contracts or services, including, without limitation, the safety record of the Bidder.
  - d. The previous and existing compliance by the Bidder with laws and ordinances relating to the contract or services.
  - e. The sufficiency of the financial resources and ability of the Bidder to perform the contract or provide the service.
  - f. The quality, availability and adaptability of the supplies or contractual services to the particular use required.
  - g. The ability of the Bidder to provide future maintenance and service for the use of the material and/or equipment.
- 7.6 The Town reserves the right to reject all bids or any part of a bid, to waive defects in bids, and to re-bid at anytime prior to the bid award if to do so is deemed to be in the best interest of the Town. The Town reserves the right to waive irregularities and technicalities in bids, such as shall best service the requirement and interest of the Town. Clerical errors detected at the bid opening will be corrected and initialed by the Selectman, Bidder and a witness if present.

## **8. TERMS OF PAYMENT**

- 8.1 Prepayment discounts for early payment are preferred. All others to be Net 30 days unless otherwise specified.
- 8.2 The Town is exempt from state and local taxes.
- 8.3 A contract shall be deemed executory only to the extent of appropriation available to each agency for the purchase of such articles. The Town's extended obligation on these contracts which envision extended funding, through successive fiscal periods shall be contingent upon actual appropriations for the following year.

## **9. PERFORMANCE/LABOR AND MATERIALS BOND**

- 9.1 If required by the bid specifications, the successful Bidder shall supply an original performance bond and labor and materials bond in the amount of 100% of the total awarded bid amount within five (5) business days of the award notification. The provisions of Section 2.6 above shall apply to the bonds required by this Section 9.1. The bonds shall remain in effect for one year from the date of delivery of the bonds to the Town. Should the Town elect to renew the terms of the accepted proposal, if applicable, then the bonds shall be extended for the period of such renewal period and the performance bond shall be increased to the full amount of the revised contract price, if applicable.

## **10. INSURANCE REQUIREMENTS**

- 10.1 The successful Bidder shall, at its own expense and cost, obtain and keep in force during the duration of the work/project the insurance set forth below covering the Bidder and its agents, employees and subcontractors and other providers of services and shall name the Town of Guilford and its employees and agents as "Additional Insureds" on a primary and non-contributory basis to the Bidder's Commercial General Liability and Automobile Liability Certificate of Insurance.
- 10.2 Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum Best's Rating of A-. In addition, all Carriers are subject to approval by the Town of Guilford.
- 10.3 The Town reserves the right to require additional coverages than those listed below, including, without limitation, Builder's Risk insurance for construction projects and Owner's Protective Liability, if desirable.
- 10.4 The required coverages are as follows:
  - a. **Worker's Compensation Insurance:** (i) statutory coverage, (ii) employer's liability and (iii) \$100,000 each accident/ \$500,000 disease-policy limit/\$100,000 disease each employee. (Coverage is to be extended for USL&H benefits and include coverage for Jones Act where work is adjacent to or on the water.)



- b. **Commercial General Liability** (on an occurrence basis): (i) including premises & operations, products and completed operations, personal and advertising injury, contractual liability and independent contractors, (ii) limits of liability for bodily injury and property damage each occurrence \$1,000,000, aggregate \$2,000,000 (to be applied separately to each job), and (iii) waiver of subrogation shall be provided.
- c. **Automobile Insurance:** (i) including all owned, hired, borrowed and non-owned vehicles and (ii) limit of liability for bodily injury and property damage per accident \$1,000,000.

The Bidder shall provide a Certificate of Insurance to the Town within five (5) business days after receipt of notice of award. The Certificate shall specify that the Town of Guilford shall receive thirty (30) days advance written notice of cancellation or non-renewal. The Certificate shall evidence all required coverage including the Additional Insured and Waiver of Subrogation. Notwithstanding the forgoing, in the event that any State laws or regulations require additional coverage and/or higher coverage amounts, State laws and regulations shall control.

## **11. WARRANTIES AND MAINTENANCE**

- 11.1 Copies of manufacturer's warranties and maintenance policies and associated costs shall accompany the bid proposal for items being bid.
- 11.2 At a minimum the Bidder shall warrant that any defective components discovered within a one year period after the date of installation/delivery shall be replaced at no expense to the Town, unless otherwise specified. Bidder shall pay the cost of all shipping with regard to such defective parts (both return and purchase of replacement parts.)If the bid specifications require a longer or more extensive warranty, the specifications shall control.

## **12. INDEMNIFICATION**

- 12.1 The Bidder shall indemnify and hold harmless the Town, its agents and employees from and against all claims, damages, losses and expenses, including attorney's fees arising out of, in whole or in part, the performance of the contract, or any negligent or willful act or omission of the Bidder, its subcontractors, employees or agents, including, without limitation, claims, damages, loss and expense attributable to bodily injury, sickness, disease or death or injury to or destruction of tangible property, including the loss of use resulting there from or attributable to any type of pollution and/or environmental impairment or release into or upon land, the atmosphere, or any course or body of water that is above or below ground. The indemnification obligation under 12.1 shall not be limited in anyway by any limitation of the amount or type of damages, compensation or benefits payable by or for the Bidder, its subcontractors, agents or employees under worker's compensation, disability benefit acts or other employee benefit acts. This indemnity shall survive the expiration or early termination of the contract.

13. **MISCELLANEOUS CONTRACT TERMS**

- 13.1 **Delivery.** Bidder shall state on its Proposal Form the date upon which it can make delivery of all equipment or merchandise. Time is of the essence. All bids shall be based upon inside delivery of the equipment or merchandise F.O.B. at the location specified by the Town. The Town reserves the right to cancel orders or any part thereof, without obligation, if delivery is not made within the time(s) specified on the proposal form. Such failure to deliver shall authorize the Town to purchase replacement articles of comparable grade from third party supplier(s). On all such purchases, Bidder shall reimburse the Town, within a reasonable time as specified by the Town, for any expenses incurred in excess of contract prices or the Town may deduct such amount from amounts owed the defaulting contractor. Such substitute purchases shall be deducted from contract quantities. If in the best interest of the Town, the Town reserves the right to use or consume articles delivered which are substandard in quality, subject to an adjustment in price to be determined by the Town.
- 13.2 **Termination of Contract.** Contracts shall remain in force for the period within which the Bidder must perform as set forth in the proposal, unless (i) there have been satisfactory deliveries prior to expiration; or (ii) an extension has been agreed upon as evidenced by a contract extension executed by Bidder and the Town; or (iii) the Contract executed by the awarded bidder and the Town expressly states otherwise.
- 13.3 **Assignment.** Bidder shall not assign or transfer this contract or its obligations hereunder without the consent of the Town, which consent may be withheld in the Town's sole discretion.
- 13.4 **Default.** The contract may be terminated by the Town by written notice of default to the contractor upon non-performance or breach of the contract terms. The awarded Bidder shall be obligated to pay the Town for all losses, damages, costs and expenses, including the cost of re-procurement, and attorney's fees incurred defending claims arising from such default and in seeking recovery of all such costs and expenses from Bidder and/or its surety. Upon a termination for cause, the Town shall have no further obligation to issue payments to the Contractor until resolution of the dispute.

14. **COMPLIANCE WITH LAWS**

- 14.1 The Bidder shall comply with all federal, state and local laws and regulation and shall procure all necessary license and permits, pay all charges and fees and give all notice necessary and incident to the due and lawful performance of the contract and bid process. Such laws shall include, without limitation, the following:
- a. **Non-Discrimination and Affirmative Action.** Contractor, in performing under this contract, shall not discriminate against any worker, employee or applicant, or any member of the public, because of race, creed, color, age, marital status, sexual orientation, national origin, ancestry, sex, mental retardation or physical disability, including but not limited to blindness, unless it is shown by the contractor that such disability prevents performance of the work involved in any manner prohibited by the laws of the United States or the State of Connecticut, nor otherwise commit an unfair employment practice. Contractor further agrees that this article, ( and any additional provisions required by law), will be incorporated by contractor in all contracts entered into with suppliers of materials or services contractors and sub-contractors and all labor

organizations, furnishing skilled, unskilled and craft union skilled labor or who may perform any such labor or services in connection with this contract. The following principles and requirements of Equal Opportunity and Affirmative Action, as incorporated herein, will be incorporated into “Equal Opportunity – Non-Discrimination Clause” to be included in all bid documents, purchase orders, lease and contracts. The principles of Affirmative Action are addressed in the 13<sup>th</sup>, 14<sup>th</sup> and 15<sup>th</sup> Amendments of the United States Constitution, Civil Rights Act of 1964, Equal Pay Act of 1963, Title VI and VII of the 1964 United States Civil Rights Act, Presidential Executive Orders 11246, 11375, 11478 (nondiscrimination under federal contracts), Act 1, Section 1 and 20 of the Connecticut Constitution, Governor Grasso’s Executive Order Number 11, Governor O’Neill’s Executive Order Number 9, the Connecticut Fair Employment Practices Law (Sec. 46a-60-69) of the Connecticut General Statutes, Connecticut Code of Fair Practices (46a-70-81), Deprivation of Civil Rights (46a-58 (a)(d) ), Public Accommodations Law (46a-63-64), Discrimination against Criminal Offenders (46a-80), definition of blind (46a-51(1)), definition of Physically Disabled (46a-51 (15) ), definition of Mentally Retarded (46a-51-13 ), cooperation with the Commission of Human Rights and Opportunities (46a-77), Sexual Harassment (46a-60 (a)-8), Connecticut Credit Discrimination Law (360436 through 439), Title 1 of the State and the Local Fiscal Assistance Act 1 1972. Every contract to which the State is party must contain the nondiscrimination and affirmative action provisions provided in the Connecticut General Statutes Section 4a-60a.

- b. **Executive Orders.** The contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill, promulgate June 16, 1971, concerning labor employment practices, Executive Order No. Seventeen of Governor Thomas J. Meskill, promulgate February 15, 1973, concerning the listing of employment opening and Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a part of the contract as if they had been fully set forth in it. The contract may also be subject to Executive Order No. 7C of Governor M. Jodi Rell, promulgated July 13, 2006, concerning contracting reforms and Executive Order No. 14 of Governor M. Jodi Rell, promulgate April 17, 2006, concerning procurement of cleaning products and services, in accordance with their respective terms and conditions.
- c. **Connecticut’s Prevailing Wage Law Provision.** If applicable, the contractor must be in full compliance with Connecticut General Statutes Section 31-53 and 31-53(a) which applies to each contract for the construction, remodeling, refinishing, refurbishing, rehabilitation, alteration, or repair of any public works project by the state or its agents, or by any political subdivision of the State of Connecticut General Statutes, Section 31-53 (g) provides monetary thresholds which must be met before the law is applicable. The contractor should familiarize themselves with all aspects of the provisions under state law in order to ensure full compliance.
- d. **Occupational Safety and Health Administration Requirements.** According to Connecticut General Statutes, Section 31-53b (a) each contract entered into on or after July 1, 2007, for the construction, remodeling, refinishing, refurbishing, rehabilitation,

alteration or repair of any public building project by the state or any of its agents, or by a political subdivision of the state or any of its agents, where the total cost of all work to be performed by all contractors and subcontractors in connection with the contract is at least one hundred thousand dollars shall contain a provision requiring that, not later than thirty days after the date such contract is awarded, each contractor furnish proof to the Labor Commissioner that all employees performing manual labor on or in such public building , pursuant to such contract, have completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, in the case of telecommunications employees, have completed at least ten hours of training in accordance with 29 CFR 1910.268. The contractors should familiarize themselves with all aspects of state law and any applicable regulations pertaining to these requirements in order to ensure full compliance.

In addition, Bidder has not been cited for three or more willful or serious violations of OSHA, or any standard, order or regulation promulgated pursuant to such Act, during the three year period preceding the bid, which violations were cited in accordance with the provisions of any State Occupational Safety and Health Act or the Occupation Safety and Health Act of 1970 and which were not abated within the time fixed by the citation; which citation has not been set aside following appeal to the appropriate agency or court having jurisdiction. The foregoing is meant to comply with Section 31-57b of the Connecticut General Statutes.

**III.**

**FIRE DEPARTMENT SPECIFICATIONS**

**HEAVY RESCUE VEHICLE FOR THE TOWN OF GUILFORD FIRE DEPARTMENT**

**INSTRUCTIONS TO VENDOR**

- The attached General and Detailed Specifications shall be considered as a minimum. Should the manufacturer's current published data on specifications exceed these, they shall be considered as minimum and shall be furnished.
- The Fire Department shall be the sole judge as to whether any proposal complies with the intent of these Specifications, and as such, award the contract to the manufacturer who offers the Rescue Truck most advantageous to the needs of the Department.
- It is the intent of the Fire Department to award to the proposal to the manufacturer who in the opinion of the Department complies with these specifications. Parts availability, service capability, and total life cost will be considered.

**GENERAL SPECIFICATIONS**

**REQUIRED SUBMISSION - QUESTIONNAIRE**

- 1) It is the intent of these specifications to provide minimum requirements for **the** manufacturing of a **HEAVY-DUTY RESCUE** vehicle. These specifications establish essential criteria for design, performance, equipment and appearance of the vehicle.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

- 2) Only RFPs from manufacturers with local dealers will be accepted. The manufacturer shall be represented by a full-time dealer or sales agent. RFPs from manufacturers with no local dealer or having only part-time dealers will be rejected.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

3) The manufacturer and/or dealer will maintain a staffed service center within 100 miles of the purchaser. This service center shall be fully enclosed, heated and capable of repairing the vehicle.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

4) In order to avoid divided warranty responsibility, only RFPs from manufacturers who build their own bodies will be considered. Manufacturers, who buy bodies from another manufacturer, whether in a finished or unfinished state, will be rejected. RFPs based on existing stock units or demonstrator units will be rejected. The body must be built in exact accordance with the attached specifications. The body described here in has been designed by the Fire Department and represents the required compartment layout and placement of equipment to best suit their needs.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

5) Only RFPs containing the following warranty program will be considered.

A) Body - including all, mechanical, cabinetry etc. - the entire body, including installation of same, shall be guaranteed for a minimum of three years from date of receipt, covering 100% parts and labor.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

B) Structural Integrity - The structural integrity of the body shall be guaranteed for fifteen (15) year or as long as the original purchaser shall own it.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

C) Electrical System - shall be warranted for minimum of one (1) year. All manufacture shall provide pricing for two and five years as an option.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

D) Paint and Finish - shall be warranted for a minimum of seven years.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**VENDORS MUST INCLUDE STATEMENT OF WARRANTY POLICIES WITH RFP.**

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

6) Vendors are required to mark each paragraph of the purchasers specifications as to compliance or non- compliance, and return same with their RFP.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

7) During the course of construction, the builder will be required to make arrangements for three (3) inspection trips for four (4) members of the Fire Dept. to the factory. Trips will be scheduled for pre-construction, mid-construction as designated by the Guilford Fire Department, and final inspection. The cost of these trips shall be borne by the builder. If nothing is mentioned in the RFP pertaining to the inspection trips, it will be assumed that vendor is taking exception and will be rejected. If manufacturer is within 250 miles, ground transportation is to be provided. Travel in excess of this will be Air transportation.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

8) Exceptions to the construction methods or interior and exterior compartment layout will not be allowed. Exceptions to name brand items will be allowed. Brand name items mentioned in these specifications are used to establish the level of quality required and items of equal quality maybe substituted. It is the vendor's responsibility to explain all exceptions in detail on a separate sheet, indicating the paragraph in the purchaser's specifications where he is taking exception and his reason for same. The Department shall be the judge as to whether or not the exception is, in fact, equal.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

9) All vendors are required to include with their RFP detailed CAD drawings of the unit they propose; showing the left, right and rear exterior; the left, right, front, and top views of interior. No exceptions. RFPs not containing **these CAD drawings** will be rejected. **THESE DRAWINGS MUST BE PROVIDED BY THE MANUFACTURER TO INSURE THE FULL COMPLIANCE IN UNDERSTANDING OF THE COMPLEXITY OF THIS VEHICLE.**

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

10) Vendors must submit complete detailed construction specifications covering products offered for vehicle as proposed. A general statement or letter stating that the vendor meets all specifications will not be sufficient evidence of vendor's intention, nor will a photo static copy of these specifications be acceptable. Vendor's specifications must follow same sequence as that used in these specifications for ease in comparison.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

11) All forms must be filled in and signed by a corporate officer of the Vendor with company seal and returned with the bid. Failure to comply will mean immediate rejection of the RFP. RFPs signed by sales representative shall be declared informal and will be rejected.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

12) A Vendor must provide with the RFP a list of at least 10 units of similar design delivered and in service. All vendors shall provide with their proposal a cost breakdown showing prices for all components, equipment and accessories.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

13) The manufacturer must be engaged actively in the business of manufacturing emergency vehicles and submit proof of such for a period of not less than twenty prior years under the same name.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

14) Time of delivery is of essence. Vendor shall state delivery time of the Rescue.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

15) The Rescue body shall be new custom built. Shall not be leftover, demonstrator, or prototype model.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

16) Prior to the award of contract, any prospective vendor, upon request of the Department, shall provide a location of a similar unit for inspection and construction preview.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_



17) All vendors must submit as part of their RFP sample set of wiring diagrams showing their basic wiring system.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**18) ALL EXCEPTIONS TO THESE SPECIFICATIONS SHALL be listed under EXCEPTIONS TO THE SPECIFICATIONS and any RFP submitted without EXPLICIT DETAILED EXCEPTIONS will be required to meet every detail of these specifications, regardless of the cost to the vendor. A general exception cannot be taken for any paragraph, and full word for word WRITTEN COMPARISON for each component must be included within the body of the RFP.**

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

19) The Rescue Truck shall meet or exceed all applicable State and Federal and NFPA regulations and laws including weight and vehicle restriction in effect at the time the proposals are received.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

20) The price shall not include any Local, State, or Federal taxes.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

21) The Fire Department reserves the right to inspect the progress of the Rescue at any reasonable time during its manufacture.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

22) The design of the apparatus must 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: Accessibility of the various units which require periodic maintenance; ease of operation; and symmetrical proportions.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

23) Welding shall not be employed in the assembly of the apparatus in a manner that will prevent the ready removal of any component part for service and repair.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

24) The apparatus will be designed and the equipment mounted with due consideration to the distribution of load between the front and rear axles and left and right side of the Rescue Truck so that all specified equipment, full complement of personnel and Rescue equipment will be carried without injury to the apparatus.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**25) All vendors are alerted that the weight of removal equipment that the Guilford Fire Department carries is eleven thousand pounds (11,000 lbs.). This weight does not include equipment, shelving brackets, etc. that are mounted in the vehicle.**

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

26) Multiplexing will not be allowed. The vehicle shall be rated for severe duty and all wiring shall be point to point.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

27) Cab external side grab rails shall be flush mounted. Similar to current Fire Department apparatus.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

28) All tire opening to protect the side of the cab and body shall be rubber.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

29) All lighting mounted to the side of the vehicle shall be recess into the body. Similar to current Heavy Rescue.

Does your RFP comply? Yes\_\_\_\_No\_\_\_\_

**DETAILED SPECIFICATIONS  
REQUIRED SUBMISSION - QUESTIONNAIRE**

The vehicle has the following critical overall dimensions. All vendors must comply with these Critical Dimensions.

The customer has requested the following MAXIMUM vehicle dimensions:

**OVERALL VEHICLE DIMENSIONS:**

The vehicle has the following overall dimensions:

Overall vehicle length: 425 inches

Overall vehicle height: 137 inches

Overall vehicle width: 100 inches, not including removable items

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DELIVERY**

The completed vehicle shall be delivered to the purchaser's designated location.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TRAINING:**

Upon completion and delivery of the vehicle, training will be provided on the proper and safe use of the vehicle by factory trained technicians.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ENGINEERING BLUEPRINTS:**

Production drawings will be supplied prior to the pre-construction conference.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DELIVERY**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INFORMATION REQUIRED**

The manufacturer shall supply at time of delivery, complete operation and maintenance manuals covering the completed apparatus as delivered. A permanent plate shall be mounted in the driver's compartment which specifies the quantity and type of fluids required including hydraulic oils, engine oil, engine coolant, transmission and drive axle.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **PERFORMANCE TESTS AND REQUIREMENTS**

A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters:

- A) The apparatus, when fully equipped and loaded, shall have not less than 25% nor more than 50% of the weight on the front axle, and not less than 50% nor more than 75% on the rear axle.
- B) The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.
- C) The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor Vehicle Safety Standards (FMVSS) 121.

D) The apparatus, fully loaded, shall be capable of obtaining a speed of 80 mph on a level concrete highway with the engine not exceeding its governed rpm (full load).

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FAILURE TO MEET TEST**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**GENERAL CONSTRUCTION**

The apparatus shall be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association.

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.

The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company shall designate in writing who is qualified to witness and certify test results.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**NFPA COMPLIANCY**

Apparatus proposed by the bidder shall meet the applicable requirements of the National Fire Protection Association as stated in current edition at time of contract execution.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ENGINE INSTALLATION CERTIFICATION**

The fire apparatus manufacturer shall provide, at the time of delivery, a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The approval of the engine installation shall be at full horsepower rating in a continuous duty application under all operating conditions. No type of automatic horsepower reduction feature shall be allowed.

There shall be no exception to any portion of the engine installation certification. Non-conformance shall lead to immediate rejection of bid.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TOTAL VEHICLE ASSESSMENT CERTIFICATION**

The apparatus shall be third-party, independent, audit-certified through Underwriters Laboratory (UL) to the current edition of NFPA 1901 standards. The certification includes: all design, production, operational and performance testing of the apparatus. NO EXCEPTIONS.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**GENERATOR TEST**

The generator shall be tested, approved, and certified by Underwriters Laboratories at the manufacturer's expense. The test results shall be provided.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**MODEL**

The chassis shall be a Spartan Gladiator ER model or an equivalent approved by the Guilford Fire Department. The cab and chassis shall include design considerations for multiple emergency vehicle applications, rapid transit and maneuverability. The chassis shall be manufactured for heavy duty service with the strength and capacity to support a fully laden apparatus, one hundred (100) percent of the time.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**MODEL YEAR**

The chassis shall have a vehicle identification number that reflects a 2018 model year.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**COUNTRY OF SERVICE**

The chassis shall be put in service in the country of United States of America (USA).

The chassis will meet applicable U.S.A. federal motor vehicle safety standards per CFR Title 49 Chapter V Part 571 as clarified in the incomplete vehicle book per CFR Title 49 Chapter V Part 568 Section 4 which accompanies each chassis.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CAB AND CHASSIS LABELING LANGUAGE**

The cab and chassis shall include the applicable caution, warning, and safety notice labels with text to be written in English.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**APPARATUS TYPE**

The apparatus shall be a rescue vehicle designed for emergency service use which shall include the functions of a multipurpose vehicle which primarily provides support services at emergency scenes.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**VEHICLE TYPE**

The chassis shall be manufactured for use as a straight truck type vehicle and designed for the installation of a permanently mounted apparatus behind the cab. The apparatus of the vehicle shall be supplied and installed by the apparatus manufacturer.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**AXLE CONFIGURATION**

The chassis shall feature a 6 x 4 axle configuration consisting of a tandem rear drive axle set with a single front steer axle.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**GROSS AXLE WEIGHT RATINGS FRONT**

The front gross axle weight rating (GAWR) of the chassis should be a minimum of 23,000 pounds.

This front gross axle weight rating shall be adequate to carry the weight of the completed apparatus including all equipment and personnel. The final axle weight rating shall be determined by the manufacturer to ensure proper capacity.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **GROSS AXLE WEIGHT RATINGS REAR**

The rear gross axle weight rating (GAWR) of the chassis shall be a minimum of 48,000 pounds. This rear gross axle weight rating shall be adequate to carry the weight of the completed apparatus including all equipment and personnel. The final axle weight rating shall be determined by the manufacturer to ensure proper capacity.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB STYLE**

The cab shall be a custom, fully enclosed, ER model with a 10.00 inch raised roof over the driver and officer, 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 heavy-duty service utilizing superior strength and capacity for the application of protecting the occupants of the vehicle. This style of cab shall offer up to two (2) seating positions.

The exterior width of the cab should be a minimum 99.40 inches wide with a minimum interior width of 91.00 inches. The overall cab length should be a minimum 77.10 inches with the back wall of the cab located at the centerline of the front axle.

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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **OCCUPANT PROTECTION**

The vehicle shall include the Advanced Protection System™ (APS) which shall secure belted occupants and increase the survivable space within the cab. The APS 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.

The system components shall include:

- Driver steering wheel airbag
- Driver dual knee air bags (patent pending) with energy management mounting (patent pending) and officer knee airbag.
- Driver and officer large side curtain airbags



- APS advanced seat belt system - retractor pre-tensioners tighten the seat belts around the occupants, securing the occupants in seats and load limiters play out some of the seat belt webbing to reduce seat belt to chest and torso force upon impact as well as mitigate head and neck injuries
- Heavy truck Restraints Control Module (RCM) - receives inputs from the outboard sensors, selectively deploys APS systems, and records sensory inputs immediately before and during a detected qualifying event
- Integrated outboard crash sensors mounted at the perimeter of the vehicle - detects a qualifying front or side impact event and monitors and communicates vehicle status and real-time diagnostics of all critical subsystems to the RCM
- Fault-indicating Supplemental Restraint System (SRS) light on the driver's instrument panel

Frontal impact protection shall be provided by the outboard sensors and the RCM. In a qualifying front impact event, the outboard sensors provide inputs to the RCM. The RCM activates the steering wheel airbag, driver side dual knee airbags (patent pending), officer side knee airbag, and advanced seat belts for each occupant in the cab.

Rollover, side impact, and ejection mitigation shall be provided by the outboard sensors and the RCM. In qualifying rollover or side impact events the outboard sensors provide inputs to the RCM. The RCM activates the side curtain airbags and advanced seat belts for each occupant in the cab. The RCM measures roll angle, lateral acceleration, and roll rate to determine if a rollover event or side impact event is imminent or occurring.

In the event of a qualifying offset or other non-frontal impact, the RCM shall determine and intelligently deploy the front impact protection system, the side impact protection system, or both front and side impact protection systems based on the inputs received from the outboard crash sensors.

Does your RFP comply? Yes\_\_\_\_\_ No\_\_\_\_\_

#### **CAB FRONT FASCIA**

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

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 the "Classic" design.

The front cab fascia shall include two (2) molded plastic modules on each side accommodating a total of four (4) Hi/Low beam headlights and two (2) turn signal lights and four (4) warning lights. A chrome plated molded plastic bezel shall be provided on each side around each set of four lamps.

Does your RFP comply? Yes\_\_\_\_\_ No\_\_\_\_\_

#### **FRONT GRILLE**

The front cab fascia shall include a classic box style, 304 stainless steel front grille. The grille shall measure 55.45 wide X 33.50 inches high X 1.50 inches deep. The upper portion of the grille shall be

hinged to provide service access behind the grille. The grille shall include a minimum free air intake of 750.00 square inches.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB UNDERCOAT**

There shall be a rubberized undercoating applied to the underside of the cab that provides abrasion protection, sound deadening and corrosion protection.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB SIDE DRIP RAIL**

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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB PAINT MANUFACTURER**

The cab shall be painted with PPG Industries paint.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB PAINT PRIMARY/LOWER COLOR**

The primary/lower paint color shall be PPG 914466 red FBCH

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB PAINT SECONDARY/UPPER COLOR**

The secondary/upper paint color shall be PPG FBCH 931853 white.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB PAINT EXTERIOR BREAKLINE**

The upper and lower paint shall meet at a breakline on the cab which shall be located approximately 1.00 inch below the door windows on each side of the cab. The breakline shall curve down at the front cab corners to approximately 5.00 inches below the windshields on the front of the cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB PAINT PINSTRIPE**

Where the upper and lower paint colors meet a temporary 0.50-inch-wide black pinstripe shall be applied over this break line to offer a more finished look prior to the final pinstripe being installed by the OEM.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB PAINT WARRANTY**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB PAINT INTERIOR**

The visible interior cab structure surfaces shall be painted with a multi-tone silver gray texture finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB ENTRY DOOR TYPE**

All cab entry doors shall be barrier clear design resulting in exposed lower cab steps. The doors shall provide approximately 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.

Entry doors shall include Pollak mechanical plunger style switches for electrical component activation.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB INSULATION**

The cab ceiling and walls shall include 1.00-inch-thick foam insulation. The insulation shall act as a barrier absorbing noise as well as assisting in sustaining the desired climate within the cab interior.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB STRUCTURAL WARRANTY**

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. The warranty period shall commence on the date the vehicle is delivered to the first end user.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB TEST INFORMATION**

The cab shall have successfully completed the preload side impact, static roof load application and frontal impact without encroachment to the occupant survival space when tested in accordance with Section 4 of SAE J2420 COE Frontal Strength Evaluation Dynamic Loading Heavy Trucks, Section 5 of SAE J2422 Cab Roof Strength Evaluation Quasi –Static Loading Heavy Trucks and ECE R29 Uniform Provisions Concerning the Approval of Vehicles with regard to the Protection of the Occupants of the Cab of a Commercial Vehicles Annex 3 Paragraph 5.

The above tests have been witnessed by and attested to by an independent third party. The test results were recorded using cameras, high speed imagers, accelerometers and strain gauges. Documentation of the testing shall be provided upon request.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ELECTRICAL SYSTEM**

The chassis shall include a single starting electrical system which shall include a 12-volt direct current system, suppressed per SAE J551. The wiring shall be appropriate gauge cross link with 311-degree Fahrenheit insulation. All SAE wires in the chassis shall be color coded and shall include the circuit number and function where possible. The wiring shall be protected by 275-degree Fahrenheit minimum high temperature flame retardant loom.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **APPARATUS WIRING PROVISION**

An apparatus wiring panel shall be installed in the center dash area behind the rocker switch panel which shall include eight (8) open circuits consisting of three (3) 20 amp, one (1) 30 amp, three (3) 10 amp, and one (1) 15-amp circuit, with relays and breakers with trigger wires which shall be routed to the rocker switch panel.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **LOAD MANAGEMENT SYSTEM**

The apparatus shall be equipped with a Class 1 Total System Manager (TSM) or equivalent 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. 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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **DATA RECORDING SYSTEM**

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

- Vehicle Speed
- Acceleration

- Deceleration
- Engine Speed
- Engine Throttle Position
- ABS Event
- Seat Occupied Status
- Seat Belt Status
- Master Optical Warning Device Switch Position
- Service Brake
  
- Engine Hours
- Time
- Date

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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

#### **ACCESSORY POWER**

The electrical distribution panel shall include two (2) power studs. The studs shall be size #10 and each of the power studs shall be circuit protected with a fuse of the specified amperage. One (1) power stud shall be capable of carrying up to a 40-amp battery direct load. One (1) power stud shall be capable of carrying up to a 15-amp ignition switched load. The two (2) power studs shall share one (1) #10 ground stud. A 225-amp battery direct power and ground stud shall be provided and installed on the chassis near the left-hand battery box for OEM body connections.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

#### **AUXILIARY ACCESSORY POWER**

An auxiliary set of power and ground studs shall be provided and installed in the officer side under seat storage compartment. The power and ground studs shall be circuit protected with a 40-amp breaker. The studs shall be 0.38-inch diameter and be capable of carrying up to a 40-amp battery direct load.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

#### **ADDITIONAL ACCESSORY POWER**

An additional set of power and ground studs shall be provided and installed in the right-side front under seat storage compartment. The power and ground studs shall be circuit protected with a 40-amp breaker. The studs shall be 0.38-inch diameter and be capable of carrying up to a 40-amp ignition switched load.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **EXTERIOR ELECTRICAL TERMINAL COATING**

All terminals exposed to the elements will be sprayed with a high visibility protective rubberized coating to prevent corrosion.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ENGINE**

The chassis engine shall be a Cummins X15 engine. The X15 engine shall be an in-line six (6) cylinder, four cycle diesel powered engine. The engine shall offer a rating of 600 horse power at 1800 RPM and shall be governed at 2100 RPM. The torque rating shall feature 1850-foot pounds of torque at 1200 RPM with 912 cubic inches (14.9 liter) of displacement.

The X15 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 2017 emissions standards using cooled exhaust gas recirculation and selective catalytic reduction technology.

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.

A wiring harness shall be supplied ending at the back of the cab. The harness shall include a connector which shall allow an optional harness for the pump panel. The included circuits shall be provided for a tachometer, oil pressure, engine temperature, hand throttle, high idle and a PSG system. A circuit for J1939 data link shall also be provided at the back of the cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **CAB ENGINE TUNNEL**

The cab interior shall include an integrated engine tunnel constructed of 5052-H32 Marine Grade 0.19 of an inch-thick aluminum alloy plate. The tunnel shall be a maximum of 46.50 inches wide X 29.00 inches high.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **DIESEL PARTICULATE FILTER CONTROLS**

There shall be two (2) controls for the diesel particulate filter. One (1) control shall be for regeneration and one (1) control shall be for regeneration inhibit.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ENGINE PROGRAMMING HIGH IDLE SPEED**

The engine high idle control shall maintain the engine idle at approximately 1250 RPM when engaged.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ENGINE HIGH IDLE CONTROL**

The vehicle shall be equipped with an automatic high-idle speed control which shall be pre-set to operate when the engine is at a specified RPM to increase alternator output. 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 operator depresses the brake pedal, or the transmission is placed in gear, and shall automatically re-engage when the brake is released, or when the transmission is placed in neutral.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ENGINE PROGRAMMING ROAD SPEED GOVERNOR**

The engine shall include programming which will govern the top speed of the vehicle.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **JACOBS ENGINE BRAKE**

A Jacobs compression brake, for the six (6) cylinder engine shall be provided. 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.

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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **AUXILIARY ENGINE BRAKE CONTROL**

An engine 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:

- A valid gear ratio is detected.
- The driver has requested or enabled engine compression brake operation.
- The throttle is at a minimum engine speed position.
- The electronic controller is not presently attempting to execute an electronically controlled final drive gear shift.
- There is no active ABS event.

The compression brake shall be controlled through an off/low/high rocker switch on the dash.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ELECTRONIC ENGINE OIL LEVEL INDICATOR**

The engine oil shall be monitored electronically and shall send a signal to activate a warning in the instrument panel when levels fall below normal. The warning shall activate in a low oil situation upon turning on the master battery and ignition switches without the engine running.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FLUID FILLS**

The front of the chassis shall accommodate fluid fill for the engine oil through the grille. This area shall also accommodate a check for the engine oil. The transmission, power steering, and coolant fluid fills and checks shall be under the cab. The windshield washer fill shall be accessible through the front left side mid step.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE DRAIN PLUG**

The engine shall include an original equipment manufacturer installed oil drain plug.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE WARRANTY**

The Cummins engine shall be warranted for a period of five (5) years or 100,000 miles, whichever occurs first.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE PROGRAMMING REMOTE THROTTLE**

The engine ECM (Electronic Control Module) discreet wire remote throttle circuit shall be turned off for use with a J1939 based pump controller or when the discreet wire remote throttle controls are not required.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE PROGRAMMING IDLE SPEED**

The engine low idle speed will be programmed at 700 rpm.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE FAN DRIVE**

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



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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE COOLING SYSTEM**

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.

The cooling system shall be comprised of 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, a charge air cooler bolted to the front of the radiator, recirculation shields, a shroud, a fan, and required tubing.

The radiator shall be a down-flow design constructed with aluminum cores, plastic end tanks, and a steel frame. The radiator shall be equipped with a drain cock to drain the coolant for serviceability.

The cooling system shall include a one piece injected molded polymer fan with a three (3) piece fiberglass fan shroud.

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 rearward oriented 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.

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.

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.

The radiator and charge air cooler shall be removable through the bottom of the chassis.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE COOLING SYSTEM PROTECTION**

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. The skid plate shall be painted to match the frame color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ENGINE COOLANT**

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. 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.

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ENGINE COOLANT FILTER**

An engine coolant filter with a shut-off valve for the inlet and outlet shall be installed on the chassis. The location of the filter shall allow for easy maintenance.

Proposals offering engines equipped with coolant filters shall be supplied with standard non-chemical type particulate filters.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ELECTRONIC COOLANT LEVEL INDICATOR**

The instrument panel shall feature a low engine coolant indicator light which shall be located in the center of the instrument panel. An audible tone alarm shall also be provided to warn of a low coolant incident.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **COOLANT HOSES**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ENGINE AIR INTAKE**

The engine air intake system shall include an ember separator air intake filter which shall be located behind the right-hand side headlamp. This filter ember separator shall be designed to protect the downstream air filter from embers, using a combination of unique flat and crimped metal screens packaged in a corrosion resistant heavy duty galvanized steel frame. This multilayered screen shall be design traps embers and allows them to burn out before passing through the pack.

The engine air intake system shall also include a stainless-steel air cleaner mounted to the frame and located beneath the cab on the right side of the vehicle. The air cleaner shall utilize a replaceable filter element designed to prevent dust and debris from being ingested into the engine. The air cleaner housing

and connections in the air intake system shall be designed to mitigate water intrusion into the system during severe weather conditions.

The air intake system shall also include a restriction indicator light in the warning light cluster on the instrument panel, which shall activate when the air cleaner element requires replacement.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR INTAKE PROTECTION**

A light duty skid plate shall be supplied for the engine air intake system below the right front side of the cab. The skid plate shall provide protection for the air intake system from light impacts, stones, and road debris. The skid plate shall be painted to match the frame color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE EXHAUST SYSTEM**

The exhaust system shall include an end-in end-out horizontally mounted single module after treatment device, downpipe from the charge air cooled turbo. The single module shall include four temperature sensors, diesel particulate filter (DPF), urea dosing module (UL2), 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 mixed and injected into the system through the between the DPF and SCR.

The system shall utilize 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.

The single module after treatment through the end of the tailpipe shall be connected with zero leak clamps. The discharge shall terminate horizontally on the right side of the vehicle ahead of the rear tires. The exhaust system after treatment module shall be mounted below the frame in the inboard position.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **DIESEL EXHAUST FLUID TANK**

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 and shall be mounted on the left-hand side of the chassis frame behind the batteries below the frame.

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.

The tank fill tube shall be temporarily mounted outside the frame, at the battery box, and behind the cab for routing by the body manufacturer.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ENGINE EXHAUST ACCESSORIES**

The exhaust system shall be modified to accept a Plymovent exhaust extraction system collar.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ENGINE EXHAUST WRAP**

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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TRANSMISSION**

The drive train shall include an Allison model EVS 4000 torque converting, automatic transmission which shall include electronic controls. The transmission shall feature two (2) 10-bolt PTO pads located on the converter housing.

The transmission shall include two (2) internal oil filters which shall offer Castrol TranSynd™ 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.

The transmission gear ratios shall be:

- 1st 3.51:1
- 2nd 1.91:1
- 3rd 1.43:1
- 4th 1.00:1
- 5th 0.74:1
- 6th 0.64:1
- Rev 4.80:1

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TRANSMISSION MODE PROGRAMMING**

The transmission, upon start-up, will select five (5) speeds of operation. The sixth speed over drive shall be available with the activation of the mode button on the shifting pad.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TRANSMISSION FEATURE PROGRAMMING**

The Allison Gen V-E transmission EVS group package number 127 shall contain the 227 vocational package in consideration of the duty of this apparatus for rescue. 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.

A transmission interface connector shall be provided in the cab. This package shall contain the following input/output circuits to the transmission control module. The Gen V-E transmission shall include prognostic diagnostic capabilities. These capabilities shall include the monitoring of the fluid life, filter change indication, and transmission clutch maintenance.

<u>Function ID</u>	<u>Description</u>	<u>Wire assignment</u>
Inputs		
C	PTO Request	143
F	Aux. Function Range Inhibit (Special)	101/142
Outputs		
G	PTO Enable Output (See Input Function C)	130
S	Neutral Indicator for PTO	145
	Signal Return	103

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

### **ELECTRONIC TRANSMISSION OIL LEVEL INDICATOR**

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.

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

### **TRANSMISSION SHIFT SELECTOR**

An Allison 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.

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

### **TRANSMISSION PRE-SELECT WITH AUXILIARY BRAKE**

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.

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

### **TRANSMISSION COOLING SYSTEM**

The transmission shall include a 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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TRANSMISSION DRAIN PLUG**

The transmission shall include an original equipment manufacturer installed magnetic transmission fluid drain plug.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TRANSMISSION WARRANTY**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**POWER-TAKE-OFF DRIVE**

There shall be a "Hot Shift" power-take-off (PTO) installed on the transmission PTO opening of the chassis. The "Hot Shift" PTO is provided to allow the engagement of the PTO at higher engine RPM speeds. The PTO output shall be connected to the generator through hollow tube type driveline with heavy duty universals. All PTO driven equipment shall be capable of running simultaneous and capable of being independently operated even after other PTO equipment is already operating and able to perform at full capacity

The engagement of the PTO shall be in the chassis cab with a rocker switch and red pilot light to note engagement of the PTO.

The installation of the engine, transmission, driven accessories (power takeoffs (PTO), etc.) shall meet the engine and transmission manufacturers' installation recommendations for the service intended.

The PTO shall be manufactured by Chelsea.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**LH PTO**

A PTO shall be installed on the transmission by the OEM.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**LH PTO MODEL**

A ten (10) bolt Chelsea heavy duty transmission driven PTO shall be installed.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**RH PTO**

A PTO shall be installed on the transmission by the OEM.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**RH PTO MODEL**

A ten (10) bolt Chelsea heavy duty transmission driven PTO shall be installed.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**PTO LOCATION**

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 1:00 o'clock position.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DRIVELINE**

All drivelines shall be heavy duty metal tube and equipped with Spicer 1810 series universal joints for the main drivelines, and 1710 series for the inter-axle shaft. 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®.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FUEL FILTER/WATER SEPARATOR**

The fuel system shall have a Racor S3238 fuel filter/water separator as a primary filter. The fuel filter shall have a drain valve and a see-through cover to allow visual inspection of fuel and filter condition. The Racor S3238 shall be a 10-micron filter capable of handling a maximum flow rate of 150 gallons per hour.

A secondary fuel filter shall be included as approved by the engine manufacturer. An instrument panel lamp and audible alarm which indicates when water is present in the fuel-water separator shall also be included.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FUEL LINES**

The fuel system supply and return lines installed from the fuel tank to the engine shall be black textile braided lines which are reinforced with braided high tensile steel wire. The fuel lines shall be connected with reusable steel fittings.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FUEL SHUTOFF VALVE**

A fuel shutoff valve shall be installed in the fuel draw line at the primary fuel filter to allow the fuel filter to be changed without loss of fuel to the fuel pump.

A second fuel shutoff valve shall be installed in the fuel draw line, near the fuel tank to allow maintenance to be performed with minimal loss of fuel.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ELECTRIC FUEL PRIMER**

Integral to the engine assembly is an electric lift pump that serves the purpose of pre-filter fuel priming.  
Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FUEL COOLER**

An aluminum cross flow air to fuel cooler shall be provided to lower fuel temperature allowing the vehicle to operate at higher ambient temperatures. The fuel cooler shall be located behind the rear axle.  
Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FUEL TANK**

The fuel tank shall have a capacity of sixty-eight (68) gallons and shall measure 35.00 inches in width X 17.00 inches in height X 29.00 inches in length.

The baffled 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.

The tank is designed with dual draw tubes and sender flanges. The tank shall have 2.00-inch NPT fill ports for right or left-hand fill. A 0.50-inch NPT drain plug shall be centered in the bottom of the tank.

The fuel tank shall be mounted below the frame, behind the rear axle. Two (2) three-piece strap hanger assemblies with "U" straps bolted midway on the fuel tank front and rear shall be utilized to allow the tank to be easily lowered and removed for service purposes. 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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FUEL TANK MATERIAL AND FINISH**

The fuel tank shall be constructed of 12-gauge aluminized steel. The exterior of the tank shall be powder coated black and then shall feature a Spar-Liner spray on bedliner coating.

All powder coatings, primers and paint shall be compatible with all metals, pretreatments and primers used. The cross-hatch adhesion test per ASTM D3359 Method B, results to be 5B minimum. The pencil hardness test per ASTM D3363 shall have a final post-cured pencil hardness of H-2H. The direct impact resistance test per ASTM D2794, results to be 5B minimum.

Any proposals offering painted fuel tanks 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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FUEL TANK STRAP MATERIAL**

The fuel tank straps shall be constructed of ASTM A-36 steel and shall feature a Spar-Liner spray on bedliner coating.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_



**FUEL TANK FILL PORT**

The fuel tank fill ports shall be provided with two (2) left fill ports located one (1) in the forward position and one (1) in the middle position and the right fill port located in the middle position of the fuel tank.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FUEL TANK SERVICEABILITY PROVISIONS**

The chassis fuel lines shall have additional length provided so the tank can be easily lowered and removed for service purposes. The additional 8.00 feet of length shall be located above the fuel tank and shall be coiled and secured. The fuel line fittings shall be pointed towards the right side (curbside) of the chassis.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FUEL TANK DRAIN PLUG**

A 0.5-inch NPT drain plug shall be centered in the bottom of the fuel tank.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT AXLE**

The front axle shall be a Meritor Easy Steer Non- drive front axle, model number MFS-20. The axle shall include a 3.74 inch drop and a 71.00-inch king pin intersection (KPI). The axle shall include a conventional style hub with a standard knuckle. The weight capacity for the axle shall be rated to a minimum of 23,000 pounds. The final weight rating shall be determined by the manufacturer to ensure proper capacity.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT AXLE WARRANTY**

The front axle shall be warranted by Meritor for two (2) years with unlimited miles under the general service application. Details of the Meritor warranty are provided on the PDF document attached to this option.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT WHEEL BEARING LUBRICATION**

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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **FRONT SHOCK ABSORBERS**

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

The ride afforded through the use of a gas shock is more consistent and shall not deteriorate with heat, the same way a conventional oil filled hydraulic shock would.

The Bilstein 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. The working piston design shall feature fewer parts than most conventional twin tube and “road sensing” shock designs and shall contribute to the durability and long life of the Bilstein shock absorbers.

Proposals offering the use of conventional twin tube or “road sensing” designed shocks shall not be considered.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **FRONT SUSPENSION**

The front suspension shall include a ten (10) leaf spring pack in which the longest leaf measures 53.38-inch-long and 4.00 inches wide. The springs shall be shot peened for long life and include a military double wrapped front eye. The springs shall be bolted in place with M20 10.9 bolts and have replaceable rubber bushings in the spring eyes. The spring capacity shall be rated at a minimum of 23,000 pounds. The final weight rating shall be determined by the manufacturer to ensure proper capacity.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **STEERING COLUMN/ WHEEL**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ELECTRONIC POWER STEERING FLUID LEVEL INDICATOR**

The power steering fluid shall be monitored electronically and shall send a signal to activate an audible alarm and visual warning in the instrument panel when fluid level falls below normal.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **POWER STEERING PUMP**

The hydraulic power steering pump shall be a TRW PS and shall be gear driven from the engine. The pump shall be a balanced, positive displacement, sliding vane type. The power steering system shall include an oil to air passive cooler.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **FRONT AXLE CRAMP ANGLE**

The chassis shall have a minimum front axle cramp angle of 48-degrees to the left and 44-degrees to the right.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **POWER STEERING GEAR**

The power steering gear shall be a TRW model TAS 85 with an assist cylinder.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **CHASSIS ALIGNMENT**

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. The front and rear axles shall be laser aligned. The front tires and wheels shall be aligned and toe-in set on the front tires by the chassis manufacturer.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **REAR AXLE**

The rear axle shall be a Meritor model RT-46-160 tandem drive axle. The axle shall include precision forged, single reduction differential gearing, and should have a fire service rated minimum capacity of 48,000 pounds. The final weight rating shall be determined by the manufacturer to ensure proper capacity.

The axle shall be built of superior construction and quality components to provide the rugged dependability needed to stand up to the fire industry's demands. The axle shall include rectangular shaped, hot-formed housing with a standard wall thickness of 0.50 of an inch for extra strength and rigidity and a rigid differential case for high axle strength and reduced maintenance.

The axle shall have heavy-duty Hypoid gearing for longer life, greater strength and quieter operation. Industry-standard wheel ends for compatibility with both disc and drum brakes, and unitized oil seal technology to keep lubricant in and help prevent contaminant damage will be used.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **REAR AXLE DIFFERENTIAL LUBRICATION**

The rear axle differential shall be lubricated with oil.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR AXLE WARRANTY**

The rear axle shall be warranted by Meritor for two (2) years with unlimited miles under the general service application. Details of the Meritor warranty are provided on the PDF document attached to this option.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR WHEEL BEARING LUBRICATION**

The rear axle wheel bearings shall be lubricated with oil.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR AXLE DIFFERENTIAL CONTROL**

The tandem axle chassis shall include an inter-axle differential lock, which will allow both axles to be engaged as drive axles. The differential lock shall be controlled by a locking rocker switch on the switch panel. The light on the switch shall illuminate with positive engagement of the inter-axle differential control.

A driver controlled differential lock shall be installed on one of the tandem rear axles. This feature shall allow the main differential to be locked and unlocked when encountering poor road or highway conditions, where maximum traction is needed, for use at speeds no greater than 25 MPH. The driver controlled differential lock shall be controlled by a separate locking rocker switch on the switch panel. The light on the switch shall illuminate with positive engagement of the differential control.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **VEHICLE TOP SPEED**

The top speed of the vehicle shall be approximately 80 MPH +/-2 MPH at governed engine RPM.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR SUSPENSION**

The tandem rear axle shall feature a Hendrickson Firemaax™ air suspension. Each axle will be independently suspended for optimum performance. The suspension shall include four optimized air springs mounted to cast structural trailing arms, transverse cross beams for increased roll stability and four 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 four eccentric bushings at each frame bracket.

The rear suspension capacity should be rated for a minimum of 48,000 pounds. The final weight rating shall be determined by the manufacturer to ensure proper capacity.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**REAR SHOCK ABSORBERS**

Shock absorbers shall be supplied by the suspension manufacturer and installed on the rear axle suspension.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT TIRE**

The front tires shall be Goodyear 425/65R-22.5 20PR "L" tubeless radial G296 MSA mixed service tread.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**REAR TIRE**

The rear tires shall be Goodyear 12R-22.5 16PR "H" tubeless radial G622 RSD mixed service tread.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**REAR AXLE RATIO**

A rear axle ratio shall be furnished to allow the vehicle to reach an approximate top speed of 80 mph. The Cummins Engine will be programmed to limit top speed in 6Th gear and allow the unit to operate at highway speeds at reduced engine rpm.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TIRE PRESSURE INDICATOR**

There shall be electronic chrome LED valve caps shipped loose for installation by the OEM which shall illuminate with a red LED when tire pressure drops 8psi provided. The valve caps are self-calibrating and set to the pressure of the tire upon installation.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT WHEEL**

The front wheels shall be steel hub piloted, 22.50-inch X 12.25-inch. The wheels shall be painted the same red color as the lower section of the cab and body.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**REAR WHEEL**

The rear wheels shall be steel hub piloted, 22.50-inch X 8.25-inch. The wheels shall be painted the same red color as the lower section of the cab and body.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**BALANCE WHEELS AND TIRES**

All of the wheels and tires, including any spare wheels and tire assemblies, shall be dynamically balanced.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**WHEEL TRIM**

The front wheels shall include stainless steel lug nut covers and stainless-steel baby moons shipped loose with the chassis for installation by the apparatus builder. The baby moons shall have cutouts for oil seal viewing when applicable.

The rear wheels shall include stainless steel lug nut covers and band mounted spring clip stainless steel high hats shipped loose with the chassis for installation by the apparatus builder.

The lug nut covers, baby moons, and high hats shall be RealWheels® brand constructed of 304L grade, non-corrosive stainless steel with a mirror finish. Each wheel trim component shall meet D.O.T. certification.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**WHEEL GUARDS**

The rear dual wheels shall include a plastic isolator approximately 0.04” installed between the inner and outer wheel hub to help prevent corrosion caused by metal to metal contact. There shall also be a plastic isolator between the axle hub and the wheels on both front and rear axles.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**BRAKE SYSTEM**

A rapid build-up air brake system shall be provided. The air brakes shall include a three (3) air tank, four (4) reservoir system with a total of 6220 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 labeled for identification.

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.

A six (6) sensor, six (6) modulator Anti-Lock Braking System (ABS) shall be installed on the front and tandem rear axles in order to prevent the brakes from locking or skidding while braking during hard stops or on icy or wet surfaces. This in turn shall allow the driver to maintain steering control under heavy braking and in most instances, shorten the braking distance. 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.

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

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.

The Electronic Stability Control (ESC) unit is a functional extension of the electronic braking system. It is able to detect any skidding of the vehicle about its vertical axis as well as any rollover tendency. The control unit comprises an angular-speed sensor that measures the vehicle's motion about the vertical axis, caused, for instance, by cornering or by skidding on a slippery road surface. An acceleration sensor measures the vehicle's lateral acceleration. The Controller Area Network (CAN) bus provides information on the steering angle. On the basis of lateral acceleration and steering angle, an integrated microcontroller calculates a theoretical angular speed for the stable vehicle condition.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FRONT BRAKES**

The front brakes shall be Meritor EX225 Disc Plus disc brakes with 17.00-inch vented rotors.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR BRAKES**

The rear brakes shall be Meritor EX225 Disc Plus disc brakes with 17.00-inch vented rotors.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **PARK BRAKE**

Upon application of the push-pull valve in the cab, the rear brakes will engage via mechanical spring force. This is accomplished by dual chamber rear brakes, satisfying the FMVSS parking brake requirements.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **PARK BRAKE CONTROL**

A Meritor-Wabco manual hand control push-pull style valve shall operate the parking brake. Activation of the parking brake shall also apply the front service brakes.

The parking brake actuation valve shall be mounted to the left side of the engine tunnel integrated into the transmission shift pod console within easy access of the driver.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR DRYER**

The brake system shall include a Wabco System Saver 1200 air dryer with an integral heater with a Metri-Pack sealed connector. The air dryer incorporates an internal turbo cutoff valve that closes the path between the air compressor and air dryer purge valve during the compressor "unload" cycle. The turbo cutoff valve allows purging of moisture and contaminants without the loss of turbo boost pressure. The air dryer shall be mounted behind the battery box on the left-hand side.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FRONT BRAKE CHAMBERS**

The front brakes shall be provided with MGM type 24 long stroke brake chambers.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR BRAKE CHAMBERS**

The rear axle shall include TSE 24/30 H.O.T. (High Output Technology) brake chambers shall convert the energy of compressed air into mechanical force and motion. This shall actuate the brake camshaft, which in turn shall operate the foundational brake mechanism forcing the brake pads against the brake rotor.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR COMPRESSOR**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR GOVERNOR**

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. The air governor shall be located on the air dryer bracket on the left frame rail behind the battery box.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **MOISTURE EJECTORS**

Heated, automatic moisture ejectors with a manual drain provision shall be installed on all reservoirs of the air supply system. The manual drain provision shall include an actuation pull cable coiled and tied at



each drain valve. 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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR SUPPLY LINES**

The air system on the chassis shall be plumbed with color coded reinforced nylon tubing air lines. The primary (rear) brake line shall be green, the secondary (front) brake line red, the parking brake line orange and the auxiliary (outlet) will be blue.

Brass compression type fittings shall be used on the nylon tubing. All drop hoses shall include fiber reinforced neoprene covered hoses.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR INLET CONNECTION**

An air connection for the shoreline air inlet shall be supplied.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR INLET LOCATION**

The air inlet shall be located in the foot well of the driver's door in a convenient location.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR INLET/ OUTLET FITTING TYPE**

The air connector supplied shall be a 0.25-inch size Tru-Flate Interchange style manual connection which is compatible with Milton 'T' style, Myers 0.25-inch Automotive style and Parker 0.25-inch 10 Series connectors.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR TANK SPACERS**

There shall be spacers included with the air tank mounting. The spacers shall move the air tanks 1.50 inches inward towards the center of the chassis. This shall provide clearance between the air tanks and the frame for body U-bolt clearance.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR AIR TANK MOUNTING**

If a combination of wheel base, air tank quantity, or other requirements necessitate the location of one or more air tanks to be mounted rear of the fuel tank, these tank(s) will be mounted perpendicular to frame.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**WHEELBASE**

The chassis wheelbase shall be 197.00 inches.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRAME**

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 with an inner channel of 9.44 inches high X 3.13 inches deep and 0.38 inches thick. 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) minimum of 3,213,100-inch pounds and have a minimum section modulus of 29.21 cubic inches. The frame shall measure 35.00 inches in width.

Proposals calculating the frame strength using the "box method" shall not be considered.

Proposals including heat treated rails shall not be considered. Heat treating frame rails produces rails that are not uniform in their mechanical properties throughout the length of the rail. Rails made of high strength, low alloy steel are already at the required yield strength prior to forming the rail.

A minimum of seven (7) fully gusseted 0.25-inch-thick 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. The bolt heads shall be flanged type, held in place by distorted thread flanged lock nuts. 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.

Any proposals not including additional reinforcement for each cross member shall not be considered.

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.

The frame and cross members shall carry a lifetime warranty to the original purchaser. A copy of the frame warranty shall be made available upon request.

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRAME WARRANTY**

The frame and cross members shall carry a limited lifetime warranty to the original purchaser. The warranty period shall commence on the date the vehicle is delivered to the first end user.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **FRAME PAINT**

The frame shall be hot dip galvanized prior to assembly and attachment of any components. The components that shall be galvanized shall include:

- Main frame “C” channel or channels
- Front splayed rails and fish plates
- Cross members (excluding suspension cross members)
- Cross member gussets
- Fuel tank mounting brackets
- Air tank mounting brackets
- Exhaust mounting brackets
- Air cleaner skid plate
- Radiator skid plate
- Battery supports, battery trays and battery covers

The frame parts which are not galvanized shall be powder coated prior to any attachment of components. Parts which shall be powder coated shall include but are not limited to:

- Spring hangers
- Suspension components
- Steering gear bracket
- Front and rear axles

All powder coatings, primers and paint used on the non-galvanized components shall be compatible with all metals, pretreatments and primers used. 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.

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

### **FRONT BUMPER**

The chassis shall be equipped with a severe duty front bumper constructed from structural steel channel. The bumper material shall be 0.38 thick ASTM A36 steel which shall measure 12.00 inches high with a 3.05-inch flange and shall be 104.50 inches wide with angled front corners.

The bumper shall be primed and painted as specified.

The bumper shall have a 2” receiver hitch rated and accessible for a portable winch and rope operations.

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

### **FRONT BUMPER EXTENSION LENGTH**

The front bumper shall be extended approximately 21.00 inches ahead of the cab.

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

### **FRONT BUMPER REINFORCEMENT**

The bumper shall feature four (4) molded black rubber bumpers mounted to the face of the bumper. There shall be two (2) bumpers located on the right and left side of the center

bumper face section just inboard of each frame rail. Additionally, there shall be two (2) bumpers located on the right and left side of the bumper face as far outboard as possible on the flat surface. The bumpers should be approximately 6" x 6" x 10".

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT BUMPER PAINT**

The front bumper shall be painted the same as the lower cab color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT MOUNTED WINCH**

**PACCAR MODEL AHGU5**

**HYDRAULIC WINCH:**

A 20,000-pound capacity winch shall be provided and securely mounted behind the front bumper. The winch shall be powered by a hydraulic pump and motor, driven from a transmission mounted PTO. A 40-gallon hydraulic fluid tank shall be included and located in an easily accessible area. The hydraulic tank shall include a dipstick or fluid sight glass, suction strainer with suction line shutoff valve for strainer access, and a return line filter.

A remote control for the shall be furnished with a 30.00' length of cord and a hand held deadman style joystick. The remote control shall provide complete proportional control of the winch. The remote control shall only control the pay-out and pay-in speed of the winch. There shall be a manual control for the winch at a location to be determined. The winch drum clutch shall be manually controlled near the winch.

The winch shall be furnished with 225.00 feet of .50" galvanized rope. The winch rope shall terminate with a thimble, and shall include a size chain shackle. Cable shall feed through a full captive type 4-way roller and guide assembly.

A label shall be placed on or near the mount that states the maximum winch load rating and the maximum rope load rating that the mount can support.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**WINCH TEST**

The winch shall be tested, approved, and certified to full PACCAR capacity and speed specifications at the manufacturer's expense. The test results shall be provided.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **PTO FOR HYDRAULIC WINCHES**

The hydraulic winch systems shall be driven by a hot-shift PTO unit mounted to a Chelsea split box. One PTO and pump shall provide hydraulic power to the front and rear winches. Activation of the generator PTO, VanAir PTO, or hydraulic winch PTO shall be unaffected by the activation or deactivation of any other PTO.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FRONT BUMPER APRON**

The 21.00 inch extended front bumper shall include an apron constructed of 0.19-inch-thick embossed aluminum tread plate.

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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FRONT BUMPER COMPARTMENT CENTER**

The bumper apron shall include access provisions for a center mounted winch. The apron shall include an access cover constructed of 0.19-inch-thick bright embossed aluminum tread plate to help protect the winch from water, dirt or debris.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FRONT BUMPER COMPARTMENT**

The bumper shall include a compartment in the front bumper located on the right-hand side outboard of the frame rail which may be used as a chain well. The compartment shall be constructed of 0.13 inch 5052-H32 grade aluminum. The compartment shall include a cover constructed of 0.19-inch-thick bright embossed aluminum tread plate. The compartment shall have sufficient compartment lighting to provide a minimum of 2 fc (20 lx) at any location on the floor of the compartment without any equipment in the compartment.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FRONT BUMPER COMPARTMENT COVER HARDWARE**

The front bumper compartment cover(s) shall include gas cylinder stays which shall hold the cover

open. Each cover shall be held in the closed position via a D-ring style latch. There shall also be one (1) 12.00-inch-long LED Amdor Luma Bar H2O™ NFPA compliant ground lights mounted under each cover. A flashing warning light signal shall be provided indicating when a compartment door is not in a closed position as required by NFPA 1901.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT BUMPER GUIDE POLES**

The cab bumper sides shall include a 42.00-inch chromed poles on the left and right sides of the bumper. The poles shall be mounted so the top of the pole is approximately at the same height as the bottom of the windshield. Each pole shall include an amber light at the top for improved night visibility. There shall be an electrical connection to allow for ease of removal and or replacement.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**MECHANICAL SIREN**

The front bumper shall include an electro mechanical Federal Q2B™ siren, which shall be streamlined, chrome-plated and shall produce 123 decibels of sound at 10.00 feet. The Q2B™ siren produces a distinctive warning sound that is recognizable at long distances. A unique clutch design provides a longer coast down sound while reducing the amp draw to 100 amps. The siren shall measure 10.50 inches wide X 10.00 inches high X 14.00 inches deep. The siren shall include mounting hardware designed to recess or flush mount.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**MECHANICAL SIREN LOCATION**

The siren shall be recess mounted on the driver side of the front fascia of the bumper, in the outboard position.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**AIR HORN**

There shall be two (2) chrome plated air horns furnished and installed on the vehicle. They shall be manufactured by Grover and be the Stuttertone model # 1510.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**AIR HORN LOCATION**

The air horns shall be recess mounted in the front bumper face, one (1) on the right side of the bumper in the inboard position relative to the right-hand frame rail and one (1) on the left side of the bumper in the inboard position relative to the left-hand frame rail.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**AIR HORN RESERVOIR**

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. 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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ELECTRONIC SIREN SPEAKER**

There shall be one (1) Whelen Engineering Inc. model SP123BMC, 100 watt cast aluminum speaker provided. The speaker shall measure 7.25 inches tall X 9.25 inches wide X 5.25 inches deep. The speaker shall include a chrome grille.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ELECTRONIC SIREN SPEAKER LOCATION**

The electronic siren speaker shall be located on the front bumper face on the right side outboard of the frame rail in the far outboard position.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT BUMPER TOW EYES**

The bumper shall include two (2) painted tow eyes shall be installed above the front bumper. The tow eyes shall be fabricated from 0.75-inch-thick #1020 ASTM-36 hot rolled steel. The inside diameter of the tow eye shall be 3.00 inches and shall have a chamfered edge. The tow eyes shall be painted to match the frame.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TOW FORK PROVISION**

Two (2) heavy duty tubular steel towing forks shall be welded to the underside of the frame drop at the front of the chassis. The tubes shall be shaped like an upside down “U” to act as a designated hookup point to accept a tow bar from a service vehicle. The robust design shall allow a disabled vehicle to be lifted and towed without doing damage to the bumper or bumper mounted options.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CAB TILT SYSTEM**

The entire cab shall be capable of tilting approximately 45-degrees to allow for easy maintenance of the engine and transmission. The cab tilt pump assembly shall be located on the right side of the chassis above the battery box.

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.

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.

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.

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.

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 when the cab is in the fully tilted position. 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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB TILT AUXILIARY PUMP**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB TILT LIMIT SWITCH**

A cab tilt limit switch shall be installed. The switch will effectively limit the travel of the cab when being tilted. The limit adjustment of the switch shall be preset by the chassis manufacturer to prevent damage to the cab or any bumper mounted option mounted in the cab tilt arc. Further adjustment to the limit by the apparatus manufacturer shall be available to accommodate additional equipment.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB TILT CONTROL RECEPTACLE**

The cab tilt control cable shall include a receptacle which shall be located in compartment C2 to provide a place to plug in the cab tilt remote control pendant. The tilt pump shall include 8.00 feet of cable with a six (6) pin Deutsch receptacle with a cap.

The remote-control pendant shall include 20.00 feet of cable with a mating Deutsch connector.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB TILT LOCK DOWN INDICATOR**

The cab dash shall include a message located within the dual air pressure gauge which shall alert the driver when the cab is unlocked and ajar. The alert message shall cease to be displayed when the cab is in the fully lowered position and the hold down hooks are secured and locked to the cab mounts.

In addition to the alert message an audible alarm shall sound when the cab is unlocked and ajar and the parking brake is released.



Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CAB WINDSHIELD**

The cab windshield shall be a wraparound design for maximum visibility.

The glass utilized for the windshield shall include standard automotive tint. The left and right windshield shall be fully interchangeable thereby minimizing stocking and replacement costs.

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**GLASS FRONT DOOR**

The front cab doors shall include a window which is 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 using electric actuation. The left and right front door windows shall be controlled using a switch on each respective side inner door panel. The left dash panel shall include a switch for each powered door window in the cab.

There shall be an irregular shaped fixed window which shall measure 2.50 inches wide at the top, 8.00 inches wide at the bottom X 26.00 inches in height.

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**GLASS TINT FRONT DOOR**

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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CLIMATE CONTROL**

The cab shall include a 57,500 BTU @ 425 CFM front overhead heater/defroster which shall be provided and installed above the windshield between the sun visors.

The cab shall also include a combination heater air-conditioning unit mounted to the ceiling in a central location above the engine tunnel. This unit shall offer eight (8) adjustable louvers, four (4) forward facing and four (4) rearward facing, a temperature control valve and two (2) blowers offering three (3) speeds which shall be capable of circulating 550 cubic feet of air per minute. The unit shall be rated for 42,500 BTU/Hr. of cooling and 36,000 BTU/Hr. of heating. The temperature and blower controls shall be located on the center of the dashboard

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

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

In 100-degree Fahrenheit ambient temperature with 50 percent relative humidity and at maximum compressor speed, the cab and crew cab shall cool down to 75 degrees Fahrenheit within 30 minutes. Actual test results of the air-conditioning system, verifying this performance requirement, shall be submitted at delivery or equivalent.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

#### **CLIMATE CONTROL DRAIN**

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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

#### **CLIMATE CONTROL ACTIVATION**

The heating and defrosting controls shall be located on the front overhead climate control unit. There shall be additional heating and air conditioning controls located on the center dash panel.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

#### **A/C CONDENSER LOCATION**

A roof mounted A/C condenser shall be installed on the center of the cab, mid-roof.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

#### **A/C COMPRESSOR**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

#### **UNDER CAB INSULATION**

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

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.

The engine tunnel insulation shall measure approximately 0.75-inch-thick including a vertically lapped polyester fiber layer, a 1.0 lb./ft<sup>2</sup> PVC barrier layer, an open cell foam layer, and a moisture and heat reflective foil facing reinforced with a woven fiberglass layer. The foil surface acts as protection against moisture and other contaminants. The insulation shall meet or exceed FMVSS 302 flammability test.

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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERIOR TRIM FLOOR**

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. 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.

The driver and officer front seating area floor shall have an overlay of 3003-H22 aluminum embossed tread plate. The tread plate shall be held down with screws and aluminum trim molding.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERIOR TRIM**

The cab interior shall include trim on the front ceiling, rear crew ceiling, and the cab walls. It shall be easily removable to assist in maintenance. The trim shall be constructed of insulated vinyl over a hard board backing.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR WALL INTERIOR TRIM**

The rear wall of the cab shall be trimmed with vinyl.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **HEADER TRIM**

The cab interior shall feature header trim over the driver and officer dash constructed of 5052-H32 Marine Grade, 0.13-inch-thick aluminum.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TRIM CENTER DASH**

The main center dash area shall be constructed of 5052-H32 Marine Grade, 0.13-inch-thick aluminum plate. There shall be four (4) holes located on the top of the dash near each outer edge of the electrical access cover for ventilation.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TRIM LH DASH**

The left-hand dash shall be constructed of 5052-H32 Marine Grade, 0.13-inch-thick aluminum plate for a perfect fit around the instrument panel. For increased occupant protection, the extreme duty left hand dash utilizes patent pending break away technology to reduce rigidity in the event of a frontal crash. The left-hand dash shall offer lower vertical surface area to the left and right of the steering column to accommodate control panels.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TRIM RH DASH**

The right-hand dash shall be constructed of 5052-H32 Marine Grade, 0.13 of an inch-thick aluminum plate and shall include a glove compartment with a hinged door and a Mobile Data Terminal (MDT) provision. The glove compartment size will measure 14.00 inches wide X 6.38 inches high X 5.88 inches deep. The MDT provision shall be provided above the glove compartment.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE TUNNEL TRIM**

The cab engine tunnel shall be covered with a multi-layer mat consisting of 0.25-inch closed cell foam with a 0.06-inch-thick non-slip vinyl surface with a pebble grain finish. The mat shall be held in place by pressure sensitive adhesive. The engine tunnel mat shall be trimmed with anodized aluminum stair nosing trim for an aesthetically pleasing appearance.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **POWER POINT DASH MOUNT**

The cab interior shall include four (4) 12-volt cigarette lighter type receptacles in the cab dash to provide a power source for 12-volt electrical equipment. The receptacles shall be wired battery direct.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STEP TRIM**

Each cab entry door shall include a three-step entry. The first step closest to the ground shall be constructed of SAE 304 stainless steel with indented perforations. The perforations shall allow water and other debris to flow through rather than becoming trapped within the stepping surface. The stainless-steel material shall have a number 7 mirror finish. The lower step shall be mounted to a frame which is integral with the construction of the cab for rigidity and strength. The middle step shall be integral with the cab construction and shall be trimmed in 0.08-inch-thick 3003-H22 embossed aluminum tread plate.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STEP TRIM KICKPLATE**

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 which is 0.07 inch thick.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**INTERIOR DOOR TRIM**

The interior trim on the doors of the cab shall consist of an aluminum panel constructed of Marine Grade 5052-H32 0.13 of an inch-thick aluminum plate. The door panels shall include a painted finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DOOR TRIM KICKPLATE**

The inner door panels shall include a DA sanded kick plate which shall be fastened to the lower portion of the door panels.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DOOR TRIM SCUFF PLATE**

The trim along the door shall include a stainless-steel scuff plate along the door jamb to prevent the chipping of paint should the seat belt buckle come in contact with the door jamb.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DOOR TRIM CUSTOMER NAMEPLATE**

The interior door trim on the front doors shall include a customer nameplate which states the vehicle was custom built for their Department.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CAB DOOR TRIM REFLECTIVE**

The interior of each door shall include a white reflective tape installed vertically along the outer rear edge of the door. Also, a 12.00-inch reflective octagon stop sign shall be installed on the inner door panel of each door.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**INTERIOR GRAB HANDLE "A" PILLAR**

There shall be two (2) rubber covered 11.00-inch grab handles installed inside the cab, one on each "A" post at the left and right door openings. The left handle shall be located 7.88 inches above the bottom of the door window opening and the right handle shall be located 2.88 inches above the bottom of the door window opening. The handles shall assist personnel in entering and exiting the cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**INTERIOR GRAB HANDLE FRONT DOOR**

Each front door shall include one (1) ergonomically contoured 9.00-inch cast aluminum handle mounted horizontally on the interior door panels. The handles shall feature a textured black powder coat finish to assist personnel entering and exiting the cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**INTERIOR SOFT TRIM COLOR**

The cab interior soft trim surfaces shall be gray in color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**INTERIOR TRIM SUNVISOR**

The header shall include two (2) sun visors, one each side forward of the driver and officer seating positions above the windshield. Each sun visor shall be constructed of Masonite and covered with padded vinyl trim.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**INTERIOR FLOOR MAT COLOR**

The cab interior floor mat shall be gray in color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CAB PAINT INTERIOR DOOR TRIM**

The inner door panel surfaces shall be painted with multi-tone silver gray texture finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**HEADER TRIM INTERIOR PAINT**

The metal surfaces in the header area shall be coated with multi-tone silver gray texture finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TRIM CENTER DASH INTERIOR PAINT**

The entire center dash shall be coated with multi-tone silver gray texture finish. Any accessory pods attached to the dash shall also be painted this color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TRIM LH DASH INTERIOR PAINT**

The left-hand dash shall be painted with a multi-tone silver gray texture finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**TRIM RIGHT HAND DASH INTERIOR PAINT**

The right-hand dash shall be painted with multi-tone silver gray texture finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DASH PANEL GROUP**

The main center dash area shall include three (3) removable panels located one (1) to the right of the driver position, one (1) in the center of the dash and one (1) to the left of the officer position. The center panel shall be within comfortable reach of both the driver and officer.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SWITCHES CENTER PANEL**

The center dash panel shall include twenty-four (24) rocker switch positions, in a twelve (12) over twelve (12) switch configuration in the center of the panel.

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. Each blank switch legend can be custom engraved by the body manufacturer. All switch legends shall have backlighting provided.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SWITCHES LEFT PANEL**

The left dash panel shall include thirteen (13) switches. There shall be six (6) switches across the top of the panel and seven (7) across the bottom of the panel. Five (5) of the top row of switches shall be rocker type and the left one (1) shall be the headlight switch. Five (5) of the lower row of switches shall be rocker type and the left two (2) shall be the windshield wiper/washer control switch and instrument lamp dimmer switch.

A rocker switch with a blank legend installed directly above shall be provided for any position not designated by a specific option. The non-designated switches shall be two-position, black switches with a green indicator light. Each blank switch legend can be custom engraved by the body manufacturer. All switch legends shall have backlighting provided

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SWITCHES RIGHT PANEL**

The right dash panel shall include eight (8) rocker switch positions in a four (4) over four (4) switch configuration.

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. Each blank switch legend can be custom engraved by the body manufacturer. All switch legends shall have backlighting provided.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SEAT BELT WARNING**

A Weldon seat belt warning system, integrated with the Vehicle Data Recorder system, shall be installed for each seat within the cab. The system shall 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.

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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SEAT MATERIAL**

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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SEAT COLOR**

All seats supplied with the chassis shall be gray in color. All seats shall include red seat belts.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SEAT DRIVER**

The driver's seat shall be an H.O. Bostrom 400 Series Sierra model seat with air suspension. The four-way seat shall feature a 3.00 inches 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.

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. The buckle portion of the seat belt shall extend from the seat base towards the driver position within easy reach of the occupant.

This model of seat shall have successfully completed the static load tests set forth by FMVSS 207/210. This testing shall include a simultaneous forward load of 3000 pounds each on the lap and shoulder belts and twenty (20) times the weight through the center of gravity. This model of seat installed in the cab model, as specified, shall have successfully completed the dynamic sled testing using FMVSS 208 as a guide with the following accommodations. In order to reflect the larger size outfitted firefighters, the test dummy used shall be a 95th percentile hybrid III male weighing 225 pounds rather than the 50th percentile male dummy weighing 165 pounds as referenced in FMVSS 208.

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 RFP comply? Yes\_\_\_\_ No\_\_\_\_



### **SEAT BACK DRIVER**

The driver's seat shall include a standard seat back incorporating the all belts to seat feature (ABTS) as described above. The seat back shall feature a contoured, adjustable head rest. The seat back shall recline up to 19-degrees.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SEAT MOUNTING DRIVER**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **OCCUPANT PROTECTION DRIVER**

The driver's position shall be equipped with the Advanced Protection System™ (APS). The APS 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.

The driver's seating area APS shall include:

- Advanced seat belt system - retractor pre-tensioner tightens the seat belt around the driver, securing the occupant in the seat and the load limiter plays out some of the seat belt webbing to reduce seat belt to chest and torso force upon impact as well as mitigate head and neck injuries.
- Large side curtain airbag - protects the driver's head, neck, and upper body from dangerous cab side surfaces and contact points with intrusive surfaces as a result of a collision as well as provides ejection mitigation protection to the driver in a qualifying event by covering the window and the upper portion of the door.
- Dual knee airbags (patent pending) with energy management mounting (patent pending) - protects the driver's lower body from dangerous surface contact injuries, acceleration injuries, and from intrusion as well as locks the lower body in place so the upper body shall be slowed by the load limiting seat belt.

Steering wheel airbag - protects the driver's head, neck, and upper torso from contact injuries, acceleration injuries, and contact points with intrusive surfaces as a result of a collision.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SEAT OFFICER**

The officer's seat shall be a H.O. Bostrom 400 Series Firefighter series. The seat shall feature a tapered and padded seat, and cushion. The seat shall be a non-adjustable type seat.

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. The buckle portion of the seat belt shall extend from the seat base towards the driver position within easy reach of the occupant.

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

This model of seat shall have successfully completed the static load tests by FMVSS 207/210. This testing shall include a simultaneous forward load of 3000 pounds each on the lap and shoulder belts and twenty (20) times the weight through the center of gravity. This model of seat installed in the cab model, as specified, shall have successfully completed the dynamic sled testing using FMVSS 208 as a guide with the following accommodations. In order to reflect the larger size outfitted firefighters, the test dummy used shall be a 95th percentile hybrid III male weighing 225 pounds rather than the 50th percentile male dummy weighing 165 pounds as referenced in FMVSS 208. 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, of which decides the burning rate of materials in the occupant compartments of motor vehicles.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SEAT BACK OFFICER**

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.

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.

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SEAT MOUNTING OFFICER**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **OCCUPANT PROTECTION OFFICER**

The officer's position shall be equipped with the Advanced Protection System™ (APS). The APS 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.

The officer's seating area APS shall include:

- Advanced seat belt system - retractor pre-tensioner tightens the seat belt around the officer, securing the occupant in the seat and the load limiter plays out some of the seat belt webbing to reduce seat belt to chest and torso force upon impact as well as mitigate head and neck injuries.
- Large side curtain airbag - protects the officer's head, neck, and upper body from dangerous cab side surfaces and contact points with intrusive surfaces as a result of a collision as well as provides ejection mitigation protection to the officer in a qualifying event by covering the window and the upper portion of the door.

Knee airbags - protects the officer's lower body from dangerous surface contact injuries, acceleration injuries, and from contact points with intrusive surfaces as a result of a collision as well as locks the lower body in place so the upper body shall be slowed by the load limiting seat belt.

Does your RFP comply? Yes \_\_\_ No \_\_\_

#### **CAB FRONT UNDERSEAT STORAGE ACCESS**

The left and right under seat storage areas shall have a solid aluminum hinged door with non-locking latch.

Does your RFP comply? Yes \_\_\_ No \_\_\_

#### **SEAT COMPARTMENT DOOR FINISH**

All under seat storage compartment access doors shall have a multi-tone silver gray texture finish.

Does your RFP comply? Yes \_\_\_ No \_\_\_

#### **WINDSHIELD WIPER SYSTEM**

The cab shall include a dual arm wiper system which shall clear the windshield of water, ice and debris. There shall be two (2) windshield wipers which shall be affixed to a radial wet arm. 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. The wiper motor shall be activated by an intermittent wiper control located within easy reach of the driver's position.

Does your RFP comply? Yes \_\_\_ No \_\_\_

#### **ELECTRONIC WINDSHIELD FLUID LEVEL INDICATOR**

The windshield washer fluid level shall be monitored electronically. When the washer fluid level becomes low the yellow "Check Message Center" indicator light on the instrument panel shall illuminate and the message center in the dual air pressure gauge shall display a "Check Washer Fluid Level" message.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CAB DOOR HARDWARE**

The cab entry doors shall be equipped with exterior pull handles, suitable for use while wearing firefighter gloves. The handles shall be made of aluminum with a chrome plated finish.

The interior exit door handles shall be flush paddle type with a black finish, which are incorporated into the upper door panel.

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

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DOOR LOCKS**

Each cab entry door shall include a manually operated door lock. 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 TriMark key from the exterior. The door locks are designed to prevent accidental lock out.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**GRAB HANDLES**

The cab shall include one (1) 18.00-inch three-piece knurled aluminum, anti-slip exterior assist handle, installed behind each cab door, recess installed into an aluminum surround. The assist handle shall be made of extruded aluminum with a knurled finish to enable non-slip assistance with a gloved hand.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**REARVIEW MIRRORS**

Retrac Aerodynamic West Coast style dual vision mirror heads model 613315 shall be provided and installed each of the front cab doors.

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

The mirrors shall measure 8.00 inches wide X 19.00 inches high and shall include an integral convex mirror in the mirror head below the flat glass to provide 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.

The mirror backs shall be constructed of vacuum formed chrome plated ABS plastic housings that are corrosion resistant and shall include an amber marker light. The mirrors shall be manufactured with the finest quality non-glare glass.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REARVIEW MIRROR HEAT SWITCH**

The heat for the rearview mirrors shall be controlled through a rocker switch on the dash in the switch panel.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AUXILIARY EXTERIOR MIRRORS**

The cab exterior shall include one (1) Retrac 10.00-inch diameter convex look down mirror with a black plastic back. The mirror assembly shall include a Retrac model 612665 stainless steel arm assembly to provide a stable three-point mount to reduce mirror vibration.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB FENDER**

Full width wheel well liners shall be installed on the extruded cab to limit road splash and enable easier cleaning. Each two-piece liner shall consist of an inner liner 16.00 inches wide made of vacuum formed ABS composite and an outer fenderette 3.50 inches wide made of rubber.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **IGNITION**

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 chrome push type starter button shall be provided adjacent to the master battery and ignition switches.

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

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **BATTERY**

The single start electrical system shall include six (6) Harris BCI 31 925 CCA batteries with a 210-minute reserve capacity and 4/0 welding type dual path starter cables per SAE J541.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **BATTERY TRAY**

The batteries shall be installed within two (2) steel battery trays located on the left side and right side of the chassis, securely bolted to the frame rails. The battery trays shall be coated with the same material as the frame.

The battery trays shall include drain holes in the bottom for sufficient drainage of water. A durable, nonconducting, 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. The batteries shall be held in place by non-conducting phenolic resin hold down boards.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **BATTERY BOX COVER**

Each battery box shall include a steel cover which protects the top of the batteries. Each cover shall include flush latches which shall keep the cover secure as well as a black powder coated handle for convenience when opening.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **BATTERY CABLE**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **BATTERY JUMPER STUD**

The starting system shall include battery jumper studs. These studs shall be located in the forward most portion of the driver's side lower step. The studs shall 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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ALTERNATOR**

The charging system shall include a 430-amp Delco Remy 55SI 12-volt alternator. The alternator shall include a self-exciting integral regulator.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STARTER MOTOR**

The single start electrical system shall include a Delco brand starter motor.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**BATTERY CONDITIONER**

A Kussmaul 1200 battery conditioner shall be supplied. The battery conditioner shall be mounted in the cab in the area between the officer seat and the RH rear facing outer seat position.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**BATTERY CONDITIONER DISPLAY**

A Kussmaul battery conditioner display shall be supplied. The battery conditioner display shall be shipped loose for installation by the apparatus builder.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ELECTRICAL INLET**

A Hubbell brand 30-amp twist lock electrical receptacle model HBL2615 shall be supplied.

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

Amp Draw Reference List:

*Kussmaul 1000 Charger - 3.5 Amps*

*Kussmaul 1200 Charger - 10 Amps*

*Kussmaul 35/10 Charger - 10 Amps*

*1000W Engine Heater - 8.33 Amps*

*1500W Engine Heater - 12.5 Amps*

*120V Air Compressor - 4.2 Amps*

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ELECTRICAL INLET LOCATION**

An electrical inlet shall be installed on the driver's side step well in a convenient location.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ELECTRICAL INLET CONNECTION**

The electrical inlet shall be connected to the battery conditioner.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ELECTRICAL INLET COLOR**

The electrical inlet connection shall include a red cover.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**HEADLIGHTS**

The cab front shall include four (4) rectangular LED headlamps with separate high and low beams mounted in bright chrome bezels.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_  
**FRONT TURN SIGNALS**

The front fascia shall include two (2) Whelen model 600 4.00-inch X 6.00-inch programmable amber LED turn signals which shall be installed in polished aluminum housing above and outboard of the front warning and head lamps.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**HEADLIGHT LOCATION**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SIDE TURN/MARKER LIGHTS**

The sides of the cab shall include two (2) LED round side marker lights which shall be provided just behind the front cab radius corners.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**MARKER AND ICC LIGHTS**

In accordance with FMVSS, there shall be five (5) LED cab marker lamps designating identification, center and clearance provided. These lights shall be installed on the face of the cab within full view of other vehicles from ground level.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**HEADLIGHT AND MARKER LIGHT ACTIVATION**

The headlights and marker lights shall be controlled through a rocker switch within easy reach of the driver. There shall be a dimmer switch within easy reach of the driver to adjust the brightness of the dash lights. The headlamps shall be equipped with the "Daytime Running" light feature, which shall illuminate the headlights and marker lamps to 100% brilliance when the battery master switch is in the "On" position and the parking brake is released.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**GROUND LIGHTS**

Each door shall include an NFPA compliant LED ground light mounted to the underside of the cab step below each door. The lights shall include a polycarbonate lens, a housing which is vibration welded and LEDs which shall be shock mounted for extended life. The ground lighting shall be activated by the opening of the respective door, when the parking brake is set or by a rocker switch on the switch panel.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**LOWER CAB STEP LIGHTS**



The middle step located at each door shall include a recess mounted 4.00-inch round LED light which shall activate with the ground lights.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERMEDIATE STEP LIGHTS**

The intermediate step well area at each door shall include an LED light within a chrome housing. The Egress step lights shall provide visibility to the step well area for the first step exiting the vehicle. The Egress step lights shall activate with Entry step lighting.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **UNDER BUMPER LIGHTS**

There shall be one (1) 40.00-inch-long clear LED Amdor Luma Bar H2O™ NFPA compliant ground light mounted under the forward face of the bumper between the frame rails. There shall also be two (2) 12.00-inch-long LED Amdor Luma Bar H2O™ NFPA compliant ground lights mounted under the forward face of the bumper outside of the frame rails. The under bumper ground lighting shall be interlocked with the park brake.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE COMPARTMENT LIGHT**

There shall be an LED NFPA compliant light mounted under the engine tunnel for area work lighting on the engine. The light shall include a polycarbonate lens, a housing which is vibration welded and a bulb which shall be shock mounted for extended life. The light shall activate automatically when the cab is tilted.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB FRONT LIGHTBAR**

The lightbar provisions shall be for one (1) Whelen brand Freedom IV LED lightbar mounted centered on the front of the cab roof. The lightbar shall be 72.00 inches in length. The lightbar shall feature twelve (12) red LED light modules and two (2) clear LED light modules. The clear lights shall be disabled with park brake engaged. The lightbar shall include an Opticom mounted centered in the front of the light bar. The cable shall exit the lightbar on the right side of the cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **LIGHTBAR SWITCH**

The light bar shall be controlled by a rocker switch located on the switch panel. This switch shall be clearly labeled for identification.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT SCENE LIGHTS**

The front of the cab shall include two (2) Whelen model Pioneer PFP2 contour roof mount scene lights installed on the brow of the cab.

Each lamp head shall have two (2) 12-volt high intensity LED panels. Each lamp head shall draw 12.0 amps and generate 14,000 lumens total. Each lamp head will be adjustable up to 20-degrees and shall measure 4.25 inches in height X 14.00 inches in width. The lamp heads and brackets shall be powder coated white.

Each lamp head shall be also be activated with the warning lights and integrated into the white light cut off.

There shall also be a switch to turn off only the Pioneer flashing mode.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT SCENE LIGHTS ACTIVATION**

The front scene lighting shall be activated by a rocker switch labeled “Brow Lights” at the LH and RH panels.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FRONT SCENE LIGHT LOCATION**

There shall be two (2) scene lights mounted to the front brow of the cab inboard of the outer front marker lights.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SIDE SCENE LIGHTS**

The side of the cab shall include two (2) Whelen Pioneer Plus model PCPSM2C dual combination Super LED flood/spot light, one on each side of the cab. The lights shall be mounted flush to the cab. The PCPSM2C configuration shall consist of 24 white Super-LEDs for the spot light on the bottom and 48 white Super-LEDs in the flood light on the top, and a clear non-optic polycarbonate lens. Light(s) shall be 12 VDC, 12-amp, 154 watts, with 16,000 usable lumens.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SIDE SCENE LIGHT LOCATION**

The scene lighting located on the left and right sides of the cab shall be mounted in the upper forward portion of the cab between the front door and the back of the cab. No part of the light shall extend past the edge of the body. The light head shall be fully recessed in the body to match the current Rescue truck.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SIDE SCENE ACTIVATION**

The scene lights shall be activated by four (4) rocker switches located in the switch panel, one (1) for each light at the LH and RH switch panels, and by opening the respective side cab doors.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**INTERIOR OVERHEAD LIGHTS**

The cab shall include a two-section, red and clear Weldon LED dome lamp located over each door. The dome lamps shall be rectangular in shape and shall measure approximately 7.00 inches in length X 3.00 inches in width with a black colored bezel. The clear portion of each lamp shall be activated by opening the respective door and both the red and clear portion can be activated by individual push lenses on each lamp.

An additional incandescent three (3) light module with dual map lights shall be located over the engine tunnel which can be activated by individual switches on the lamp.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SPOTLIGHT**

The officer position shall include one (1) 12-volt Optronics QH-100 hand-held spotlight which shall be mounted to the right of the engine tunnel. The spotlight shall provide 1,000,000 candlepower of illumination utilizing a 55-watt quartz halogen bulb and shall include a 10.00-foot coil cord and a momentary push button switch.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DO NOT MOVE APPARATUS LIGHT**

The front headliner of the cab shall include a flashing red Whelen Ion LED light clearly labeled "Do Not Move Apparatus". In addition to the flashing red light, an audible alarm shall be included which shall sound while the light is activated.

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

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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

**MASTER WARNING SWITCH**

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. 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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**WHITE LIGHT CUTOUT SWITCH**

There shall be a switch installed to allow the white warning lights to be disabled during response mode.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **HEADLIGHT FLASHER**

An alternating high beam headlight flashing system shall be installed into the high beam headlight circuit which shall allow the high beams to flash alternately from left to right.

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.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **HEADLIGHT FLASHER SWITCH**

The flashing headlights shall be activated through a rocker switch on the switch panel. The rocker switch shall be clearly labeled for identification.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INBOARD FRONT WARNING LIGHTS**

The cab front fascia shall include two (2) Whelen 600 series Super LED front warning lights in the left and right inboard positions. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the front fascia of the cab within a chrome bezel.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INBOARD FRONT WARNING LIGHTS COLOR**

The warning lights mounted on the cab front fascia in the inboard positions shall be red/clear, both with clear lenses.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **OUTBOARD FRONT WARNING LIGHTS**

The cab front fascia shall include two (2) Whelen 600 series Super LED front warning lights in the left and right outboard positions. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the front fascia of the cab within a chrome bezel.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **OUTBOARD FRONT WARNING LIGHTS COLOR**

The warning lights mounted on the cab front fascia in the outboard position shall be red/clear with a clear lens.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FRONT WARNING SWITCH**

The front warning lights shall be controlled via rocker switch on the panel. This switch shall be clearly labeled for identification.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERSECTION WARNING LIGHTS**

The chassis shall include two (2) Whelen 600 series Super LED intersection warning lights, one (1) each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERSECTION WARNING LIGHTS COLOR**

The intersection lights shall be red/clear with a clear lens.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERSECTION WARNING LIGHTS LOCATION**

The intersection lights shall be mounted on the side of the bumper in the rearward position.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SIDE WARNING LIGHTS**

The cab sides shall include two (2) Whelen 600 series Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the sides of the cab within a chrome bezel.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SIDE WARNING LIGHTS COLOR**

The warning lights located on the side of the cab shall be red/clear with a clear lens.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SIDE WARNING LIGHTS LOCATION**

The warning lights on the side of the cab shall be mounted over the front wheel well forward from the center of the front axle.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SIDE AND INTERSECTOR WARNING SWITCH**

The side and intersection warning lights shall be controlled by a rocker switch on the switch panel. This switch shall be clearly labeled for identification.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TRAFFIC CONTROL**

There shall be one (1) GTT (Global Traffic Technologies) Opticom model 795H traffic control optical emitter mounted in the lightbar on the front of the cab roof. The emitter shall be activated by a lighted rocker switch on dash and shall be deactivated when the parking brake is applied.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERIOR DOOR OPEN WARNING LIGHTS**

The interior of each door shall include one (1) red Whelen 500 Series TIR6™ Super-LED® warning light located on the door panel. 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 RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SIREN CONTROL HEAD**

A Whelen 295HFSC9 series electronic siren control head shall be provided. The siren head shall feature 200-watt output, wail, yelp, manual siren, and hands-free operation which shall allow the operator to turn the siren on and off from the horn ring if a horn/siren selector switch option is also selected. The siren head shall be shipped loose and installed by the apparatus manufacturer for installation in a location specific to the customer's needs.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **HORN BUTTON SELECTOR SWITCH**

A rocker switch shall be installed in the switch panel between the driver and officer to allow control of the electric horn or the mechanical siren from the steering wheel horn button. The electric horn shall sound by default when the selector switch is in either position to meet FMCSA requirements.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AIR HORN ACTIVATION**

The air horn activation shall be accomplished by two (2) lanyard cables, one (1) on the left-hand side accessible to the driver and one (1) on the right-hand side accessible to the officer. The air horn shall also be activated by a right-hand side Linemaster model SP491-S81 foot switch for the officer

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **MECHANICAL SIREN ACTIVATION**

The mechanical siren shall be actuated by two (2) Linemaster model SP491-S81 foot switches mounted in the front section of the cab for use by the driver and officer. A red momentary siren brake rocker switch shall be provided in the switch panel on the dash.

The siren shall only be active when master warning switch is on to prevent accidental engagement.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ELECTRONIC SIREN AUXILIARY ACTIVATION**

The electronic siren shall include activation by the steering wheel horn button.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **BACK-UP ALARM**

An ECCO model 575 backup alarm shall be installed at the rear of the chassis with an output level of 107 dB. The alarm shall automatically activate when the transmission is placed in reverse.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INSTRUMENTATION**

An ergonomically designed instrument panel shall be provided. Each gauge shall be backlit with LED lamps. Stepper motor movements shall drive all gauges. 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.

A twenty-eight (28) icon lightbar message center with integral LCD odometer/trip odometer shall be included. The odometer shall display up to 999,999.9 miles. The trip odometer shall display 9,999.9 miles. The LCD message center screen shall be capable of custom configuration by the users for displaying certain vehicle status and diagnostic functions.

The instrument panel shall contain the following gauges:

One (1) three-movement gauge displaying vehicle speed, fuel level, and Diesel Exhaust Fluid (DEF) level. 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. The scale on the fuel and DEF level gauges shall read from empty to full as a fraction of full tank capacity. Red indicator lights in the gauge and an audible alarm shall indicate low fuel or low DEF at 1/8<sup>th</sup> tank level.

One (1) three-movement gauge displaying engine RPM, and primary and secondary air system pressures shall be included. The scale on the tachometer shall read from 0 to 3000 RPM. The scale on the air pressure gauges shall read from 0 to 150 pounds per square inch (PSI) with a red line zone indicating critical levels of air pressure. Red indicator lights in the gauge and an audible alarm shall indicate low air pressure.

One (1) four-movement gauge displaying engine oil pressure, coolant temperature, voltmeter, and transmission temperature shall be included. The scale on the engine oil pressure gauge shall read from 0 to 100 pounds PSI with a red line zone indicating critical levels of oil pressure. A red indicator light in the gauge and audible alarm shall indicate low engine oil pressure. The scale on the coolant temperature gauge shall read from 100 to 250 degrees Fahrenheit (°F) with a red line zone indicating critical coolant temperatures. A red indicator light in the gauge and audible alarm shall indicate high coolant temperature. The scale on the voltmeter shall read from 9 to 18 volts with a red line zone indicating critical levels of battery voltage. A red indicator light in the gauge and an audible alarm shall indicate high or low system voltage. The low voltage alarm shall indicate when the system voltage has dropped below 11.8 volts for more than 120 seconds in accordance with the requirements of NFPA 1901. The scale on the transmission temperature gauge shall read from 100 to 300 degrees °F with a red line zone

indicating critical temperatures. A red indicator light in the gauge and an audible alarm shall indicate a high transmission temperature.

The light bar portion of the message center shall include twenty-eight (28) LED backlit indicators. The lightbar shall be split with fourteen (14) indicators on each side of the LCD message screen. The lightbar shall contain the following indicators and produce the following audible alarms when supplied in conjunction with applicable configurations:

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **RED INDICATORS**

Stop Engine - indicates critical engine fault

Air Filter Restricted - indicates excessive engine air intake restriction

Park Brake - indicates parking brake is set

Seat Belt - indicates a seat is occupied and corresponding seat belt remains unfastened

Low Coolant - indicates critically low engine coolant

Cab Tilt Lock - indicates the cab tilt system locks are not engaged.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **AMBER INDICATORS**

Malfunction Indicator Lamp (MIL) - indicates an engine emission control system fault

Check Engine - indicates engine fault

Check Transmission - indicates transmission fault

Anti-Lock Brake System (ABS) - indicates anti-lock brake system fault

High exhaust system temperature – indicates elevated exhaust temperatures

Water in Fuel - indicates presence of water in fuel filter

Wait to Start - indicates active engine air preheat cycle

Windshield Washer Fluid – indicates washer fluid is low

DPF restriction - indicates a restriction of the diesel particulate filter

Regen Inhibit-indicates regeneration of the DPF has been inhibited by the operator

Range Inhibit - indicates a transmission operation is prevented and requested shift request may not occur.

SRS - indicates a problem in the supplemental restraint system

Check Message - indicates a vehicle status or diagnostic message on the LCD display requiring attention.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **GREEN INDICATORS**

Left and Right turn signal indicators

ATC - indicates low wheel traction for automatic traction control equipped vehicles, also indicates mud/snow mode is active for ATC system

High Idle - indicates engine high idle is active.

Cruise Control - indicates cruise control is enabled



OK to Pump - indicates the pump is engaged and conditions have been met for pump operations  
Pump Engaged - indicates the pump transmission is currently in pump gear  
Auxiliary Brake - indicates secondary braking device is active

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**BLUE INDICATORS**

High Beam indicator

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**AUDIBLE ALARMS**

Air Filter Restriction  
Cab Tilt Lock  
Check Engine  
Check Transmission  
Open Door/Compartment  
High Coolant Temperature  
High or Low System Voltage  
High Transmission Temperature  
Low Air Pressure  
Low Coolant Level  
Low DEF Level  
Low Engine Oil Pressure  
Low Fuel  
Seatbelt Indicator  
Stop Engine  
Water in Fuel  
Extended Left/Right Turn Signal On  
ABS System Fault

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**BACKLIGHTING COLOR**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**RADIO**

A Jensen radio with weather band, AM/FM stereo receiver, compact disc (CD) player, and four (4) speakers shall be installed in the cab. The radio shall include rear RCA input pigtail connector, satellite radio capability, and a covered front auxiliary mini stereo input with iPod ready USB jack. The CD player shall be compatible with CD-R, CD-RW and MP3 format discs. The radio shall be installed in the left hand overhead position. The speakers shall be installed inside the cab with two (2) speakers recessed within the headliner of the front of the cab just behind the windshield and two (2) speakers on the upper rear wall of the cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**AM/FM ANTENNA**

A small antenna shall be located on the left-hand side of the cab roof for AM/FM and weather band reception.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CAMERA**

An Audiovox Voyager heavy duty rearview camera system shall be supplied. The system shall include one (1) box shaped camera to afford the driver a clear view of the rear to the vehicle, one camera mounted to the officers side of the vehicle to provide a clear view of any blind spots, and one (1) box shaped camera shall be installed in the crew compartment of the body to allow the driver to monitor the crew.

The cameras shall be wired to a 7.00-inch flip down monitor which shall include a color display and day and night brightness modes installed above the driver position. The rear camera shall activate when the transmission is placed in reverse, the blind spot camera shall activate with the right turn signal, and the crew compartment camera shall activate whenever the rear-view camera is not active.

The camera system shall include a one- way communication device that shall be an integral part of the rear camera for the use of voice commands directly to the driver.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CAB EXTERIOR PROTECTION**

The cab face shall have a removable plastic film installed over the painted surfaces to protect the paint finish during transport to the body manufacturer.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FIRE EXTINGUISHER**

A 2.50-pound D.O.T approved fire extinguisher with BC rating shall be shipped loose with the cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DOOR KEYS**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**DIAGNOSTIC SOFTWARE OCCUPANT PROTECTION**

Diagnostic software for the Advanced Protection System shall be available for free download to authorized OEMs, dealers and service centers, as well as the vehicle owner.

The software has been validated to be compatible with the following RP1210 interface adapters:

- Dearborn Group DPA4 Plus
- Noregon Systems JPRO<sup>®</sup> DLA+
- Cummins INLINE5
- Cummins INLINE6
- NexIQ<sup>™</sup> USB-Link<sup>™</sup>

The software and adapter utilize the SAE J1939-13 heavy duty nine (9) pin connector which is located below the driver's side dash to the left of the steering column.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **WARRANTY**

The chassis manufacturer shall provide a limited parts and labor warranty to the original purchaser of the custom-built cab and chassis for a period of twenty-four (24) months, or the first 36,000 miles, whichever occurs first. The warranty period shall commence on the date the vehicle is delivered to the first end user.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CHASSIS OPERATION MANUAL**

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

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENGINE AND TRANSMISSION OPERATION MANUALS**

The following manuals specific to the engine and transmission models ordered will be included with the chassis in the ship loose items:

- (1) Hard copy of the Engine Operation and Maintenance manual with CD
- (1) Digital copy of the Transmission Operator's manual
- (1) Digital copy of the Engine Owner's manual

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CAB/CHASSIS AS BUILT WIRING DIAGRAMS**

The cab and chassis shall include two (2) digital copies of wiring schematics and option wiring diagrams.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **PAINT CONFIRMATION**

There shall be a paint confirmation letter sent to the body manufacturer with paint spray outs to confirm the cab primary paint color or primary and secondary paint color as specified by the paint options.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **DRIVELINE LAYOUT CONFIRMATION**

During the design phase of the chassis the, chassis driveline engineer shall submit the driveline layout to an OEM engineer to review the chassis design for any potential problems integrating the OEM body to the chassis. The OEM engineer shall provide approval to the driveline engineer prior to driveline bills of materials being released.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **LUBRICATION AND TIRE DATA PLATE**

A permanent label in the driving compartment shall specify the quantity and type of the following fluids used in the vehicle and tire information:

- Engine oil
- Engine coolant
- Chassis transmission fluid
- Pump transmission lubrication fluid (if applicable)
- Drive axle(s) lubrication fluid
- Air conditioning refrigerant (if applicable)
- Air conditioning lubrication oil (if applicable)
- Power steering fluid
- Cab tilt mechanism fluid (if applicable)
- Transfer case fluid (if applicable)
- Equipment rack fluid (if applicable)
- Generator system lubricant (if applicable)
- Front tire cold pressure
- Rear tire cold pressure
- Maximum tire speed ratings

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **VEHICLE DATA PLATE**

A permanent label in the driving compartment which indicates the following:

- Filter part numbers for the;
  - Engine
  - Transmission
  - Air
  - Fuel
- Serial numbers for the;

- Engine
- Transmission
- Delivered Weights of the Front and Rear Axles
- Paint Brand and Code(s)
- Sales Order Number

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**OVERALL HEIGHT, LENGTH DATA PLATE (US)**

The fire apparatus manufacturer shall permanently affix a high-visibility label in a location visible to the driver while seated.

The label shall show the height of the completed fire apparatus in feet and inches, the length of the completed fire apparatus in feet and inches, and the GVWR in pounds.

Wording on the label shall indicate that the information shown was current when the apparatus was manufactured and that, if the overall height changes while the vehicle is in service, the fire department must revise that dimension on the plate.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**PERSONNEL CAPACITY**

A label that states the number of personnel the vehicle is designed to carry shall be located in an area visible to the driver.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FINAL STAGE MANUFACTURER VEHICLE CERTIFICATION**

A final stage manufacturer vehicle certification label shall be provided and installed in the driver cab door jamb area.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**MUDFLAPS**

There shall be 1/4" rubber mudflaps provided and installed behind each set of tires to prevent throwing road debris and lower road spray.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**REAR MUDFLAP**

There shall be a full-length mudflap installed at the rear of the truck to minimize spray and dust collection on the rear of the truck.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FUEL FILL**

There shall be one (1) fuel fill door located in the curbside exterior wheel well panel, behind the rear axle. The fill door shall be fabricated from brushed stainless steel. There shall be a permanent label with the text "DIESEL FUEL ONLY" located adjacent to the fuel fill access.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **BODY DESIGN**

The importance of public safety associated with emergency vehicles requires that the construction of this vehicle meet the following specifications. These specifications are written to establish the minimum level of quality and design. All Bidders shall be required to meet these minimum requirements.

It is the intent of these specifications to fully describe the requirements for a custom-built emergency type vehicle. In order to extend the expected service life of this vehicle, the body module shall be removable from the chassis frame and be capable of being installed on a new chassis.

The sheet metal material requirements, including alloy and material thickness, throughout the specifications are considered to be a minimum. Since such materials are available to all Manufacturers, the material specifications shall be strictly adhered to.

The fabrication of the body shall be formed sheet metal. Formed components shall allow the Guilford Fire Department to have the body repaired locally in the case where any object has struck the body and caused damage. The use of proprietary extrusions will prevent the Guilford Fire Department from such repair and shall NOT be used.

Following construction of the subframe, which supports the apparatus body, the sheet metal portion of the body shall be built directly on the subframe. The joining of the subframe and body shall be of a welded integral construction.

The sheet metal fabrication of the body shall be performed using inert gas continuous feed welders only. The entire body shall be welded construction. The use of pop rivets in any portion of structural construction may allow premature failure of the body structure. Therefore, pop rivets shall NOT be used in the construction of the structural portions of the body. This includes side body sheets, inner panels of compartment doors, and any other structural portions of the body.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **EXTERIOR STAINLESS-STEEL BODY**

The fabrication of the body shall be constructed from 12-gauge type #304 stainless steel. This shall include the compartment front panels, vertical side sheets, side upper roll-over panels, rear panels and compartment door frames.

The body exterior panels and compartment floors shall be constructed with not less than 12-gauge type #304 stainless steel. Interior compartment dividing walls shall be constructed with not less than 14-gauge type #304 stainless steel. Lighter gauge sheet metal will not be acceptable in these areas.

The compartment door frame openings shall be formed "C" channel design. An electrical wiring conduit raceway running the full length of exterior compartments shall be provided. This raceway shall contain all 12-volt wiring running to the rear of the apparatus, permitting easy accessibility to wiring.

Individual compartment modules, with dead air space voids between compartments, shall not be an acceptable method of compartment construction.

The compartments shall be an integral part of the body construction. Compartment floors from front of body to ahead of rear axle, also from rear axle to rear of body shall be single one-piece sections. Compartment floors shall be pre-formed, then positioned in body and welded into final position.

Compartment floors shall have a "sweep-out" design with door opening threshold positioned lower than compartment floor, permitting easy cleaning of compartments. Angles, lips, or door moldings are not acceptable in the base of compartment door opening. One-way rubber drain valves shall be provided in compartment floors so that a water hose may be used to flush-out compartment area.

All seams in sheet metal below frame, and around the rear wheel well area shall be welded and caulked to prevent moisture from entering the compartments. All other interior seams and corners shall be sealed with silicone based caulk prior to painting.

Only stainless-steel bolts, nuts, and sheet metal screws shall be used in mounting exterior trim, hardware and equipment.

Exterior compartments shall have louvers in lower back wall of compartment for ventilation.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **ALUMINUM TREADPLATE ROOF OVERLAY**

The roof overlay shall be not be integral with the roof structure or body sheet metal construction. The body roof structure shall be overlaid with .100" aluminum 3003H-14 alloy NFPA compliant non-skid tread plate. Roof overlay shall be bolted to the roof structure with countersunk stainless steel bolts and caulked to prevent entry of moisture. Any steel body components shall be painted and caulked and barrier material used prior to assembly to prevent dissimilar materials contact.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **BODY SUBFRAME**

The chassis frame rails shall be fitted with 1/4" custom extruded UHMW polyethylene rail cap to isolate the body frame members from direct contact with chassis frame rails.

The body subframe shall be constructed from stainless steel tubing. The subframe shall consist of two (2) 2" x 4" x 11-gauge type #304 stainless steel tubes running the full length of the body and spaced the same width as the chassis frame rails. Welded to the two (2) stringers shall be 2" x 4" x 11-gauge type #304 stainless steel tubing cross members. These cross members shall extend the full width of the body to support the compartments. Cross members shall be located at front and rear of body, below compartment divider walls, and in front and rear of wheel well opening. Additional stainless steel cross members shall be located on 16" centers, or as necessary to support walkways or heavy equipment.

The compartment area behind the rear axle may be supported by a drop frame fabricated of the same 2" x 4" x 11-gauge stainless steel tube and the main stringers. Any such rear drop frame shall be constructed using a minimum of four (4) vertical drop tubes, welded to the main subframe. In areas where heavy equipment shall be mounted, drop frame support shall be constructed with 2" x 4" x 11-gauge stainless steel tube. All drop frame structures must be welded directly to the body subframe to allow the body to be a completely separate structure from the chassis.

To form the frame, the tubing shall be welded at each joint using a wire feed MIG welders with ER308 stainless steel welding wire.

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## **BODY MOUNTING**

The body subframe shall be fastened to the chassis frame with a minimum of six (6) spring loaded body mounts. Each mount shall be configured using a two-piece encapsulated slide bracket. The two (2) brackets shall be fabricated of heavy duty 1/4" thick steel and shall have a powder coat finish to prevent any corrosion. Each mounting assembly shall utilize two (2) 3/4" diameter x 6" long grade 8 bolts and two (2) heavy duty springs. The assembly design shall allow the body and subframe to act as one (1) component, separate from the chassis. As the chassis frame twists under driving conditions, the spring mounting system shall eliminate any stress from being transferred into the body. The spring-loaded body mounts shall also prevent frame side rail or body damage caused by unevenly distributed stress and strains due to load and chassis movement.

Body mountings that do not allow relief from chassis movement will not be acceptable.

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

## **REAR TOW EYES**

There shall be two (2) heavy duty rear mounted tow eyes securely attached to the body subframe, below body. The tow eyes shall be fabricated from 3/4" thick steel plate with a 3" diameter opening. Tow eyes shall have a black powder coat finish.



**REAR MOUNTED WINCH**  
**PACCAR MODEL AHGU5**  
**HYDRAULIC WINCH:**

A 20,000-pound capacity winch shall be provided and securely mounted in the rear frame area of the unit. The winch shall be powered by a hydraulic pump and motor, driven from a transmission mounted PTO. A 40-gallon hydraulic fluid tank shall be included and located in an easily accessible area. The hydraulic tank shall include a dipstick or fluid sight glass, suction strainer with suction line shutoff valve for strainer access, and a return line filter.

A remote control for the winch shall be furnished with a 30.00' length of cord and a hand held deadman style joystick. The remote control shall provide complete proportional control of the winch. The remote control shall only control the pay-out and pay-in speed of the winch. There shall be a manual control for the winch at a location to be determined. The winch drum clutch shall be manually controlled near the winch.

The winch shall be furnished with 225.00 feet of .50" galvanized rope. The winch rope shall terminate with a thimble, and shall include a size chain shackle. Cable shall feed through a full captive type 4-way roller and guide assembly.

A label shall be placed on or near the mount that states the maximum winch load rating and the maximum rope load rating that the mount can support.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**WINCH TEST**

The winch shall be tested, approved, and certified to full PACCAR capacity and speed specifications at the manufacturer's expense. The test results shall be provided.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**PTO FOR HYDRAULIC WINCHES**

The hydraulic winch systems shall be driven by a hot-shift PTO unit mounted to a Chelsea split box. One PTO and pump shall provide hydraulic power to the front and rear

winches. Activation of the generator PTO, VanAir PTO, or hydraulic winch PTO shall be unaffected by the activation or deactivation of any other PTO.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TRAILER HITCH**

A Class V weight carrying capacity rear hitch receiver shall be provided below the rear step. The receiver shall be attached to chassis frame with heavy duty steel frame work with a black hammertone powder coat paint finish.

The hitch shall be complete with a 2.5" square receiver without a "weight distribution" adjustable ball hitch. The Class V receiver shall have a capacity of 20,000 lbs. gross trailer weight and a maximum tongue weight of 2,700 lbs.

A Gen-Y hitch, Model # GH-624 Adjustable Receiver hitch with ball mount and pintle will be provided.

A label shall be provided in a location in which it is visible to an operator making trailer connections. The label shall state the maximum GVWR and tongue weight of the trailer that can be safely towed with the hitch system.

Two (2) safety chain attachment points shall be provided near the hitch point for hitches designed to use safety chains, each designed with an ultimate strength of not less than the maximum GVWR specified on label.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TRAILER ELECTRICAL RECEPTACLE**

For hydraulic brake equipped or electric brake equipped trailer towing capability, a primary electrical receptacle shall be provided near the hitch point and shall match the umbilical cable specified. Receptacle shall be a 7-Way Blade Type socket, the same as used on most Light Duty Trucks and RV's.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TRAILER BRAKE CONTROLLER**

An electric trailer brake controller will be installed.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **GROUND LIGHTS**

There shall be two (2) OnScene 8" Access LED lights installed below the rear of the truck capable of providing illumination at a minimum level of 2 fc (20 lx) on ground areas within 30 in. (800 mm) of the

edge of the vehicle in areas designed for personnel to climb onto or descend from the vehicle to the ground level.

Lighting shall be switchable but activated automatically when the vehicle park brake is set.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **WHEEL WELL EXTERIOR PANEL**

The exterior panel of the body wheel well shall be constructed from not less than 14-gauge type #304 smooth stainless steel.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **DIEFORMED BEADED EDGE BODY FENDERS**

A die formed beaded edge shall be provided along the radius of the wheel well opening for a finished appearance.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **WHEEL WELL LINERS**

The wheel wells shall be provided with an easily removable polymer, circular inner fender liner. The inner liner shall be bolted to the wheel well with stainless steel bolts and spaced away from the wheel well so the liner will not accumulate dirt or water. The outside of the wheel well shall have an outer fenderette 3.50 inches wide made of rubber.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SCBA CYLINDER COMPARTMENTS**

There shall be seven (7) SCBA cylinder storage compartments located, four (4) on curbside, and three (3) on streetside of rear tandem wheel well area. Each compartment shall be capable of storing two (2) SCBA (60 min.) cylinders. Each compartment shall have a vertical stainless steel hinged aluminum door with a positive catch latch and painted primary lower body color. Each compartment shall allow the storage of an SCBA cylinder or a fire extinguisher up to 7-3/4" in diameter x 24" deep. The door shall activate the "Hazard Warning Light" in the cab when not in the closed position.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FASTENERS**

Prior to the assembly and reinstallation of exterior components; i.e. warning and DOT lights, handrails, steps, door hardware, and miscellaneous items, a Mylar isolation tape, or gasket shall be used to prevent damage to the finish painted surface. These components shall be fastened to body using either a plastic insert into body metal with stainless steel screws or zinc coated nut-surts into body surface using stainless steel bolts to prevent corrosion from dissimilar metals.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ELECTROLYSIS CORROSION CONTROL**

The vehicle shall be assembled using ECK brand or similar corrosion control compound on all high corrosion potential areas.

ECK protects aluminum and stainless steel against electrolytic reaction, isolates dissimilar metals and gives bedding protection for hardware and fasteners. ECK contains anti-seizing lubricant for threads. ECK is dielectric and perfect for use with electrical connectors.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**PAINT FINISH - TWO COLOR**

The body shall be painted with a two-tone color of PPG Delfleet® Evolution paint per approved customer spray-out.

Touch-up paint shall be provided with completed vehicle.

The primary/lower paint color shall be PPG 914466 red FBCH  
The secondary/upper paint color shall be PPG FBCH 931853 white

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**BODY UNDERCOATING**

The entire underside of body shall be sprayed with black automotive undercoating. Undercoating shall cover all areas underside of body and wheel well area to help prevent corrosion under the vehicle.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**UNDERCOAT WARRANTY**

The body undercoating shall have a warranty provided by the manufacturer for the lifetime of the vehicle or twenty (20) years, whichever occurs first. The warranty shall be transferable between vehicle owners. Should the undercoating material applied to the underside of the body and wheel wells of the vehicle ever flake off, peel, chip or crack due to drying out, the damaged area shall be re-sprayed without charge to the vehicle owner.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**PAINT WARRANTY**

The vehicle shall be provided with a ten (10) year non-prorated warranty to the original owner. Warranty is provided by PPG Inc. A warranty sheet with all conditions and maintenance procedures shall be provided with the delivered vehicle. **Pro-rated warranties will not be acceptable.**

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **COMPARTMENT INTERIOR FINISH**

The interior of all exterior body compartments shall be a "Maintenance Free" smooth unpainted finish. All body seams shall be finished with a caulk sealant for both appearance and moisture protection.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REFLECTIVE STRIPE REQUIREMENTS**

#### Material

All retroreflective materials shall conform to the requirements of ASTM D 4956, *Standard Specification for Retroreflective Sheeting for Traffic Control*, Section 6.1.1 for Type I Sheeting.

All retroreflective materials used that are colors not listed in ASTM D 4956, Section 6.1.1, shall have a minimum coefficient of retro-reflection of 10 with observation angle of 0.2 degrees and entrance angle of -4 degrees.

Any printed or processed retroreflective film construction used shall conform to the standards required of an integral colored film as specified in ASTM D 4956, Section 6.1.1.

#### Minimum Requirements

A retroreflective stripe(s) shall be affixed to at least 50 percent of the cab and body length on each side, and at least 25 percent of the width of the front of the apparatus.

The stripe or combination of stripes shall be a minimum of 8 in. in total width.

The 8-in. wide stripe or combination of stripes shall be permitted to be interrupted by objects (i.e., receptacles, joints between doors) provided the full stripe is seen as conspicuous when approaching the apparatus.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **GRAPHICS PROOF**

A color graphics proof of the reflective striping layout shall be provided for approval by Guilford Fire Department prior to installation. The graphics proof shall be submitted to Guilford Fire Department on

8.5" x 11" sheets with front, sides, rear and plan views, each on one (1) sheet. In addition, if there is any special art work an additional sheet shall be provided showing all details.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**REFLECTIVE STRIPE - CAB SIDE**

The reflective stripe material shall be 8" wide, 3M Scotchcal 680 series.

- This reflective stripe shall be white in color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**REFLECTIVE STRIPE - CAB FRONT**

The reflective stripe material shall be 8" wide, 3M Scotchcal 680 series.

- This reflective stripe shall be white in color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**REFLECTIVE STRIPE - BODY SIDES**

The reflective stripe material shall be 8" wide, 3M Scotchcal 680 series.

- This reflective stripe shall be white in color.

The stripe shall remain in a straight line from the front of the front of cab to the rear body.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CHEVRON REFLECTIVE STRIPE - REAR SIDES PANELS**

At least 50 percent of the rear-facing vertical surfaces, visible from the rear of the apparatus, excluding any pump panel areas not covered by a door, shall be equipped with retroreflective striping in a chevron pattern sloping downward and away from the centerline of the vehicle at an angle of 45 degrees. Each stripe shall be 6" width.

The rear side panels of the body on each side of a rear stairway or compartment shall have a chevron style reflective stripe, extending from bumper height up to side compartment drip rail height. Each chevron panel shall be a full sheet and shall have a 3M UV over laminate to protect from UV rays, scene damage, and everyday use. Chevron panel shall have a minimum 10-year warranty for material failure, and colorfastness.

The stripe material shall be 3M Diamond Grade.

This reflective chevron stripe shall alternate red and fluorescent yellow-green in color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SIDE CAB DOOR LETTERING**

There shall be fifty (50) 3" high SuperGold letters furnished and installed on the vehicle. Lettering shall have a clear 3M UV Protective Over Laminate applied before installation.

Final design and layout shall be determined prior to construction.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **UPPER BODY SIDE LETTERING**

There shall be forty (40) 10" high SuperGold letters furnished and installed on the vehicle. Lettering shall have a clear 3M UV Protective Over Laminate applied before installation.

Final design and layout shall be determined prior to construction.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR BODY LETTERING**

There shall be sixty (60) 10" high reflective letters furnished and installed on the vehicle.

- This reflective lettering shall be white in color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FRONT OF CAB LETTERING**

There shall be fifteen (15) 3" high SuperGold letters furnished and installed on the vehicle. Lettering shall have a clear 3M UV Protective Over Laminate applied before installation.

Final design and layout shall be determined prior to construction.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CUSTOM DECAL LOGO - 12" -18"**

Four (4) custom designed 12" - 18" Scotchcal type retroreflective logo shall be provided and located on the completed vehicle. The exact design and/or artwork shall be provided by the Guilford Fire Department prior to construction.

Four (4) copy of the above custom logo shall be provided and located on the completed vehicle as directed by Guilford Fire Department.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CUSTOM GRILLE LOGO**

There shall be a custom grille logo provided on the grille as directed by the fire department at pre-construction.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**FLUSH FITTING HINGED DOOR CONSTRUCTION**

The exterior compartment doors shall be a flush style, custom manufactured and built for each compartment. The compartment doors must be able to withstand years of rugged service and wear. For this reason, the compartment door design, metal thickness, and attachments must be strictly adhered to.

The compartment doors shall be all stainless-steel construction. The double panel doors shall be 1-3/4" thick to completely enclose the door latching assembly. Doors shall have drain hole openings for drainage and ventilation.

The doors shall be flush mounted so that the outer surface is in line with the side body surface. Lap or bevel type constructed doors, doors framed with extrusions, or doors requiring rubber bumpers to prevent unnecessary contact are NOT ACCEPTABLE.

Compartment door openings shall be sealed with closed cell automotive type rubber molding to provide a weather resistant seal around door. In addition, rubber molding shall be provided along hinge to prevent moisture entry. Open cell foam type rubber moldings are NOT ACCEPTABLE.

Hinged compartment doors shall have 14-gauge stainless steel hinge, with 1/4" stainless steel pin. The hinge shall be bolted to the door and body with stainless steel machine screws. A polyester barrier film gasket shall be placed between stainless steel hinge and any dissimilar metals as necessary.

Drip rails shall be installed above all compartment door openings. Drip rails shall be completely removable for easy replacement if necessary.

Each door shall be capable of being opened or closed without unlatching. Door checks shall be bolted to the upper compartment door header and the box pan of the door. Door checks that require unlatching by hand will NOT BE ACCEPTABLE.

Vertically hinged door openings up to 32" wide shall be single door construction. Door openings over 32" shall be double door construction with the forward first opening door overlapping the second opening door.



- The interior door panel shall have a smooth un-painted panel.

Does your RFP comply? Yes\_\_\_\_\_ No\_\_\_\_\_

**BODY HEIGHT MEASUREMENTS**

The vertical body dimensions shall be approximately:

AHEAD OF REAR AXLE

<u>Description</u>	<u>Dimension</u>
A Bottom of Subframe to Top of Body	94.7"
B Bottom of Subframe to Bottom of Body	22.5"
C Total Body Height	117.2"
D Compartment Height Above Frame	49.0"
E Compartment Height Below Frame	22.5"
F Vertical Door Opening - (Full Height Compartment):	
-with hinged door	68.0"
G Vertical Door Opening (Below Frame Compartment):	
-with hinged door	19.0"

ABOVE REAR AXLE

<u>Description</u>	<u>Dimension</u>
H Vertical Door Opening - Above Rear Wheel	
-with horizontal hinged door	35.5"

BEHIND REAR AXLE

<u>Description</u>	<u>Dimension</u>
I Bottom of Subframe to Bottom of Body	20.0"
J Compartment Height Above Frame	49.0"
K Compartment Height Below Frame	19.75"
L Vertical Door Opening - (Full Height Compartment):	
-with hinged door	66.5"
M Vertical Door Opening - (Below Frame Compartment):	
N -with hinged door	16.5"

GENERAL

<u>Description</u>	<u>Dimension</u>
O Bottom of Drip Rail to Top of Body	44.75"

P Walk-in Interior Height 86.0"  
(min.)

(Dimensions are approximate and subject to change during construction or design process.)

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_  
**BODY WIDTH DIMENSIONS**

The walk thru body shall be 100.0" wide, and 102.0" wide at drip rails. Interior compartment depth dimensions shall be approximately:

<u>Area Description</u>	<u>Dimension</u>
Transverse above subframe	95.0" (If specified.)
Compartment depth above subframe	31.0" (To walkway wall.)
Compartment depth below subframe	24.5"
Walkway width	34"

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STREETSIDE COMPARTMENT - FRONT (S1)**

The interior useable compartment width shall be approximately 32.0" wide.

The compartment door opening shall be approximately 25.0" wide.

- This compartment shall have flush fitting vertically hinged stainless-steel compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. All Hansen latches shall be slam-style latches with Nader bolts located at the top and bottom.
- All latches shall be activated by stainless steel cables.
- Each exterior compartment door shall have only one release handle in double door compartments. The second door shall be held closed by the primary door. Inside release handles are not acceptable.

- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **COMPARTMENT LAYOUT**

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- One (1) OnScene Access LED, full height compartment light, vertically mounted.
- The controls for the specified light tower(s).
- The 12-volt electrical distribution panel shall be located in the front lower compartment.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STREETSIDE COMPARTMENT - FRONT (S2)**

The interior useable compartment width shall be approximately 48.0" wide.

The compartment door opening shall be approximately 40.0" wide.

- This compartment shall have flush fitting vertically hinged stainless-steel compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. All Hansen latches shall be slam-style latches with Nader bolts located at the top and bottom.
- All latches shall be activated by stainless steel cables.
- Each exterior compartment door shall have only one release handle in double door compartments. The second door shall be held closed by the primary door. Inside release handles are not acceptable.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## COMPARTMENT LAYOUT

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- There shall be one (1) adjustable shelf/shelves approximately 94" deep. Each shelf shall be fabricated from 3/16" 3003 aluminum sheet with a 2" vertical flange along the front and rear edges.
  - One (1) Guilford Fire Department supplied stokes basket(s). Manufacturer, model number and dimensions of the stokes basket(s) shall be provided during the pre-construction meeting.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be one (1) OnScene Solutions 84 series slide-out or equivalent, drop-down style aluminum tray base with 90% extension, and rating of 250 lbs. Slide-out tray(s) base shall be approximately 46" deep and as wide as the compartment layout or door opening permits. It shall be located above the level of the chassis frame rails and shall be vertically adjustable in height. Each slide shall have a cable operated, spring loaded latch complimented by a large hand opening and red pull handle (Pull to Release) which will hold the tray in the closed position. Each tray shall be fabricated from 3/16" 3003 aluminum sheet and have welded corners to form a box type tray surface with an internal depth of approximately 3 ½".
- Mounts will be supplied and installed for two (2) hydraulic rams.
- Mounts will be supplied and installed for one (1) hydraulic cutter.
- Mounts will be supplied and installed for one (1) hydraulic spreader.
  - The above components shall have a smooth un-painted finish.
- There shall be one (1) module fabricated from 3/16" (.188) 3003H-14 aluminum alloy smooth sheet. The module will be designed for the following long tools and equipment:
  - The list of items to be stored in the transverse module shall be determined at the pre-construction meeting.
  - One (1) Guilford Fire Department supplied rescue tri-pod. Manufacturer, model number and dimensions of the rescue tri-pod shall be provided during the pre-construction meeting.
  - One (1) Guilford Fire Department supplied ladder. Manufacturer, model number and dimensions of the ladder(s) shall be provided during the pre-construction meeting.
  - One (1) Guilford Fire Department supplied Paratech Maxi-Force Airbag
  - There shall be two (2) OnScene Solutions Velcro cargo straps provided to secure the stored equipment.

- There shall be one (1) SCBA cylinder storage module for 8" OD (maximum) SCBA bottles. The maximum length of the SCBA cylinder shall be 24.75". The module shall have an exterior shell fabricated from 1/8" (.125) 3003H-14 aluminum alloy sheet. The module shall have a 2" slope, front to back to prevent cylinders from sliding out. The SCBA cylinder storage tubing shall be fabricated from PVC pipe to prevent damage or abrasion to cylinders. In addition, there shall be rubber matting provided in the base of each storage tube for bottle protection and to prevent slipping.
  - The SCBA cylinder module shall be capable of storing four (4) SCBA cylinders up to 7.5" diameter.
- The floor of the compartment above the frame rails shall be extended to the interior edge of the door. The floor shall have a 2" vertical lip and a 1" return to increase strength.
- One (1) Hannay ECR1622-17-18 240-volt electric cable reel(s) capable of storing 200' of 8/4 electric cable. Reel(s) shall be designed to hold 110% of the capacity of cord length, with fully enclosed 60-amp, four (4) conductor collector rings. Reel(s) shall be mounted to channel structure that allows for side-to-side adjustment of reel position.
  - Power rewind control(s) shall be in a position where the operator can observe the rewinding operation and not be more than 72 in. (1830 mm) above the operator's standing position, and shall be marked with a label indicating its function.
  - A label shall be provided in a visible location adjacent to reel with following information: Current rating, Current type, Phase, Voltage, and Total cord length.
  - The electric cord reel shall be equipped with 200' of 8/4 SEOW yellow cord, a molded plastic ball clamp, and a single heavy duty L14-30 twist-lock female plug.
- One Woodhead Power Distribution Box shall be provided to match what the Guilford Fire Department currently utilizes.
- The fairlead roller shall be mounted directly to the reel.
- One (1) Hannay EF2020-17-18 hydraulic hose reel(s) with painted finish capable of storing 100' of dual line 3/8" TNT hydraulic hose. The rewind button for each reel shall be located adjacent to the reel it controls.
- The hydraulic reel shall be equipped with 100' of 3/8" TNT dual hydraulic hose with #4 JIC reel, and Nexus tool couplers. The hose shall be red in color.
- The hydraulic reel shall connect to the hydraulic pump with one (1) 6' TNT dual hydraulic hose with threaded couplers on one end, and 1/4" NPT for hose reel end. The hoses shall be red in color.
- The fairlead roller shall be mounted directly to the reel.

- One (1) Hannay EF2020-17-18 hydraulic hose reel(s) with painted finish capable of storing 100' of dual line 3/8" TNT hydraulic hose. The rewind button for each reel shall be located adjacent to the reel it controls.
- The hydraulic reel shall be equipped with 100' of 3/8" TNT dual hydraulic hose with #4 JIC reel, and Nexus tool couplers. The hose shall be blue in color.
- The hydraulic reel shall connect to the hydraulic pump with one (1) 6' TNT dual hydraulic hose with threaded couplers on one end, and 1/4" NPT for hose reel end. The hoses shall be blue in color.
- The fairlead roller shall be mounted directly to the reel.
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.
- One (1) OnScene Solutions Rough-Service 9" LED light(s) shall be provided below the body. Each light shall be mounted in an extruded aluminum housing to protect against damage from personnel or equipment.

Does your RFP comply? Yes\_\_\_\_\_ No\_\_\_\_\_

### **STREETSIDE COMPARTMENT - AHEAD OF REAR WHEELS (S3)**

The interior useable compartment width shall be approximately 54.0" wide.

The compartment door opening shall be approximately 45.0" wide.

- This compartment shall have flush fitting vertically hinged stainless-steel compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. All Hansen latches shall be slam-style latches with Nader bolts located at the top and bottom.
- All latches shall be activated by stainless steel cables.
- Each exterior compartment door shall have only one release handle in double door compartments. The second door shall be held closed by the primary door. Inside release handles are not acceptable.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### COMPARTMENT LAYOUT

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- There shall be three (3) adjustable shelf/shelves approximately 24" deep. Each shelf shall be fabricated from 3/16" 3003 aluminum sheet with a 2" vertical flange along the front and rear edge.
  - One (1) shelf will be mounted above the bottle filling/air station, in between the air bag storage module and the right wall.
  - Two (2) shelves will be mounted in between the bottle filling/air station and the air bag module.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be one (1) bolt-in vertical compartment partition(s) provided dividing the compartment into left and right sides. The vertical partition(s) shall be 3/16" (.188) 3003H-14 alloy smooth aluminum sheet.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be one (1) air bag storage module(s). The module shall be fabricated from 1/8" (.125) 3003H-14 aluminum alloy sheet. Circular notches shall be provided along the front edge to ease the access to the air bags. Each bay shall be sized to hold the air bag and a matching piece of 1/2" plywood (plywood not provided). The make, model, qty and exact dimensions of the air bags shall be provided by the department prior to or during the pre-construction meeting.
  - There shall be five (5) OnScene Solutions Velcro cargo straps provided to secure the stored equipment.
- The floor of the compartment above the frame rails shall cover the area directly above the frame rails ONLY (non-extended floor).
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.
- The specified utility low-pressure air hose reels shall be provided with source air from either PTO driven under deck utility air compressor or specified breathing air cascade storage cylinders. Reel air source shall be selectable utilizing a manual selector valve located in compartment. Check valves shall be installed to prevent cross-contamination into the cascade storage cylinders.
- One (1) OnScene Solutions Rough-Service 9" LED light(s) shall be provided below the body. Each light shall be mounted in an extruded aluminum housing to protect against damage from personnel or equipment.
- Two (2) 4" diameter round stainless steel louvered vents shall be provided in lower compartment.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**STREETSIDE COMPARTMENT - ABOVE REAR WHEELS (S4)**

The interior useable compartment width shall be approximately 56.0" wide.

The compartment door opening shall be approximately 49.0" wide.

- This compartment shall have a flush fitting horizontally hinged, stainless steel, lift-up style compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. The Hansen latches shall be slam-style latches with Nader bolts located at the bottom.
- All latches shall be activated by stainless steel cables.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.
- A compartment threshold protection plate shall be installed on the bottom edge of the compartment door opening. The threshold protection shall be fabricated from an aluminum extrusion with an anodized exterior finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**COMPARTMENT LAYOUT**

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- There shall be one (1) adjustable shelf/shelves approximately 24" deep. Each shelf shall be fabricated from 3/16" 3003 aluminum sheet with a 2" vertical flange along the front and rear edge. The shelf shall be mounted below the "out/down" tray.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be one (1) OnScene Solutions 84 series slide-out or equivalent, drop-down style aluminum tray base with 90% extension, and rating of 150 lbs. Slide-out tray(s) base shall be approximately 24" deep and as wide as the compartment layout or door opening permits. It shall be located above the level of the chassis frame rails and shall be vertically adjustable in height. Each



slide shall have a cable operated, spring loaded latch complimented by a large hand opening and red pull handle (Pull to Release) which will hold the tray in the closed position. Each tray shall be fabricated from 3/16" 3003 aluminum sheet and have welded corners to form a box type tray surface with an internal depth of approximately 3 ½". The tray shall be mounted below the Cascade bottles at a height to be determined by the Fire Department.

- The above component(s) shall have a smooth un-painted finish.
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.

Air storage shall consist of two (2) DOT 491 SCF @ 6,000 PSI, shall be provided on completed vehicle complete with gauges and valves. Each cylinder shall measure 9.6" diameter x 55" long.

The manufacturer's test date (month and year) on each air tank shall be current within 12 months of the apparatus delivery date.

Air tanks shall be marked with a label that reads;

“High Pressure 6,000 PSI Breathing Air” or “High Pressure 41,368 kPa Breathing Air.”

- There will be a welded reinforcement framework at ceiling of compartment to carry specified DOT or ASME cylinders. The mounting of the cylinders will be powder coated steel band straps to securely hold all cylinders in place.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STREETSIDE COMPARTMENT - ABOVE REAR WHEELS (S5)**

The interior useable compartment width shall be approximately 56.0" wide.

The compartment door opening shall be approximately 49.0" wide.

- This compartment shall have a flush fitting horizontally hinged, stainless steel, lift-up style compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. The Hansen latches shall be slam-style latches with Nader bolts located at the bottom.
- All latches shall be activated by stainless steel cables.

- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.
- A compartment threshold protection plate shall be installed on the bottom edge of the compartment door opening. The threshold protection shall be fabricated from an aluminum extrusion with an anodized exterior finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **COMPARTMENT LAYOUT**

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- There shall be one (1) adjustable shelf/shelves approximately 24" deep. Each shelf shall be fabricated from 3/16" 3003 aluminum sheet with a 2" vertical flange along the front and rear edge. The shelf shall be mounted below the "out/down" tray.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be one (1) OnScene Solutions 84 series slide-out or equivalent, drop-down style aluminum tray base with 90% extension, and rating of 150 lbs. Slide-out tray(s) base shall be approximately 24" deep and as wide as the compartment layout or door opening permits. It shall be located above the level of the chassis frame rails and shall be vertically adjustable in height. Each slide shall have a cable operated, spring loaded latch complimented by a large hand opening and red pull handle (Pull to Release) which will hold the tray in the closed position. Each tray shall be fabricated from 3/16" 3003 aluminum sheet and have welded corners to form a box type tray surface with an internal depth of approximately 3 ½".
  - The above component(s) shall have a smooth un-painted finish.
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STREETSIDE COMPARTMENT - REAR (S6)**

The interior useable compartment width shall be approximately 64.0" wide.

The compartment door opening shall be approximately 57.0" wide.

- This compartment shall have flush fitting vertically hinged stainless-steel compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.

- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. All Hansen latches shall be slam-style latches with Nader bolts located at the top and bottom.
- All latches shall be activated by stainless steel cables.
- Each exterior compartment door shall have only one release handle in double door compartments. The second door shall be held closed by the primary door. Inside release handles are not acceptable.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.

Does your RFP comply? Yes \_\_\_\_ No \_\_\_\_

### **COMPARTMENT LAYOUT**

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- There shall be one (1) 400 lbs. slide-out tray(s) approximately 24" deep and as wide as the compartment layout or door opening permits. The tray top shall be fabricated from 3/16" 3003 aluminum sheet with a 3" vertical lip and welded corners to form a box type tray surface. The sliding tracks shall extend 100% of the slide length. The tray assembly shall utilize a pneumatic cylinder mounted on underside to hold the tray in both the extended and closed positions.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be two (2) 400 lbs. slide-out tray(s) approximately 24" deep and as wide as the compartment layout or door opening permits. Each tray shall be vertically adjustable. Each tray top shall be fabricated from 3/16" 3003 aluminum sheet with a 3" vertical lip and welded corners to form a box type tray surface. The sliding tracks shall extend 100% of the slide length. The tray assembly shall utilize a pneumatic cylinder mounted on underside to hold the tray in both the extended and closed positions.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be one (1) OnScene Solutions 84 series slide-out or equivalent, drop-down style aluminum tray base with 90% extension, and rating of 150 lbs. Slide-out tray(s) base shall be approximately 24" deep and as wide as the compartment layout or door opening permits. It shall be located above the level of the chassis frame rails and shall be vertically adjustable in height. Each slide shall have a cable operated, spring loaded latch complimented by a large hand opening and red pull handle (Pull to Release) which will hold the tray in the closed position. Each tray shall be fabricated from 3/16" 3003 aluminum sheet and have welded corners to form a box type tray surface with an internal depth of approximately 3 1/2".

- The above component(s) shall have a smooth un-painted finish.
- The floor of the compartment above the frame rails shall cover the area directly above the frame rails ONLY (non-extended floor).
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.
- One (1) OnScene Solutions Rough-Service 9" LED light(s) shall be provided below the body. Each light shall be mounted in an extruded aluminum housing to protect against damage from personnel or equipment.
- Two (2) 4" diameter round stainless steel louvered vents shall be provided in lower compartment.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CURBSIDE COMPARTMENT - FRONT (C1)**

The interior useable compartment width shall be approximately 32.0" wide.

The compartment door opening shall be approximately 25.0" wide.

- This compartment shall have flush fitting vertically hinged stainless-steel compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. All Hansen latches shall be slam-style latches with Nader bolts located at the top and bottom.
- All latches shall be activated by stainless steel cables.
- Each exterior compartment door shall have only one release handle in double door compartments. The second door shall be held closed by the primary door. Inside release handles are not acceptable.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## COMPARTMENT LAYOUT

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- One (1) OnScene Access LED, full height compartment light, vertically mounted.

Does your RFP comply? Yes \_\_\_ No \_\_\_

## CURBSIDE COMPARTMENT - FRONT (C2)

The interior useable compartment width shall be approximately 48.0" wide.

The compartment door opening shall be approximately 40.0" wide.

- This compartment shall have flush fitting vertically hinged stainless-steel compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. All Hansen latches shall be slam-style latches with Nader bolts located at the top and bottom.
- All latches shall be activated by stainless steel cables.
- Each exterior compartment door shall have only one release handle in double door compartments. The second door shall be held closed by the primary door. Inside release handles are not acceptable.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.

Does your RFP comply? Yes \_\_\_ No \_\_\_

## COMPARTMENT LAYOUT

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- There shall be one (1) OnScene Solutions 84 series slide-out or equivalent, drop-down style aluminum tray base with 90% extension, and rating of 250 lbs. Slide-out tray(s) base shall be approximately 46" deep and as wide as the compartment layout or door opening permits. It shall be

located above the level of the chassis frame rails and shall be vertically adjustable in height. Each slide shall have a cable operated, spring loaded latch complimented by a large hand opening and red pull handle (Pull to Release) which will hold the tray in the closed position. Each tray shall be fabricated from 3/16" 3003 aluminum sheet and have welded corners to form a box type tray surface with an internal depth of approximately 3 1/2".

- Mounts will be supplied and installed for two (2) hydraulic rams.
- Mounts will be supplied and installed for one (1) hydraulic cutter.
- Mounts will be supplied and installed for one (1) hydraulic spreader.
  - The above components shall have a smooth un-painted finish.
- The floor of the compartment above the frame rails shall be extended to the interior edge of the door. The floor shall have a 2" vertical lip and a 1" return to increase strength.
- One (1) Hannay ECR1622-17-18 240-volt electric cable reel(s) capable of storing 200' of 8/4 electric cable. Reel(s) shall be designed to hold 110% of the capacity of cord length, with fully enclosed 60-amp, four (4) conductor collector rings. Reel(s) shall be mounted to channel structure that allows for side-to-side adjustment of reel position.
  - Power rewind control(s) shall be in a position where the operator can observe the rewinding operation and not be more than 72 in. (1830 mm) above the operator's standing position, and shall be marked with a label indicating its function.
  - A label shall be provided in a visible location adjacent to reel with following information: Current rating, Current type, Phase, Voltage, and Total cord length.
  - The electric cord reel shall be equipped with 200' of 8/4 SEOW yellow cord, a molded plastic ball clamp, and a single heavy duty L14-30 twist-lock female plug.
- One Woodhead Power Distribution Box shall be provided to match what the Guilford Fire Department currently utilizes.
- The fairlead roller shall be mounted directly to the reel.
- One (1) Hannay EF2020-17-18 hydraulic hose reel(s) with painted finish capable of storing 100' of dual line 3/8" TNT hydraulic hose. The rewind button for each reel shall be located adjacent to the reel it controls.
- The hydraulic reel shall be equipped with 100' of 3/8" TNT dual hydraulic hose with #4 JIC reel, and Nexus tool couplers. The hose shall be black in color.

- The hydraulic reel shall connect to the hydraulic pump with one (1) 36' TNT dual hydraulic hose with threaded couplers on one end, and 1/4" NPT for hose reel end. The hoses shall be black in color.
- The fairlead roller shall be mounted directly to the reel.
- One (1) Hannay EF2020-17-18 hydraulic hose reel(s) with painted finish capable of storing 100' of dual line 3/8" TNT hydraulic hose. The rewind button for each reel shall be located adjacent to the reel it controls.
- The hydraulic reel shall be equipped with 100' of 3/8" TNT dual hydraulic hose with #4 JIC reel, and Nexus tool couplers. The hose shall be yellow in color.
- The hydraulic reel shall connect to the hydraulic pump with one (1) 36' TNT dual hydraulic hose with threaded couplers on one end, and 1/4" NPT for hose reel end. The hoses shall be yellow in color.
- The fairlead roller shall be mounted directly to the reel.
- One (1) Hannay EF1520-17-18 low pressure air hose reel(s) shall be provided in this compartment. Reel shall be designed to hold 110% of the capacity needed.
  - Power rewind control(s) shall be in a position where the operator can observe the rewinding operation and shall be marked with a label indicating its function and shall be guarded to prevent accidental operation.
  - A label shall be provided in a visible location adjacent to reel with following information: (1) Utility air or breathing air, (2) Operating pressure, (3) Total hose length, (4) Hose size (ID).
  - The hose reel shall be equipped with 200' of 3/8" Parker Series 7092 GST II low pressure air hose rated for 300 PSI maximum pressure. A molded plastic ball clamp shall be provided on the hose to stop it at the 4-way roller. The hose shall be Red in color.
  - The hose reel shall end with a Paratech female coupler.
  - The air supply shall be from the specified mobile breathing air system or from the VanAir compressor with a selector valve that will be located at the pre-construction meeting.
  - The air supply for specified reel(s) shall be from the on-board specified mobile breathing air system. The reel shut-off valve, pressure regulator, and gauge shall be provided at the specified breathing air control panel, not exceeding 72" from ground.
- The fairlead roller shall be mounted directly to the reel.
- One (1) Guilford Fire Department supplied Paratech Low-Pressure Air shall be mounted.
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.

- One (1) OnScene Solutions Rough-Service 9" LED light(s) shall be provided below the body. Each light shall be mounted in an extruded aluminum housing to protect against damage from personnel or equipment.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CURBSIDE COMPARTMENT - AHEAD OF REAR WHEEL (C3)**

The interior useable compartment width shall be approximately 54.0" wide.

The compartment door opening shall be approximately 45.0" wide.

- This compartment shall have flush fitting vertically hinged stainless-steel compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. All Hansen latches shall be slam-style latches with Nader bolts located at the top and bottom.
- All latches shall be activated by stainless steel cables.
- Each exterior compartment door shall have only one release handle in double door compartments. The second door shall be held closed by the primary door. Inside release handles are not acceptable.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **COMPARTMENT LAYOUT**

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- There shall be one (1) 400 lbs. slide-out tray(s) approximately 24" deep and as wide as the compartment layout or door opening permits. The tray top shall be fabricated from 3/16" 3003 aluminum sheet with a 3" vertical lip and welded corners to form a box type tray surface. The sliding tracks shall extend 100% of the slide length. The tray assembly shall utilize a pneumatic cylinder mounted on underside to hold the tray in both the extended and closed positions.



- The specified portable winch shall be mounted in compartment using a heavy duty "U" shaped channel. Winch receiver tube and mounting pin shall be utilized to hold in place during travel.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be two (2) 400 lbs. slide-out tray(s) approximately 24" deep and as wide as the compartment layout or door opening permits. Each tray shall be vertically adjustable. Each tray top shall be fabricated from 3/16" 3003 aluminum sheet with a 3" vertical lip and welded corners to form a box type tray surface. The sliding tracks shall extend 100% of the slide length. The tray assembly shall utilize a pneumatic cylinder mounted on underside to hold the tray in both the extended and closed positions.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be one (1) OnScene Solutions 84 series slide-out or equivalent, drop-down style aluminum tray base with 90% extension, and rating of 150 lbs. Slide-out tray(s) base shall be approximately 24" deep and as wide as the compartment layout or door opening permits. It shall be located above the level of the chassis frame rails and shall be vertically adjustable in height. Each slide shall have a cable operated, spring loaded latch complimented by a large hand opening and red pull handle (Pull to Release) which will hold the tray in the closed position. Each tray shall be fabricated from 3/16" 3003 aluminum sheet and have welded corners to form a box type tray surface with an internal depth of approximately 3 ½".
  - The above component(s) shall have a smooth un-painted finish.
- The floor of the compartment above the frame rails shall cover the area directly above the frame rails ONLY (non-extended floor).
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.
- One (1) OnScene Solutions Rough-Service 9" LED light(s) shall be provided below the body. Each light shall be mounted in an extruded aluminum housing to protect against damage from personnel or equipment.
- Two (2) 4" diameter round stainless steel louvered vents shall be provided in lower compartment.

Does your RFP comply? Yes \_\_\_ No \_\_\_

#### **CURBSIDE COMPARTMENT - ABOVE REAR WHEEL (C4)**

The interior useable compartment width shall be approximately 56.0" wide.

The compartment door opening shall be approximately 49.0" wide.

- This compartment shall have a flush fitting horizontally hinged, lift-up style stainless-steel compartment door. The door exterior shall be painted job color.

- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. The Hansen latches shall be slam-style latches with Nader bolts located at the bottom.
- All latches shall be activated by stainless steel cables.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.
- A compartment threshold protection plate shall be installed on the bottom edge of the compartment door opening. The threshold protection shall be fabricated from an aluminum extrusion with an anodized exterior finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### COMPARTMENT LAYOUT

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- There shall be two (2) adjustable shelf/shelves approximately 24" deep. Each shelf shall be fabricated from 3/16" 3003 aluminum sheet with a 2" vertical flange along the front and rear edge.
  - The above component(s) shall have a smooth un-painted finish.
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.
- Air storage shall consist of two (2) DOT 491 SCF @ 6,000 PSI, shall be provided on completed vehicle complete with gauges and valves. Each cylinder shall measure 9.6" diameter x 55" long.

The manufacturer's test date (month and year) on each air tank shall be current within 12 months of the apparatus delivery date.

Air tanks shall be marked with a label that reads;

“High Pressure 6,000 PSI Breathing Air” or “High Pressure 41,368 kPa Breathing Air.”

- There will be a welded reinforcement framework at ceiling of compartment to carry specified DOT or ASME cylinders. The mounting of the cylinders will be powder coated steel band straps to securely hold all cylinders in place.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CURBSIDE COMPARTMENT - ABOVE REAR WHEEL (C5)**

The interior useable compartment width shall be approximately 56.0" wide.

The compartment door opening shall be approximately 49.0" wide.

- This compartment shall have a flush fitting horizontally hinged, lift-up style stainless-steel compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. The Hansen latches shall be slam-style latches with Nader bolts located at the bottom.
- All latches shall be activated by stainless steel cables.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.
- A compartment threshold protection plate shall be installed on the bottom edge of the compartment door opening. The threshold protection shall be fabricated from an aluminum extrusion with an anodized exterior finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **COMPARTMENT LAYOUT**

- There shall be vertically mounted aluminum Shelf-Trac for specified component installation. Shelf-Trac extrusion shall have side extruded channels for use in mounting or securing special ancillary items, without need for drilling into body.
- There shall be two (2) adjustable shelf/shelves approximately 24" deep. Each shelf shall be fabricated from 3/16" 3003 aluminum sheet with a 2" vertical flange along the front and rear edge.
  - The above component(s) shall have a smooth un-painted finish.
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CURBSIDE COMPARTMENT - REAR (C6)**

The interior useable compartment width shall be approximately 64.0" wide.

The compartment door opening shall be approximately 57.0" wide.

- This compartment shall have flush fitting vertically hinged stainless-steel compartment door. The door exterior shall be painted job color.
- The interior door panel shall have a smooth un-painted stainless-steel panel.
- The door shall be equipped with a CPI harsh environment mechanical type door ajar switch located inside compartment interior lower door track.
- All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. All Hansen latches shall be slam-style latches with Nader bolts located at the top and bottom.
- All latches shall be activated by stainless steel cables.
- Each exterior compartment door shall have only one release handle in double door compartments. The second door shall be held closed by the primary door. Inside release handles are not acceptable.
- The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching. Door checks shall be bolted to the compartment door header and the box pan of the door.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **COMPARTMENT LAYOUT**

- There shall be vertically mounted stainless-steel Uni-Strut for specified component installation.
- There shall be three (3) adjustable shelf/shelves approximately 24" deep. Each shelf shall be fabricated from 3/16" 3003 aluminum sheet with a 2" vertical flange along the front and rear edge.
  - The above component(s) shall have a smooth un-painted finish.
- There shall be three (3) slide-out smooth aluminum vertical tool board(s) approximately 24" deep. Each tool board(s) vertical exterior edge shall have a double 90 degree formed edge to provide an easy grip handle. The top and bottom of tool board(s) shall be provided with Accuride 9300 series slide tracks. Each board shall be rated for a maximum 200 lbs. evenly distributed load. Each tool board shall utilize a pneumatic cylinder to hold the tool board in both the opened and closed positions. The tool board shall hold various size Paratech struts and extensions.

- The vertical tool board material shall be 3/16" (.188) 3003H-14 aluminum alloy sheet.
- The above component(s) shall have a smooth un-painted finish.
- Each tool board will be bolted to compartment floor.
- There shall be one (1) bolt-in vertical compartment partition(s) provided dividing the compartment into left and right sides. The vertical partition(s) shall be 3/16" (.188) 3003H-14 alloy smooth aluminum sheet.
  - The above component(s) shall have a smooth un-painted finish.
- The floor of the compartment above the frame rails shall cover the area directly above the frame rails ONLY (non-extended floor).
- Two (2) OnScene Access LED, full height compartment lights, vertically mounted.
- One (1) OnScene Solutions Rough-Service 9" LED light(s) shall be provided below the body. Each light shall be mounted in an extruded aluminum housing to protect against damage from personnel or equipment.
- Two (2) 4" diameter round stainless steel louvered vents shall be provided in lower compartment.

Does your RFP comply? Yes \_\_\_\_ No \_\_\_\_

### **REAR ENTRY DOOR**

Access to the interior body compartment shall be through a double rear door. The doors shall be the full height of the interior walkway and approximately 30" wide (with a 34" wide walkway width) x full height. A gray vinyl head protector shall be provided over top of doorway.

- Construction of the rear entry doors shall be with stainless steel exterior smooth plate; the interior door pans shall have a smooth un-painted stainless-steel panel.

The doors shall be hung on full height 14-gauge stainless steel hinges with 1/4" stainless steel pins. The hinge shall be bolted to the doors and body with stainless steel machine screws at 5" offset centers. The hinge shall be slotted horizontally and vertically for ease of adjustment. A polyester barrier film gasket shall be placed between the stainless-steel hinge and the aluminum doors.

The door latch shall be a double catch two-point safety slam latch recessed inside the double panel door with strike plate mounted top and bottom of the door frame.

The active latching door shall overlap the non-latching door. The latch mechanism shall include a stainless-steel paddle handle on the inside.

All compartment door handles shall be Stainless Steel, Hansen 6" Bent D-Ring handles. The handles shall have a spring return built-into handle to allow handle to return to resting position. The handle shall activate the steel rods as described or equivalent.

The hinged doors shall have a pneumatic cylinder to hold door in the open and closed positions. Each door shall be capable of being closed without unlatching.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ENTRY HANDRAILS**

There shall be four (4) handrails provided at entry door, two (2) 24" vertical on exterior of body, and two (2) 48" on inside of door. The interior handrails shall be angled for optimum use when entering or exiting the walk-in portion of the body.

Handrails shall be NFPA compliant 1-1/4" knurled 304 stainless steel with welded end stanchions.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **FOLDING STEP**

The apparatus shall be provided with 12-volt electric folding step(s) mounted under body. Step(s) shall be 30" wide and slide straight out from nested position.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **WINDOW(S)**

There shall be two (2) 12" wide x 22" high non-sliding window(s) installed. Each window shall have tinted automotive type safety glass mounted in an extruded aluminum frame. The frame shall have a black anodized finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ROPE ANCHOR OR PORTABLE WINCH RECEIVERS**

The completed unit shall have an integrated anchor system for use with life safety rope.

Anchors installed at any location on the apparatus for use with rope operations shall be designed and affixed to the apparatus to provide at least a 9,000 lb. no-yield condition with a straight-line pull.

A safety sign FAMA28 shall be located on or near each receiver or anchor stating the maximum straight line pull rating.

**RIGGING POINT CERTIFICATION:**

**Vendor Complies**

YES \_\_\_\_\_ NO \_\_\_\_\_

The rigging points shall have been tested to the qualification and proof levels specified in the current NFPA 1983. These Rigging Points are intended for use with General Use Life Safety Rope as defined by the current NFPA 1983.

The qualified Rigging Points are located at each of four roof corners and at intermediate points along the roof edge that are in line with structural sub walls.

All receivers shall have the following load rating:

	<u>STRAIGHT PULL</u>	<u>SAFETY FACTOR</u>
Rope Tie Off:	600 Lbs.	15:1
Winch:	10,000 Lbs.	2:1

The following items shall be provided to accomplish rope rescue:

Ten (10) rope anchor points shall be provided.

Provide recessed pockets or cut-outs in the rescue body to accommodate the anchor points. The Stainless-Steel Swivel Hoist Rings shall be recessed mounted through the body at the top and supported to provide **the maximum allowed by manufacturer's engineering** pound-force no-yield condition with a straight line pull per location.

The Stainless-Steel Swivel Hoist Rings shall serve as an anchor point for ropes used in a rope rescue situation and have a minimum inside diameter of 2.00". Protective stainless-steel scuff plates shall be installed behind and around the rings within the recessed pocket. Provide a hinged brushed stainless-steel latching door to cover each anchor point enclosure.

**Ref: Crosby SS Swivel Hoist Ring or approved equal**

Ten (10) high angle rescue anchor points will be provided on the body:

Four (4) Each Side, Recessed Upper Body Roof Area & Spaced to Form a Triangular Arrangement Regarding the Rear Wheel Well Rescue Winch Receiver.

Two (2) Rear Body Upper Corners

- Two (2) removable rope anchor(s) shall be provided with completed vehicle. Each rope anchor shall be fabricated from 3/4" stainless steel with a 3" ID eyelet. Eyelet end shall have radiused edge to prevent damage to rope or carabineer.
- One (1) Warn model ZEON 10 Multi-Mount 10,000 lb. 12-volt electric winch shall be furnished with the completed unit. It shall be capable of being stored in a compartment and mounted to the apparatus by inserting the mounting point into a properly rated receiver. A minimum of 80' of 3/8"

stranded galvanized steel cable with pinned utility hook shall be installed on the drum. A 12' remote control shall be provided with the assembly that permits the operator to stand at a safe operating distance from the cable and winch.

- Receivers or anchors installed at any location on the apparatus for use as removable winch anchors shall be designed and affixed to provide at least a 2.0 to 1 straight line pull no-yield safety factor over the load rating of the removable winch.
- There shall be one (1) 2" x 2" x 1/4" wall stainless steel receiver tube located at the front bumper for use with removable rope anchor point and/or a portable electric winch.
  - There shall be one (1) 12 VDC plug(s) with quick connect provided to power a Warn portable winch. All 12 VDC cables to be sized according to Warn and installation for intended use.
  - The receiver(s) shall have one (1) rubber cover(s) provided.
- There shall be one (1) 2" x 2" x 1/4" wall stainless steel receiver tube located on the streetside of the body in the forward wheel well panel area for use with removable rope anchor and/or a portable electric winch (when specified).
  - There shall be one (1) 12 VDC plug(s) with quick connect provided to power a Warn portable winch. All 12 VDC cables to be sized according to Warn and installation for intended use.
  - The receiver(s) shall have one (1) rubber cover(s) provided.
- There shall be one (1) 2" x 2" x 1/4" wall stainless steel receiver tube located on the curbside of the body in the forward wheel well panel area for use with removable rope anchor and/or a portable electric winch (when specified).
  - There shall be one (1) 12 VDC plug(s) with quick connect provided to power a Warn portable winch. All 12 VDC cables to be sized according to Warn and installation for intended use.
  - The receiver(s) shall have one (1) rubber cover(s) provided.
- The specified rear trailer hitch shall be compatible with the removable rope anchor point and/or a portable electric winch (when specified).
  - There shall be one (1) 12 VDC plug(s) with quick connect provided to power a Warn portable winch. All 12 VDC cables to be sized according to Warn and installation for intended use.
  - The receiver(s) shall have one (1) rubber cover(s) provided.

Does your RFP comply? Yes\_\_\_\_\_ No\_\_\_\_\_

**HYDRA-QUBE**

A Harrison Hydra-Qube hydraulic control module for the operation of a rescue tool hydraulic drive system shall be provided. The Hydra-Qube allows continuous operation by controlling your systems oil temperature while providing return line oil filtration.

The Hydra-Qube is easy to install, operates with virtually zero maintenance and weighs hundreds of pounds less than conventional reservoir type systems. The Hydra-Qube is;



- Open-frame modular design offers immediate access to any component unlike enclosed frames without the need to remove anything and provides best-in-class air flow for cooling
- Pop-Up Filter Dirt Alarm on top of the oil filter is strategically located above the frame to give the end user a clear visual
- 12 VDC powered fan to eliminate added horsepower or heat created with hydraulically driven fan
- Removable mounting brackets give you the option of a wall or floor mounting
- Uses only 5 Gallons instead of up to 75 Gallons
- Top access Oil Fill & Oil Filter gives instant access for replacing the filter or adding and checking hydraulic oil

**GENERAL SPECIFICATIONS:**

Dimensions: 20.5" X 19.0" X 16.0"

- Mounting: Bottom or Back
- Port Connections: Bottom
- Flow Rate: 1-25 gpm

**RESERVOIR SPECIFICATIONS:**

- Dimensions: 15.0" X 16.0" X 6.0"
- Capacity: 5 gallons
- Anti-Splash Filler/Breather: 1.5" high
- Filter: In-tank
- Level check: Sight glass
- Option: low level switch
- Option: pop up filter dirt alarm

**COOLER SPECIFICATIONS:**

- Fan: 12 VDC
  - Motor Capacity: .26 kW
  - Amp Draw: 22.5 amp
  - Recommended Fuse: 25 amp
  - Protection Class IP: 67
  - Fan Diameter: 15 inch
  - Thermostat: 130°
- One (1) TNT model PTO-QUAD HP, high pressure 10,500 psi hydraulic power unit shall be provided capable of operating four (4) TNT rescue tools simultaneously. Unit shall be inter-connected to the specified Harrison IHT hydraulic system and filled with proper mineral oil.
  - Specified hydraulic generator shall be inter-connected to Harrison IHT system providing continuous operation.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**POWER-TAKE-OFF DRIVE**

There shall be a "Hot Shift" power-take-off (PTO) installed on the transmission PTO opening of the

chassis. The "Hot Shift" PTO is provided to allow the engagement of the PTO at higher engine RPM speeds. The PTO output shall be connected to the generator through hollow tube type driveline with heavy duty universals.

The engagement of the PTO shall be in the chassis cab with a rocker switch and red pilot light to note engagement of the PTO.

The generator shall be capable of being engaged and disengaged while driving the apparatus and while the apparatus is parked.

The installation of the engine, transmission, driven accessories (power takeoffs (PTO), etc.) shall meet the engine and transmission manufacturers' installation recommendations for the service intended.

Model part number shall be Chelsea 859 series.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **LOWER SIDE BODY PROTECTION - RUB RAIL**

Rub rails shall be provided below the compartment door openings on the streetside, curbside, and at the rear of the truck.

The rub rails shall be fabricated from ABS plastic, measuring approximately 2-3/4" high x 1-3/8" thick. The rub rail shall be bolted to the body using stainless steel bolts and 1-1/2" diameter x 5/8" thick rubber mount isolators to prevent damage to the body.

The ABS plastic material shall be black in color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **MID SIDE BODY PROTECTION - RUB RAIL**

Rub rails shall be provided above the compartment door openings on the streetside, curbside, and at the rear of the truck.

The rub rails shall be fabricated from ABS plastic, measuring approximately 2-3/4" high x 1-3/8" thick. The rub rail shall be bolted to the body using stainless steel bolts and 1-1/2" diameter x 5/8" thick rubber mount isolators to prevent damage to the body.

The ABS plastic material shall be black in color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **UPPER SIDE BODY PROTECTION - RUB RAIL**

Rub rails shall be provided on upper body sides on the streetside, curbside, and at the rear of the truck.

The rub rails shall be fabricated from ABS plastic, measuring approximately 2-3/4" high x 1-3/8" thick.

The rub rail shall be bolted to the body using stainless steel bolts and 1-1/2" diameter x 5/8" thick rubber mount isolators to prevent damage to the body.

The ABS plastic material shall be black in color.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **DESK, CABINET, CONSOLE FINISH**

All specified interior desks, cabinets, overhead cabinets, or consoles shall be fabricated from formed 1/8" 3003 H14 alloy smooth aluminum. After fabrication is completed they shall be painted with a hammer tone powder coat paint finish for a hard durable surface. Paint color shall be gray.

The use of wood materials or laminated surfaces in the construction of desks, cabinets, overhead cabinets, or consoles will not be allowed. There will be **No Exceptions** allowed on specified ruggedized finish.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ROOF HATCH WITH SKYLIGHT**

The roof of body shall be reinforced for the installation of a roof hatch with skylight. Per NFPA 1901, any interior area to be occupied by personnel shall have a minimum of two means of escape. The opening shall be a minimum of 24" x 24" in size, suitable for use as an escape hatch. It shall have a heavy-duty aluminum frame with a rubber gasket inside to prevent leakage. A lip approximately 2" high shall be provided around the perimeter to prevent moisture from entering the body. It shall have an acrylic lens and be capable of opening to a vented position by sliding it, so to not increase the overall height when opened.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ROOF ACCESS LADDER**

An interior roof access ladder shall be mounted to the ceiling adjacent to roof hatch. Ladder shall be provided with a pivot point so that it can be stored against ceiling and lowered into position against street side walkway wall to assist access through roof hatch.

The roof access ladder shall be weld constructed of vertical aluminum extrusion tubing and aluminum grip surface ladder rungs with slip resistant tread grip pattern.

NFPA approved stepping material shall be provided on top of specified seat riser adjacent to ladder position to allow seat riser to be used to assist access to ladder.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERIOR INSULATION**

Following the sheet metal fabrication, the roof area, upper exterior walls and the entry door of the apparatus body shall be insulated with Dow Thermax, or equal 1-1/2" glass-fiber reinforced polyisocyanurate foam core laminated between 1.0 mil smooth, reflective aluminum foil facers on both sides, with an R9.8 value. The reinforcement, along with chemical modifications, contributes to fire resistance and dimensional stability. This insulation shall be the type that will not absorb moisture, move once in place or deteriorate. Mat type fiberglass or spray in foam insulation is not acceptable.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERIOR FINISH**

The interior of the apparatus body shall have a fully maintenance free and durable finish. The interior finish shall be installed on the ceiling, front wall, and interior side walls from top of exterior compartments to ceiling height.

The interior panels shall be installed with sheet metal screws with gray plastic plugs covering the screws. The seams between FRP panels, interior corners, and exterior corners shall be trimmed with gray plastic molding.

The interior finish shall be pearl gray pebble grain FRP.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERIOR WALKWAY SIDE WALLS**

Walkway side walls from floor level to top of exterior compartments shall be smooth un-painted aluminum panels.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERIOR WALKWAY FLOOR**

The NFPA compliant 3/16" aluminum tread plate walkway floor shall be installed above the barrier, with a 2" high vertical break on each side of the floor panel to form a watertight splash and kickboard along the walkway sides.

The walkway floor area continuously welded at all cross seams to provide a watertight finish, so that a water hose may be used to flush-out walkway area.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERIOR SUB-FLOOR**

Above the body subframe shall be an isolation sheet that shall prevent outside elements from permeating the full-length sound and thermal barrier of 3/4" thick air core plastic. The sheet shall be fabricated from the same type of material as is used in the subframe. The isolation sheet shall be flanged on both sides with a 1" high vertical break.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**ONE ROOM AIR CONDITIONER - HEATER SYSTEM**

The completed unit shall be supplied with a Dometic Cruisair “off roof” style air conditioning/heating system for one (1) room. The cooling/heat unit shall be connected to one (1) undercarriage mounted model ACH14BC, 230 VAC, 36/9 amp start/full-load, 14,000 BTU cooling/heat condensing unit. (Size: 26" L x 22" D (Inc. hoses) x 14" H, weight: 97 lbs.) Condensing unit features refrigerant condenser, compressor and associated electrical and mechanical components in an aluminum enclosure. Refrigerant connections are located on the front of unit. Blower type unit pull air in through the coil in back and discharge in back through the bottom or front of unit.

Condensing unit shall supply one (1) Dometic Cruisair model CRU-715010702-REU7C 230 VAC, 1.8/1.0 Amp start/full-load, 7,000 BTU, 233 CFM, each evaporator unit located on interior. (Size: 14" L x 10" D x 12" H, Weight: 14 lbs.) Evaporator shall be inside a wall or cabinet mounted and ducted to supply air flow for cooling and heating of inside the body. Cooling unit is a compact ductable unit with a rotatable variable speed blower, insulated condensate drip pan with anti-slosh, anti-fungal foam lining, with an air filter. Interior air temperature will be controlled by a wall mounted SMX Series computerized control.

The system will be completely tested prior to delivery for cooling capabilities and refrigerant line leaks. The entire system shall be designed and installed per Dometic Cruisair installation requirements for air flow, refrigerant line length and sizing, and condenser cooling and air flow.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CLIMATE CONTROL**

The crew area shall also include a combination heater air-conditioning unit mounted at the front of the body. This unit shall offer eight (8) adjustable louvers, four (4) forward facing and four (4) rearward facing, a temperature control valve and two (2) blowers offering three (3) speeds which shall be capable of circulating 550 cubic feet of air per minute. The unit shall be rated for 42,500 BTU/Hr. of cooling and 36,000 BTU/Hr. of heating. The temperature and blower controls shall be located on the heater/air conditioning unit.

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

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

In 100-degree Fahrenheit ambient temperature with 50 percent relative humidity and at maximum compressor speed, the cab and crew area shall cool down to 75 degrees Fahrenheit within 30 minutes. Actual test results of the air-conditioning system, verifying this performance requirement, shall be submitted at delivery or equivalent.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **CLIMATE CONTROL DRAIN**

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.

Does your RFP comply? Yes \_\_\_ No \_\_\_

## **CLIMATE CONTROL ACTIVATION**

The heating and defrosting controls shall be located on the front overhead climate control unit. There shall be additional heating and air conditioning controls located on the center dash panel.

Does your RFP comply? Yes \_\_\_ No \_\_\_

## **FRONT INTERIOR AREA (IF1)**

- One (1) 120/240 VAC load center.
- The generator gauge panel.

Does your RFP comply? Yes \_\_\_ No \_\_\_

## **INTERIOR CABINET (Forward Walkway)**

- There shall be one (1) interior counter height cabinet(s) provided on interior, rear facing at forward end of walkway. Cabinet(s) shall be constructed of 1/8" smooth finish aluminum.
- Cabinet shall be provided with vertically mounted shallow aluminum Shelf-Trac for specified component installation.
- The above cabinet(s) shall have double vertically hinged aluminum door.
- There shall be three (3) vertically adjustable shelves in each of the above cabinets.
- The interior smooth aluminum deck area over exterior side body compartments shall be covered with plastic interlocking grating. The grating shall be easily removable, maintenance-free and not subject to mechanical damage.
- There shall be one (1) 120 VAC outlet(s) located in the walk-in area of the body, forward streetside area above countertop. Outlet for specified refrigerator.
  - The outlet receptacle(s) shall be 20 amps, straight-blade (NEMA 5-20R).
  - Outlet(s) shall be powered by both the on-board generator and shore power system through a relay system.

- A freestanding 120-volt refrigerator shall be provided on countertop, streetside forward walk in area. Refrigerator shall be a minimum of 2.6 cu.ft. capacity.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STREETSIDE INTERIOR AREA (IS1)**

- The interior smooth aluminum deck area over exterior side body compartments shall be covered with plastic interlocking grating. The grating shall be easily removable, maintenance-free and not subject to mechanical damage.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STREETSIDE INTERIOR AREA (IS2)**

- There shall be one (1) cabinet(s) provided on interior above the interior deck surface formed by exterior compartment ceilings. Cabinet(s) shall be framed in from the top of the interior deck surface to the ceiling of the walk-in area. Each cabinet shall be approximately 20" wide.
- Cabinet shall be provided with vertically mounted shallow aluminum Shelf-Trac for specified component installation.
- One (1) OnScene Access LED, full height compartment light, vertically mounted.
- Cargo netting of 2" nylon webbing shall be provided over cabinet opening with easy release automotive style latches at top and/or sides.
- There shall be two (2) vertically adjustable shelves in each of the above cabinets.
- There shall be one (1) 120 VAC outlet(s) located in compartment on the forward wall.
  - The outlet receptacle(s) shall be 20 amps, straight-blade (NEMA 5-20R).
  - Outlet(s) shall be powered by both the on-board generator and shore power system through a relay system.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STREETSIDE INTERIOR AREA (IS3)**

- There shall be one (1) cabinet(s) provided on interior above the interior deck surface formed by exterior compartment ceilings. Cabinet(s) shall be framed in from the top of the interior deck surface to the ceiling of the walk-in area. Each cabinet shall be approximately 58" wide.

- Cabinet shall be provided with vertically mounted shallow aluminum Shelf-Trac for specified component installation.
- One (1) OnScene Access LED, full height compartment light, vertically mounted.
- Cargo netting of 2" nylon webbing shall be provided over cabinet opening with easy release automotive style latches at top and/or sides.
- There shall be two (2) vertically adjustable shelves in each of the above cabinets.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**STREETSIDE INTERIOR AREA (IS4)**

- There shall be one (1) cabinet(s) provided on interior above the interior deck surface formed by exterior compartment ceilings. Cabinet(s) shall be framed in from the top of the interior deck surface to the ceiling of the walk-in area. Each cabinet shall be approximately 58" wide.
- Cabinet shall be provided with vertically mounted shallow aluminum Shelf-Trac for specified component installation.
- One (1) OnScene Access LED, full height compartment light, vertically mounted.
- Cargo netting of 2" nylon webbing shall be provided over cabinet opening with easy release automotive style latches at top and/or sides.
- There shall be two (2) vertically adjustable shelves in each of the above cabinets.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SEATING RISER with STORAGE**

The interior body walkway shall be provided with a seat riser along the streetside wall. The seat base shall be fabricated of 1/8" smooth un-painted aluminum to form a under seat storage compartment. A hinged door with single point "D"-ring handle and latch shall be provided at the rear of the seat compartment. The seat riser compartment shall be approximately 144" long, 20" wide, 14" high.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**INTERIOR CREW SEAT**

Four (4) Bostrom Tanker SCBA style high back Duraware fabric seat(s) shall be provided on the completed unit. Each seat shall be securely bolted to the reinforced structure. The seat(s) shall closely match the cab seat color choice.

Seat(s) shall be connected into seat belt Occupant Restraint Indicator (ORI) and Vehicle Data Recorder (VDR).

The above specified seat(s) shall be provided with an automotive type lap seat belt. The seat belt(s) shall



be secured to the attachment point provided on the seat. The seatbelt(s) shall be red in color and comply with NFPA 1901 requirements. Seat(s) shall be connected into seat belt Occupant Restraint Indicator (ORI) and Vehicle Data Recorder (VDR).

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SCBA BRACKETS**

There shall be four (4) Zico Walkaway Spring Clip Bracket for use with Scott 30 and 60-minute bottles. The brackets shall be mounted in between the seats.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **STREETSIDE INTERIOR AREA (IS5)**

- There shall be one (1) cabinet(s) provided on interior above the interior deck surface formed by exterior compartment ceilings. Cabinet(s) shall be framed in from the top of the interior deck surface to the ceiling of the walk-in area. Each cabinet shall be approximately 58" wide.
- Cabinet shall be provided with vertically mounted shallow aluminum Shelf-Trac for specified component installation.
- One (1) OnScene Access LED, full height compartment light, vertically mounted.
- Cargo netting of 2" nylon webbing shall be provided over cabinet opening with easy release automotive style latches at top and/or sides.
- There shall be two (2) vertically adjustable shelves in each of the above cabinets.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CURBSIDE INTERIOR AREA (IC1)**

- The interior smooth aluminum deck area over exterior side body compartments shall be covered with plastic interlocking grating. The grating shall be easily removable, maintenance-free and not subject to mechanical damage.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **CURBSIDE INTERIOR AREA (IC2)**

- The interior smooth aluminum deck area over exterior side body compartments shall be covered with plastic interlocking grating. The grating shall be easily removable, maintenance-free and not subject to mechanical damage.
- There shall be one (1) 120 VAC outlet(s) located inside cabinet against the back wall.
  - The outlet receptacle(s) shall be 20 amp, straight-blade (NEMA 5-20R).

- Outlet(s) shall be powered by both the on-board generator and shore power system through a relay system.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CURBSIDE INTERIOR AREA (IC3)**

- There shall be one (1) cabinet(s) provided on interior above the interior deck surface formed by exterior compartment ceilings. Cabinet(s) shall be framed in from the top of the interior deck surface to the ceiling of the walk-in area. Each cabinet shall be approximately 58" wide.
- Cabinet shall be provided with vertically mounted shallow aluminum Shelf-Trac for specified component installation.
- One (1) OnScene Access LED, full height compartment light, vertically mounted.
- Cargo netting of 2" nylon webbing shall be provided over cabinet opening with easy release automotive style latches at top and/or sides.
- There shall be two (2) vertically adjustable shelves in each of the above cabinets.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CURBSIDE INTERIOR AREA (IC4)**

- There shall be one (1) cabinet(s) provided on interior above the interior deck surface formed by exterior compartment ceilings. Cabinet(s) shall be framed in from the top of the interior deck surface to the ceiling of the walk-in area. Each cabinet shall be approximately 58" wide.
- Cabinet shall be provided with vertically mounted shallow aluminum Shelf-Trac for specified component installation.
- One (1) OnScene Access LED, full height compartment light, vertically mounted.
- Cargo netting of 2" nylon webbing shall be provided over cabinet opening with easy release automotive style latches at top and/or sides.
- There shall be two (2) vertically adjustable shelves in each of the above cabinets.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**CURBSIDE INTERIOR AREA (IC5)**

- There shall be one (1) cabinet(s) provided on interior above the interior deck surface formed by exterior compartment ceilings. Cabinet(s) shall be framed in from the top of the interior deck surface to the ceiling of the walk-in area. Each cabinet shall be approximately 58" wide.
- Cabinet shall be provided with vertically mounted shallow aluminum Shelf-Trac for specified component installation.
- One (1) OnScene Access LED, full height compartment light, vertically mounted.
  - The above cabinet(s) shall have an open front face (no door).
- There shall be two (2) vertically adjustable shelves in each of the above cabinets.
- There shall be one (1) 120 VAC outlet(s) located inside cabinet against the back wall.
  - The outlet receptacle(s) shall be 20 amps, straight-blade (NEMA 5-20R).
  - Outlet(s) shall be powered by both the on-board generator and shore power system through a relay system.

Does your RFP comply? Yes \_\_\_\_\_ No \_\_\_\_\_

### **LOW VOLTAGE ELECTRICAL SYSTEM- 12 VDC**

#### General

Any low voltage electrical systems or warning devices installed on the fire apparatus shall be appropriate for the mounting location and intended electrical load.

Where wire passes through sheet metal, grommets shall be used to protect wire and wire looms. Electrical connections shall be with double crimp water-tight heat shrink connectors.

All 12 VDC wiring running from front to back of vehicle body shall be run in full length electrical wiring raceway down each side of body.

#### Wiring

All electrical circuit feeder wiring supplied and installed by the fire apparatus manufacturer shall meet the requirements of NFPA Chapter 13.

The circuit feeder wire shall be stranded copper or copper alloy conductors of a gauge rated to carry 125% of the maximum current for which the circuit is protected. Voltage drops in all wiring from the power source to the using device shall not exceed 10%. The use of star washers for circuit ground connections shall not be permitted.

All circuits shall otherwise be wired in conformance with SAE J1292, *Automobile, Truck, Truck-Tractor, Trailer, and Motor Coach Wiring*.

#### Wiring and Wire Harness Construction

All insulated wire and cable shall conform to SAE J1127, *Low Voltage Battery Cable*, or SAE J1128, *Low Voltage Primary Cable*, type SXL, GXL, or TXL.

All conductors shall be constructed in accordance with SAE J1127 or SAE J1128, except where good engineering practice dictates special strand construction. Conductor materials and stranding, other than copper, shall be permitted if all applicable requirements for physical, electrical, and environmental conditions are met as dictated by the end application. Physical and dimensional values of conductor insulation shall be in conformance with the requirements of SAE J1127 or SAE J1128, except where good engineering practice dictates special conductor insulation. The overall covering of conductors shall be moisture-resistant loom or braid that has a minimum continuous rating of 194°F (90°C) except where good engineering practice dictates special consideration for loom installations exposed to higher temperatures. The overall covering of jacketed cables shall be moisture resistant and have a minimum continuous temperature rating of 194°F (90°C), except where good engineering practice dictates special consideration for cable installations exposed to higher temperatures.

All wiring connections and terminations shall use a method that provides a positive mechanical and electrical connection. The wiring connections and terminations shall be installed in accordance with the device manufacturer's instructions. All ungrounded electrical terminals shall have protective covers or be in enclosures. Wire nut, insulation displacement, and insulation piercing connections shall not be used.

Wiring shall be restrained to prevent damage caused by chafing or ice buildup and protected against heat, liquid contaminants, or other environmental factors.

Wiring shall be uniquely identified at least every 2 ft. (0.6 m) by color coding or permanent marking with a circuit function code. The identification shall reference a wiring diagram.

Circuits shall be provided with properly rated low voltage over-current protective devices. Such devices shall be readily accessible and protected against heat in excess of the over-current device's design range, mechanical damage, and water spray. Circuit protection shall be accomplished by utilizing fuses, circuit breakers, fusible links, or solid state equivalent devices.

If a mechanical-type device is used, it shall conform to one of the following SAE standards:

- 1) SAE J156, *Fusible Links*
- 2) SAE J553, *Circuit Breakers*
- 3) SAE J554, *Electric Fuses (Cartridge Type)*
- 4) SAE J1888, *High Current Time Lag Electric Fuses*
- 5) SAE J2077, *Miniature Blade Type Electrical Fuses*

Switches, relays, terminals, and connectors shall have a direct current (dc) rating of 125% of maximum current for which the circuit is protected.

### Power Supply

A 12 V or greater electrical alternator shall be provided. The alternator shall have a minimum output at idle to meet the minimum continuous electrical load of the vehicle, at 200°F (93°C) ambient temperature

within the engine compartment, and shall be provided with full automatic regulation.

### Minimum Continuous Electrical Load

The minimum continuous electrical load shall consist of the total amperage required to simultaneously operate the following in a stationary mode during emergency operations:

- 1) The propulsion engine and transmission
- 2) All legally required clearance and marker lights, headlights, and other electrical devices except windshield wipers and four-way hazard flashers
- 3) The radio(s) at a duty cycle of 10 percent transmit and 90% receive (for calculation and testing purposes, a default value of 5 A continuous)
- 4) The lighting necessary to produce 2 fc (20 lx) of illumination on all walking surfaces on the apparatus and on the ground at all egress points onto and off the apparatus, 5 fc (50 lx) of illumination on all control and instrument panels, and 50 percent of the total compartment lighting loads
- 5) The minimum optical warning system, where the apparatus is blocking the right-of way
- 6) The continuous electrical current required to simultaneously operate any fire pumps, aerial devices, and hydraulic pumps
- 7) Other warning devices and electrical loads defined by the purchaser as critical to the mission of the apparatus

If the apparatus is equipped to tow a trailer, an additional 45 A shall be added to the minimum continuous electrical load to provide electrical power for the federally required clearance and marker lighting and the optical warning devices mounted on the trailer.

The condition of the low voltage electrical system shall be monitored by a warning system that provides both an audible and a visual signal to persons on, in, or near the apparatus of an impending electrical system failure caused by the excessive discharge of the battery set.

The charge status of the battery shall be determined either by direct measurement of the battery charge or indirectly by monitoring the electrical system voltage.

If electrical system voltage is monitored, the alarm shall sound if the system voltage at the battery or at the master load disconnect switch drops below 11.8 V for 12 V nominal systems, 23.6 V for 24 V nominal systems, or 35.4 V for 42 V nominal systems for more than 120 seconds.

A voltmeter shall be mounted on the driver's instrument panel to allow direct observation of the system voltage.

### Electromagnetic Interference

Electromagnetic interference suppression shall be provided, as required, to satisfy the radiation limits specified in SAE J551/1, *Performance Levels and Methods of Measurement of Electromagnetic Compatibility of Vehicles, Boats (up to 15 m), and Machines (16.6 Hz to 18 GHz)*.

### Wiring Diagram

A complete electrical wiring schematic of actual system shall be provided with finished apparatus. Similar or generic type electrical schematics shall NOT BE ACCEPTABLE.

#### Low Voltage Electrical System Performance Test

A low voltage electrical system test certification shall be provided with delivered apparatus.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **12 VOLT DIAGNOSTIC RELAY CONTROL CENTERS**

The 12-volt power distribution shall be conveniently located with easy access for service. All relays and circuit breakers shall be plug-in type allowing for removal for repairs without necessitating soldering or tools. The sockets mounts for both the relays and circuit breakers shall be of a design that permits the use of standard automotive type components.

The 12-volt distribution panel shall utilize printed circuit boards mounted in high strength enclosure. Each printed circuit board shall be provided with twelve (12) heavy duty independent switching relays. Each relay shall have the ability to be configured either normally open or normally closed and be protected by a 20-amp automatic reset breaker. Each circuit will be provided with a LED for visual diagnostic.

Power distribution panel shall be located in apparatus body within a protected enclosure with removable or hinged cover.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ROCKER SWITCH PANEL**

The 12-volt control switch panel shall be supplied and installed by the cab/chassis manufacturer.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **ELECTRICAL SYSTEM MANAGER**

The chassis shall contain an electrical system manager for:

- Monitoring chassis battery voltage
- Shedding pre-determined electrical circuits
- Sequencing pre-determined electrical circuits
- Automatically controlling chassis engine fast-idle
- Monitor master switch and parking brake applications
- Automatically control warning light modes ("Calling-For" and "Blocking Right of Way")
- Provide low voltage alarm

- Programmable control circuits
- Remote system status indicator panel

System manager shall perform all electrical functions required by current NFPA 1901 Standards.

The electrical system manager shall be supplied and installed by the cab/chassis manufacturer.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **BATTERY SYSTEM**

The battery connectors shall be heavy duty type with cables terminating in heat shrink loom. Heavy duty battery cables shall provide maximum power to the electrical system. Where required, the cables shall be shielded from exhaust tubing and the muffler. Large rubber grommets shall be provided where cables enter the battery compartment.

Batteries shall be of the high-cycle type. With the engine off, the battery system shall be able to provide the minimum continuous electrical load for 10 minutes without discharging more than 50 percent of the reserve capacity and then to restart the engine. The battery system cold cranking amps (CCA) rating shall meet or exceed the minimum CCA recommendations of the engine manufacturer. The batteries shall be mounted to prevent movement during fire apparatus operation and shall be protected against accumulations of road spray, snow, and road debris. The batteries shall be readily accessible for examination, testing, and maintenance.

A means shall be provided for jump-starting the engine if the batteries are not accessible without lifting the cab of a tilt-cab apparatus.

Where an enclosed battery compartment is provided, it shall be ventilated to the exterior to prevent the buildup of heat and explosive fumes. The batteries shall be protected against vibration and temperatures that exceed the battery manufacturer's recommendation.

An onboard battery conditioner or charger or a polarized inlet shall be provided for charging all batteries. Where an onboard conditioner or charger is supplied, the associated line voltage electrical power system shall be installed in accordance with Chapter 22.

One of the following master disconnect switches shall be provided:

- 1) A master body disconnect switch that disconnects all electrical loads not provided by the chassis manufacturer
- 2) A master load disconnect switch that disconnects all electrical loads on the apparatus except the starter

Electronic control systems and similar devices shall be permitted to be otherwise connected if so specified by their manufacturer.

The alternator shall be wired directly to the batteries through the ammeter shunt(s), if one is provided, and not through the master load disconnect switch.

A green “battery disconnect on” indicator light that is visible from the driver’s position shall be provided.

Rechargeable hand lights, radios, and other similar devices shall be permitted to be connected to the electrical system ahead of the master disconnect switch.

A sequential switching device shall be permitted to energize the optical warning devices and other high current devices required in minimum continuous electrical load, provided the switching device shall first energize the electrical devices required in minimum continuous electrical load within 5 seconds.

Does your RFP comply? Yes\_\_\_ No\_\_\_

### **FORWARD FACING CAMERA**

There shall be one (1) ASA Voyager observation camera system provided and installed on completed unit. The system shall include one (1) model VCC150 high resolution CCD color camera installed on the forward part of the body.

The camera(s) shall be wired to a screen visible from the crew compartment seats

Does your RFP comply? Yes\_\_\_ No\_\_\_

### **CREW PARKING BRAKE INDICATOR LIGHTS**

There shall be 2 LED lights installed at the rear door of the body. There shall be a green light and a red light. The green light shall activate when the parking brake is applied. The red light shall activate when the parking brake is released.

Does your RFP comply? Yes\_\_\_ No\_\_\_

### **INTERIOR LED LIGHTS**

Five (5) OnScene Solution model #70156, 10” x 10” x 7/8”, 10-30 VDC, surface mount dual red and white LED light(s) with clear lens shall be provided throughout the vehicle. Each light shall be individually switched with a high/low intensity setting switchable at the entry door(s). In addition light(s) will be capable of a five (5) second delay after switching off.

Does your RFP comply? Yes\_\_\_ No\_\_\_

### **TAIL LIGHTS**

Rear body tail lights shall be vertically mounted and located per Federal Motor Vehicle Safety Standards, FMVSS and Canadian Motor Vehicle Safety Standards CMVSS. The following lights shall be provided:

- Two (2) Whelen C6T amber LED sequential arrow turn signal lights, amber lens
- Two (2) Whelen C6BTT red LED brake and tail lights, red lens
- Two (2) Whelen C6LCC white LED back-up lights, clear lens

Each of the lights above shall be mounted in a C6FC, chrome finish bezels.



Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**MIDSHIP MARKER/TURN SIGNAL**

Two (2) Whelen model T0A00MAR 2" round amber LED midship body clearance marker/turn signal lights shall be provided and installed, one (1) light on each side of the body, in forward wheel well of rear axle. Midship marker/turn lights shall be wired to the headlight circuit of the chassis.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**MARKER LIGHTS**

The body shall be equipped with all necessary clearance lights and reflectors in accordance with Federal Motor Vehicle Safety Standards (FMVSS) and Canadian Motor Vehicle Safety Standards (CMVSS) regulations. All body clearance lights shall be Truck-Lite Model 18 LED to reduce the need for maintenance and lower the amp draw. Clearance lights shall be wired to the headlight circuit of the chassis.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**LICENSE PLATE LIGHT**

One (1) Arrow #437 chrome plated LED license plate light shall be installed on the rear of the body. License plate light shall be wired to the headlight circuit of chassis. A fastener system shall be provided for license plate installation.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**SIDE LED SCENE LIGHTS**

There shall be four (4) Whelen Pioneer Plus model PCPSM2C dual combination Super LED flood/spot light recessed in the upper body sides. Light quantity shall be divided equally per side. The PCPSM2C configuration shall consist of 24 white Super-LEDs for the spot light on the bottom and 48 white Super-LEDs in the flood light on the top, and a clear non-optic polycarbonate lens. Light(s) shall be 12 VDC, 12-amp, 154 watt, with 16,000 usable lumens.

No part of the light shall extend past the edge of the body. The light head shall be fully recessed in the body to match the current Rescue truck.

The PCPSM2C new combination optic design projects light directly down at 5° and producing illumination to the side of the vehicle arching upward to a 90° pattern of light.

The PCPSM2C is covered by a five-year factory warranty.

The lights shall be controlled by switches for each side at the switch panel in cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR LED SCENE LIGHTS**

Two (2) Whelen Pioneer Plus PCPSM1C single combination Super LED flood/spot lights shall be provided on the upper rear body, one (1) each side. The PCPSM1C configuration shall consist of 12 white Super-LEDs for the spot light on the bottom, and 24 white Super-LEDs in the flood light on the top, and a clear non-optic polycarbonate lens. Lights shall be 12 VDC, 12-amp, 152 watts, with 7,800 useable lumens.

The PCPSM1C new combination optic design projects light directly down at 5° and producing illumination to the side of the vehicle arching upward to a 90° pattern of light.

The PCPSM1C is covered by a five-year factory warranty.

The above scene lights shall light to a level of at least 3 fc (30 lx), measured at 25 equally spaced points on a 2.5 ft. (750 mm) grid with in a 10-ft. x 10 ft. (3 m x 3m) square to the rear of vehicle.

The lights shall be controlled at the switch panel in cab.

All rear white lights shall also be activated when the apparatus is in reverse.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TRAFFIC DIRECTIONAL LIGHT**

One (1) Whelen TAM85, 47" eight (8) Super LED light, traffic directional warning device with 30' control cable shall be located on upper rear body. The control head shall be located in the cab within easy reach of Driver.

The traffic directional light shall be surface mounted on the upper rear body. There shall be a formed and painted cover installed over the light for protection.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **INTERCOM**

A Fire Research Intercom model ICA200-A20 two-way system shall be provided and installed on between driver and crew area of completed unit. The intercom kit shall include a surface mount master station, surface mount remote station, and 20' of interconnecting cable. The master station shall have a volume control knob and a push-to-talk button. The remote station shall operate hands free and constantly transmit to the master station unless the master station push-to-talk button is pressed.

The intercom shall be designed for exterior use. Each station shall have an aluminum housing, an adjustable U-shaped mounting bracket, and water-resistant speakers. The master station shall be 3" deep x 5 5/8" high x 8 1/4" wide. The remote station shall be 2 1/4" deep x 5 1/4" high x 5 1/4" wide. The

power requirements for the intercom shall be 12 VDC and not exceed 3 amps. The output power shall be 16 watts.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **WARNING LIGHT PACKAGE**

Each apparatus shall have a system of optical warning devices that meets or exceeds the requirements of this section.

The optical warning system shall consist of an upper and a lower warning level. The requirements for each level shall be met by the warning devices in that particular level without consideration of the warning devices in the other level.

For the purposes of defining and measuring the required optical performance, the upper and lower warning levels shall be divided into four (4) warning zones. The four zones shall be determined by lines drawn through the geometric center of the apparatus at 45 degrees to a line drawn lengthwise through the geometric center of the apparatus. The four (4) zones shall be designated A, B, C, and D in a clockwise direction, with zone A to the front of the apparatus.

Each optical warning device shall be installed on the apparatus and connected to the apparatus's electrical system in accordance with the requirements of this standard and the requirements of the manufacturer of the device.

A master optical warning system switch that energizes all the optical warning devices shall be provided.

The optical warning system on the fire apparatus shall be capable of two (2) separate signaling modes during emergency operations. One (1) mode shall signal to drivers and pedestrians that the apparatus is responding to an emergency and is calling for the right-of-way. One (1) mode shall signal that the apparatus is stopped and is blocking the right-of-way. The use of some or all of the same warning lights shall be permitted for both modes provided the other requirements of this chapter are met.

A switching system shall be provided that senses the position of the parking brake or the park position of an automatic transmission. When the master optical warning system switch is closed and the parking brake is released or the automatic transmission is not in park, the warning devices signaling the call for the right-of-way shall be energized. When the master optical warning system switch is closed and the parking brake is on or the automatic transmission is in park, the warning devices signaling the blockage of the right-of-way shall be energized. The system shall be permitted to have a method of modifying the two (2) signaling modes.

The optical warning devices shall be constructed or arranged so as to avoid the projection of light, either directly or through mirrors, into any driving or crew compartment(s). The front optical warning devices shall be placed so as to maintain the maximum possible separation from the headlights.

Steadily burning, non-flashing optical sources shall be permitted to be used.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**UPPER LEVEL OPTICAL WARNING DEVICES**

The upper-level optical warning devices shall be mounted as high and as close to the corner points of the apparatus as is practical to define the clearance lines of the apparatus. The upper-level optical warning devices shall not be mounted above the maximum height, specified by the device manufacturer.

ZONE A - FRONT WARNING LIGHTS

The light bar shall be supplied and installed by the cab/chassis manufacturer.

The lightbar(s) shall be separately controlled at switch panel in the cab.

ZONES B AND D - SIDE WARNING LIGHTS

UPPER REAR CORNER WARNING LIGHTS

There shall be two (2) Whelen C9 SurfaceMax series (9" x 7") red Linear Super-LED with full-fill optic lights provided, one (1) each side. The self-contained flashing light shall have 75 Scan-Lock™ flash patterns including steady burn with hi/low power and covered by a five-year factory warranty. Each light shall have a clear lens and chrome flange.

The lights shall be controlled at the switch panel in cab.

UPPER FORWARD CORNER WARNING LIGHTS

There shall be four (4) Whelen C9 SurfaceMax series (9" x 7") red Linear Super-LED with full-fill optic lights provided, two (2) each side. The self-contained flashing light shall have 75 Scan-Lock™ flash patterns including steady burn with hi/low power and covered by a five year factory warranty. Each light shall have a clear lens and chrome flange.

The lights shall be controlled at the switch panel in cab.

ZONE C - REAR WARNING LIGHTS

There shall be four (4) Whelen C9 SurfaceMax series (9" x 7") red Linear Super-LED with full-fill optic lights provided, one (1) each side. The self-contained flashing light shall have 75 Scan-Lock™ flash patterns including steady burn with hi/low power and covered by a five year factory warranty. Each light shall have a clear lens and chrome flange.

There shall be two (2) Whelen C9 SurfaceMax series (9" x 7") Linear Super-LED with full-fill optic lights provided, one (1) each side. The self-contained flashing light shall have 75 Scan-Lock™ flash patterns including steady burn with hi/low power and covered by a five-year factory warranty. The streetside light shall be blue with clear lens, and the curbside light shall be amber with clear lens and chrome flanges.

The lights shall be controlled at the switch panel in cab.

There shall be two (2) Whelen 600 Series Rota-Beam Red Super-LED lights (6RBR) with 180° warning provided, one (1) each side. The warning lights shall include 14 Scan-Lock™ flash patterns including synchronize and low power features. Each light shall have a red lens and chrome flange.

The lights shall be controlled at the switch panel in cab.

Does your RFP comply? Yes \_\_\_ No \_\_\_

### **LOWER LEVEL OPTICAL WARNING DEVICES**

To define the clearance lines of the apparatus, the optical center of the lower-level optical warning devices in the front of the vehicle shall be mounted on or forward of the front axle centerline and as close to the front corner points of the apparatus as is practical.

The optical center of the lower-level optical warning devices at the rear of the vehicle shall be mounted on or behind the rear axle centerline and as close to the rear corners of the apparatus as is practical. The optical center of any lower-level device shall be between 18 in. and 62 in. (460 mm and 1600 mm) above level ground for large apparatus, and 18 in. and 48 in. (460 mm and 1600 mm) above level ground.

A midship optical warning device shall be mounted right and the left sides of the apparatus if the distance between the front and rear lower-level optical devices exceeds 25 ft. (7.6 m) at the optical center. Additional midship optical warning devices shall be required, where necessary, to maintain a horizontal distance between the centers of adjacent lower-level optical warning devices of 25 ft. (7.6 m) or less. The optical center of any midship mounted optical warning device shall be between 18 in. and 62 in. (460 mm and 1600 mm) above level ground.

#### **ZONE A - FRONT WARNING LIGHTS**

The warning lights shall be supplied and installed by the cab/chassis manufacturer. They shall be Whelen lights to complete an NFPA compliant lower level warning light system.

#### **ZONES B AND D - CAB INTERSECTOR LIGHT (CAB FRONT CORNERS)**

The warning lights shall be supplied and installed by the cab/chassis manufacturer. They shall be Whelen lights to complete an NFPA compliant lower level warning light system.

#### **ZONES B AND D - BODY LIGHT (BODY WHEELWELL AREA)**

There shall be two (2) Whelen C6 SurfaceMax series (6" x 4") red/white split Linear Super-LED with full-fill optic lights provided, one (1) each side. The self-contained flashing light shall have 75 Scan-Lock™ flash patterns including steady burn with hi/low power and covered by a five-year factory

warranty. Each light shall have a clear lens and chrome flange.

The lights shall be controlled at the switch panel in cab.

**ZONES B AND D - BODY LIGHT (BODY WHEELWELL AREA)**

There shall be two (2) Whelen C6 SurfaceMax series (6" x 4") red/white split Linear Super-LED with full-fill optic lights provided, one (1) each side. The self-contained flashing light shall have 75 Scan-Lock™ flash patterns including steady burn with hi/low power and covered by a five-year factory warranty. Each light shall have a clear lens and chrome flange.

The lights shall be controlled at the switch panel in cab.

**ZONES B AND D - BODY INTERSECTOR LIGHT (BODY REAR CORNERS)**

There shall be two (2) Whelen 500 series (5" x 2") red/blue split Linear Super-LED lights provided, one (1) each side. Each light shall have a clear lens and chrome flange.

The lights shall be controlled at the switch panel in cab.

**ZONE C - REAR WARNING LIGHTS (LOWER REAR CORNERS)**

There shall be two (2) Whelen C6 SurfaceMax series (6" x 4") red Linear Super-LED with full-fill optic lights provided, one (1) each side. The self-contained flashing light shall have 75 Scan-Lock™ flash patterns including steady burn with hi/low power and covered by a five-year factory warranty. Each light shall have a clear lens and chrome flange.

The lights shall be controlled at the switch panel in cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**HYDRAULIC GENERATOR SYSTEM**

A Harrison HydraGen model 25.0MPC-16D, hydraulic driven generator set shall be installed on the vehicle. The generator shall be rated at 25,000 watts at 120/240 VAC, 208/104 amps, single phase. Current frequency shall be stable at 60 hertz.

A means shall be provided to activate the hydraulic generator system on the dashboard.

If the hydraulic generator system is not capable of output as stated on the power source specification label at all engine speeds, an automatic engine speed control system shall be provided.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

**GENERATOR BONDING**

A minimum of four (4) 16" x 2-gauge copper ground straps shall be bolted to body sub-frame and chassis sub-frame for proper bonding of high voltage system. The conductor shall have a minimum amperage rating, as defined in 310.15, "Ampacities for Conductors Rated 0–2000 Volts," of *NFPA 70*, of 115 percent of the rated amperage on the power source specification label.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **GENERATOR MOUNTING**

The hydraulic generator module shall contain all system components necessary to comprise a complete hydraulic generating system. The components shall be grouped and assembled into a compact modular unit.

The generator unit shall be modular, packaged with a heavy steel protective frame. All connections to the module (both hydraulic and electrical) shall be easily removable for easy removal of unit from compartment.

Hydraulic oil reservoir and filter shall be easily accessible with adequate clearance to facilitate oil filling and filter changing.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **WARRANTY PERIOD**

Provided such goods are operated and maintained in accordance with Harrison's written instructions, Harrison warrants that the MPC series hydraulic generators shall be free from defects in material and workmanship for a period of two (2) years or two thousand (2,000) hours, whichever comes first, from the date of delivery to the first purchaser.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **HYDRAULIC COMPONENTS**

A hydraulic system filter and strainer shall be provided and shall be located in a readily accessible area.

Hydraulic hose shall meet the hydraulic pump manufacturer's recommendations for pressure, size, vacuum, and abrasion resistance. Hydraulic fittings shall meet the hydraulic pump manufacturer's recommendations for pressure, size, and the type of hose used.

Where the hydraulic hose comes into contact with other surfaces, the hose shall be protected from chafing.

The generator shall be engaged at the switch panel in the cab.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **GENERATOR MOUNTING**

The generator shall be mounted in an upper dunnage area or roof compartment on rubber vibration isolators. The compartment shall be reinforced and ventilated where necessary to hold weight and provide cooling air for the generator. A valve shall be provided on the generator oil drain outlet and piped to underside of generator compartment with flexible hose and plug. The drain shall be located where easily accessible for generator service.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **MANUALS AND SCHEMATICS**

Two (2) complete manuals on parts list, maintenance, wiring schematics, hydraulic schematics, circuit boards, voltage regulator board and other components shall be provided on delivery.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **POWER-TAKE-OFF GENERATOR DRIVE**

Generator drive system shall utilize specified Harrison IHT system.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **LOADCENTER**

The loadcenter shall be an Eaton BR Series specifically designed for protection and distribution of AC line voltage such as lighting and small motor branch circuits. The loadcenter enclosure is made of 16-gauge galvanized sheet steel with a galvanized coating provided for corrosion protection. All trims used on BR loadcenters are chromate sealed and finished with an electro-disposition epoxy paint (ANSI-61) which exceeds requirements for outdoor and indoor applications. A combination surface/flush cover with integral door is supplied with indoor loadcenters rated from 100 through 400 amperes. All plug-in loadcenters are CSA listed to file LL98266. CSA Certified to C22.2 No.29, to loadcenter type and CSA listing.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **GENERATOR MONITORING PANEL**

A Crompton Instruments Integra Ci3 digital meter package shall be provided to properly monitor the generator performance and load demand during operation. The electrical parameters can be viewed on a backlit LCD screen. The 15 screens are accessible via four buttons on the front panel allowing the user to scroll between various screens. The following shall be displayed full-time;

- Generator frequency in hertz



- Line 1 current in amperes
- Line 2 current in amperes
- Generator voltage in volts

In addition, an elapsed generator hours gauge shall be provided near the digital meter.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **SHORE POWER INLET - BATTERY CHARGER**

The above-mentioned shore power inlet, and battery conditioner shall be specified in the 12-volt section.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **OUTLETS AND CIRCUITS**

The generator and or shore power shall supply the 120/240-volt electrical equipment and outlets outlined below. Proper circuit protection shall be installed as noted:

- Cord Reels will be powered by the generator
- Interior Outlets will be powered by both the generator and shore power

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **GENERAL REQUIREMENTS**

#### Stability

Any fixed line voltage power source producing alternating current (ac) shall produce electric power at 60 Hz,  $\pm 3$  Hz when producing power at all levels between no load and full rated power. Any fixed line voltage power source shall produce electric power at the rated voltage  $\pm 10$  percent when producing power at all levels between no load and full rated power.

The maximum voltage supplied to portable equipment shall not exceed 275 volts to ground. Higher voltage shall be permitted only when used to operate fixed wired, permanently mounted equipment on the apparatus.

#### Conformance with National Electrical Code

All components, equipment, and installation procedures shall conform to *NFPA 70, National Electrical Code*, except where superseded by the requirements of this chapter. Where the requirements of this chapter differ from those in *NFPA 70*, the requirements in this chapter shall apply.

Where available, line voltage electrical system equipment and materials included on the apparatus shall be listed and used only in the manner for which they have been listed. All equipment and materials shall be installed in accordance with the manufacturer's instructions.

## Location Ratings

Any equipment used in a dry location shall be listed for dry locations. Any equipment used in a wet location shall be listed for wet locations.

Any equipment used in an underbody or under chassis location that is subject to road spray shall be either listed as Type 4 or mounted in an enclosure that is listed as Type 4.

## Grounding

Grounding shall be in accordance with 250.34(A) and 250.34(B) of *NFPA 70*. Ungrounded systems shall not be used.

Only stranded or braided copper conductors shall be used for grounding and bonding.

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 200.6, “Means of Identifying Grounded Conductors,” of *NFPA 70*.

Any bonding screws, straps, or buses in the distribution panel board or in other system components between the neutral and equipment-grounding conductor shall be removed and discarded.

## Bonding

The neutral conductor of the power source shall be bonded to the vehicle frame. The neutral bonding connection shall occur only at the power source. In addition to the bonding required for the low voltage return current, each body and each driving or crew compartment enclosure shall be bonded to the vehicle frame by a copper conductor.

The conductor shall have a minimum ampere rating, as defined in 310.15, “Ampacities for Conductors Rated 0–2000 Volts,” of *NFPA 70*, of 115 percent of the rated ampere on the power source specification label.

A single conductor that is sized to meet the low voltage and line voltage requirements shall be permitted to be used.

## Ground Fault Circuit Interrupters

In special service vehicles incorporating a lavatory, sink, toilet, shower, or tub, 120 V, 15 or 20 A receptacles within 6 ft. (1.8 m) of these fixtures shall have ground fault circuit interrupter (GFCI) protection. GFCIs integrated into outlets or circuit breakers or as stand-alone devices shall be permitted to be used in situations.

## Power Source General Requirements

All power source system mechanical and electrical components shall be sized to support the continuous duty nameplate rating of the power source.

The power source shall be shielded from contamination that would prevent the power source from operating within its design specifications.

## Power Source Rating

For power sources of 8 kW or larger, the power source manufacturer shall declare the continuous duty rating that the power source can provide when installed on fire apparatus according to the manufacturer's instructions and run at 120°F (49°C) air intake temperature at 2000 ft. (600 m) above sea level.

The rating on the power source specification label shall not exceed the declared rating from the power source manufacturer.

Access shall be provided to permit both routine maintenance and removal of the power source for major servicing. The power source shall be located such that neither it nor its mounting brackets interfere with the routine maintenance of the fire apparatus.

## Instrumentation

If the power source is rated at less than 3 kW, a "Power On" indicator shall be provided. If the power source is rated at 3 kW or more but less than 8 kW, a voltmeter shall be provided.

If the power source is rated at 8 kW or more, the following instrumentation shall be provided at an operator's panel:

- 1) Voltmeter
- 2) Current meters for each ungrounded leg
- 3) Frequency (Hz) meter
- 4) Power source hour meter

The instrumentation shall be permanently mounted at an operator's panel. The instruments shall be located in a plane facing the operator. Gauges, switches, or other instruments on this panel shall each have a label to indicate their function.

The instruments and other line voltage equipment and controls shall be protected from mechanical damage and not obstructed by tool mounting or equipment storage.

An instruction plate(s) that provides 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.

## Operation

Provisions shall be made for placing the generator drive system in operation using controls and switches that are identified and within convenient reach of the operator.

Where the generator is driven by the chassis engine and engine compression brakes or engine exhaust brakes are furnished, they shall be automatically disengaged for generator operations.

Any control device used in the generator system power train between the engine and the generator shall be equipped with a means to prevent unintentional movement of the control device from its set position in the power generation mode.

If there is permanent wiring on the apparatus that is designed to be connected to the power source, a power source specification label that is permanently attached to the apparatus at the operator's control station shall provide the operator with the information required.

The power source, at any load, shall not produce a noise level that exceeds 90 dBA in any driving compartment, crew compartment, or onboard command area with windows and doors closed or at any operator's station on the apparatus.

## Power Supply Assembly

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 12 ft. (4 m) in length.

All power supply assembly conductors, including neutral and grounding conductors, shall have an equivalent amperage rating and shall be sized to carry not less than 115 percent of the amperage of the nameplate current rating of the power source.

If the power supply assembly connects to the vibrating part of a generator (not a connection on the base), the conductors shall be flexible cord or other fine-stranded conductors enclosed in metallic or nonmetallic liquid tight flexible conduit rated for wet locations and temperatures not less than 194°F (90°C).

## Over-current Protection

Manually re-settable over current devices shall be installed to protect the line voltage electrical system components.

## Power Source Protection

A main over current protection device shall be provided that is either incorporated in the power source or connected to the power source by a power supply assembly.

The size of the main over current protection device shall not exceed 100 percent of the rated amperage stated on the power source specification label or the rating of the next larger available size over current

protection device, where so recommended by the power source manufacturer.

If the main over current protection device is subject to road spray, the unit shall be housed in a Type 4-rated enclosure.

### Branch Circuit Over-Current Protection

Over current protection devices shall be provided for each individual circuit and shall be sized at not less than 15 amps in accordance with 240.4, "Protection of Conductors," of *NFPA 70*.

Any panel board shall have a main breaker where the panel has six or more individual branch circuits or the power source is rated 8 kW or larger.

Each over current protection device shall be marked with a label to identify the function of the circuit it protects.

Dedicated circuits shall be provided for any large appliance or device (air conditioning units, large motors, etc.) that requires 60 percent or more of the rated capacity of the circuit to which it is connected, and that circuit shall serve no other purpose.

### Panelboards

All fixed power sources shall be hardwired to a permanently mounted panel board unless one of the following conditions exists:

- 1) All line voltage power connections are made through receptacles on the power source and the receptacles are protected by integrated over current devices.
- 2) Only one circuit is hardwired to the power source, which is protected by an integrated over current device.

The panel shall be visible and located so that there is unimpeded access to the panel board controls. All panel boards shall be designed for use in their intended location. The panel(s) shall be protected from mechanical damage, tool mounting, and equipment storage.

Where the power source is 120/240 V and 120 V loads are connected, the apparatus manufacturer or line voltage system installer shall consider load balancing to the extent that it is possible.

### Wiring Methods

Fixed wiring systems shall be limited to the following:

- 1) Metallic or nonmetallic liquid tight flexible conduit rated at temperatures not less than 194°F (90°C) with stranded copper wire rated for wet locations and temperatures not less than 194°F (90°C)
- 2) Type SOW, SOOW, SEOW, or SEOOW flexible cord rated at 600 V and at temperatures not less than 194°F (90°C)

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 and shall be arranged as follows:

- 1) Separated by a minimum distance of 12 in. (300 mm) from exhaust piping or shielded from such piping
- 2) Separated from fuel lines by a minimum distance of 6 in. (150 mm)

A means shall be provided to allow “flexing” between the driving and crew compartment, the body, and other areas or equipment whose movement would stress the wiring.

Electrical cord or conduit shall be supported within 6 in. (150 mm) of any junction box and at a minimum of every 24 in. (600 mm) of run.

Supports shall be made of nonmetallic materials or of corrosion-resistant or corrosion-protected metal. All supports shall be of a design that does not cut or abrade the conduit or cord and shall be mechanically fastened to the apparatus.

Only fittings and components listed for the type of cord or conduit being installed shall be used.

Splices shall be made only in a listed junction box.

#### Additional Requirements for Flexible Cord Installations

Where flexible cord is used in any location where it could be damaged, it shall be protected by installation in conduit, enclosures, or guards.

Where flexible cord penetrates a metal surface, rubber or plastic grommets or bushings shall be installed.

#### Wiring Identification

Each line voltage circuit originating from the main panel board shall be identified.

The wire or circuit identification either shall reference a wiring diagram or wire list or shall indicate the final termination point of the circuit.

Where pre-wiring for future power sources or devices exists, the un-terminated ends shall be marked with a label showing their wire size and intended function.

#### Wiring System Components

Only stranded copper conductors with an insulation rated for temperatures of at least 194°F (90°C) and wet locations shall be used. Conductors in flexible cord shall be sized in accordance with Table 400.5(A) of *NFPA 70*. Conductors used in conduit shall be sized in accordance with 310.15, “Ampacities for Conductors Rated 0–2000

Volts,” of *NFPA 70*. Aluminum or copper-clad aluminum conductors shall not be used.

All boxes shall conform to and be mounted in accordance with Article 314, “Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings; and Manholes,” of *NFPA 70*. All boxes shall be accessible using ordinary hand tools. Boxes shall not be permitted behind welded or pop-riveted panels.

The maximum number of conductors permitted in any box shall be in accordance with 314.16, “Number of Conductors in Outlet, Device, and Junction Boxes, and Conduit Bodies,” of *NFPA 70*.

All wiring connections and terminations shall provide a positive mechanical and electrical connection. Connectors shall be installed in accordance with the manufacturer’s instructions. Wire nuts or insulation displacement and insulation piercing connectors shall not be used.

Each switch shall indicate the position of its contact points (i.e., open or closed) and shall be rated for the continuous operation of the load being controlled. All switches shall be marked with a label indicating the function of the switch. Circuit breakers used as switches shall be “switch rated” (SWD) or better. Switches shall simultaneously open all associated line voltage conductors. Switching of the neutral conductor alone shall not be permitted.

Line voltage circuits controlled by low voltage circuits shall be wired through properly rated relays in listed enclosures that control all non-grounded current-carrying conductors.

### Receptacles and Inlet Devices

#### Wet and Dry Locations

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 406.8, “Receptacles in Damp or Wet Locations,” of *NFPA 70*.

All receptacles located in a wet location shall be not less than 24 in. (600 mm) from the ground. Receptacles on off road fire apparatus shall be a minimum of 30 in. (750 mm) from the ground. All receptacles located in a dry location shall be of the grounding type and shall be at least 12 in. (300 mm) above the interior floor height. No receptacle shall be installed in a face-up position.

The face of any wet location receptacle shall be installed in a plane from vertical to not more than 45 degrees off vertical.

#### Receptacle Label

Each receptacle shall be marked with a label indicating the nominal line voltage (120 volts or 240 volts) and the current rating in amps of the circuit. If the receptacle is DC or other than single phase, that information shall also be marked on the label.

All receptacles and electrical inlet devices shall be listed to UL 498, *Standard for Safety Attachment*

*Plugs and Receptacles*, or other recognized performance standards.

Receptacles used for DC voltages shall be rated for DC service.

### Wiring Schematics

An "As-Built" Wiring diagrams for line voltage systems shall be provided to include the following information;

- (a) Pictorial representations of circuit logic for all electrical components and wiring
- (b) Circuit identification
- (c) Connector pin identification
- (d) Zone location of electrical components
- (e) Safety interlocks
- (f) Alternator–battery power distribution circuits
- (g) Input/output assignment sheets or equivalent circuit logic implemented in multiplexing systems

### **SIDE UPPER RECESSED SCENE LIGHTS**

Four (4) Fire Research Focus, model FCA200-M15, recessed light(s) shall be installed. They shall be equally divided between the curbside and streetside. The housing shall incorporate internal heat-dissipating fins and have cutout dimensions not to exceed 2" deep by 4 1/4" high by 16 1/8" wide. The lamphead shall protrude no more than 1 1/2" from the housing flange. Wiring shall extend from the bottom of the recessed housing.

No part of the light shall extend past the edge of the body. The light head shall be fully recessed in the body to match the current Rescue truck.

The lamp head shall have one (1) quartz halogen 1500-watt 240-volt bulb. The bulb shall draw 4.2 amps and generate 35,000 lumens. The bulb shall be accessible through the front. The lamphead shall direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. Lamp head and housing shall be powder coated white. The floodlight shall be UL listed as a scene light for fire service use.

Scene lights shall be provided with a lens or a means for preventing damage from water spray and shall be listed for wet location usage.

- The above lights shall be controlled by two (2) rocker switch(es). The rocker switch(es) shall be located in the cab within reach of the Driver and/or Officer.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REAR UPPER RECESSED SCENE LIGHTS**

Two (2) Fire Research Focus, model FCA100-M15, recessed light(s) shall be installed. They shall be equally divided between the curbside and streetside. The housing shall incorporate internal heat-



dissipating fins and have cutout dimensions not to exceed 2" deep by 4 1/4" high by 16 1/8" wide. The lamp head shall protrude no more than 1 1/2" from the housing flange. Wiring shall extend from the bottom of the recessed housing.

No part of the light shall extend past the edge of the body. The light head shall be fully recessed in the body to match the current Rescue truck.

The lamp head shall have one (1) quartz halogen 1500-watt 240-volt bulb. The bulb shall draw 4.2 amps and generate 35,000 lumens. The bulb shall be accessible through the front. The lamphead shall direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. Lamp head and housing shall be powder coated white. The floodlight shall be UL listed as a scene light for fire service use.

Scene lights shall be provided with a lens or a means for preventing damage from water spray and shall be listed for wet location usage.

- The above lights shall be controlled by one (1) rocker switch(es). The rocker switch(es) shall be located in the cab within reach of the Driver and/or Officer.

Does your RFP comply? Yes \_\_\_\_ No \_\_\_\_

#### **LIGHT TOWER PROVISION**

There shall be wiring provided in an upper dunnage area for a light tower.

Does your RFP comply? Yes \_\_\_\_ No \_\_\_\_

#### **UTILITY AIR SYSTEM**

**Type:**

Vanair® Model: 050009-004 Underdeck Compressor PTO shaft driven air compressor.

**Capacity:**

200 CFM

**Gear Ratio:**

Air compressor gear ratio shall be calculated to ensure lowest possible engine speed.

**Air Intake Filters:**

Separate two-stage, heavy duty, dry-type air filters shall be provided for air compressor.

**Air Receiver:**

The tank shall be ASME code approved rated at a 250 PSIG working pressure. It shall be equipped with an ASME air pressure relief valve located upstream of the final oil separator. The receiver shall be equipped with a fill cap and easily readable sight glass, 3/4" service valve and a 25-micron full flow spin-on replaceable filter canister with built in bypass protection. Receiver tank (In.): 10.25D x 21.5L

**Air/Fluid Separator:**

Separator element to be located internally in air receiver tank. Separator shall be constructed with metallic end cap and in-flow nozzle plate with O-ring seals. Vanair separator shall provide for enhanced air quality, reduced operating and maintenance cost and optimized compressor performance. Separator to be warranted for 5 years or 3000 hours.

**Instrument Panel and Speed Control:**

The V-TEC™ system consists of an I/O Module and an LCD display module that communicate with each other utilizing J1939 protocol. The I/O module receives sensor information and modulates engine speed based on air demand. The display module presents system information including system hours, service intervals, air pressure, oil temperature and engine speed.

The Vanair® V-TEC™ speed control utilizes a micro-processor, solid state electronics, and is designed with a chassis specific plug and play wiring harness. Wiring harnesses will use weatherproof connectors and woven loom material. The V-TEC™ controller is preprogrammed to specific applications based on engine, transmission, PTO gear ratio and Vanair underdeck model. The V-TEC™ system is capable of commanding the engine speed in response to air demand.

The V-TEC™ Speed Control allows for troubleshooting of the PTO, torque converter, cooler fan(s) and programmed engine speed(s) using a laptop computer and Vanair® provided software. The system also notifies of maintenance alerts and out of range conditions as well as monitoring system pressure, temperature, engine RPM and compressor hours.

The V-TEC™ Controller logs faults and fault conditions for easy troubleshooting diagnostics. PTO will disengage in case of high compressor temperature, over pressurization, and excessive engine RPM.

**Safety System:**

V-TEC™ protective features include J1939 neutral safety system, and prevention of engagement of PTO at engine speeds above 1000 RPM. Compressor to automatically shut down in case of high compressor temperature or over pressurization. Additional protective features provided include automatic blow down valve, receiver relief valve and minimum pressure valve.

**Cooling System:**

Compressor cooling system shall allow rated air delivery and pressure operation continuously in 125 °F ambient temperatures. Cooler to be mounted in a powder coated sheet metal enclosure with a suction type fan assembly and utilize SAE O-ring fittings (No ABS plastic shrouding). When using the V-TEC™, a fan temp switch is not used. The thermistor and V-TEC™ control the compressor cooling. A dual cooler shall be provided for 185 CFM at 150 PSI.

**Controls:**

Pneumatic inlet control valve shall be integrated into compressor system and automatically modulate output from 0 to 100% in response to air demand.

**General:**

The compressor shall be manufactured in an ISO 9001 certified quality system.

**Warranty:**

The air end is warranted for life when adhering to the prescribed maintenance schedule. This warranty does not cover damage caused by accident, misuse, or negligence. If the compressor unit is disassembled the warranty is void. All other parts including the compressor unit shaft seal are warranted for twelve months subject to the same conditions mentioned above.

**Service Centers:**

The air compressor manufacturer MUST have factory authorized service centers located in each state of the United States of America and Canadian provinces.

Does your RFP comply? Yes\_\_\_ No\_\_\_

**AIR COMPRESSOR CONTROL LOCATION**

The controls for low pressure utility air compressor shall be in Compartment S3. There shall be a switch located on the dashboard and also in compartment S3 to activate and deactivate the VanAir system. Results of the NFPA required utility air system test shall be provided with delivered vehicle.

Does your RFP comply? Yes\_\_\_ No\_\_\_

**AIR COMPRESSOR DISCHARGES**

There shall be 2 discharges for the air compressor. They shall be located in compartment S2 and C2. The discharges shall be plumbed with 1” ID piping and terminate with Chicago-style air fittings.

Does your RFP comply? Yes\_\_\_ No\_\_\_

**PAINT FINISH**

The paint finish will be black finish coat.

Does your RFP comply? Yes\_\_\_ No\_\_\_

**EQUIPMENT PAYLOAD WEIGHT ALLOWANCE**

In compliance with NFPA 1901 standards, the special service vehicle shall be designed for an equipment loading allowance of 11,000 lbs. of Guilford Fire Department provided equipment.

Does your RFP comply? Yes\_\_\_ No\_\_\_

**EQUIPMENT**

The following equipment shall be furnished with the completed special service vehicle;

- One (1) container of assorted stainless-steel nuts, bolts, screws and washers used in the construction of the apparatus shall be provided with the completed apparatus.
- There shall be two (2) Zico SAC-44-E NFPA approved folding aluminum wheel chocks provided for 44" diameter tires that together will hold the vehicle when loaded to its GVWR or GCWR, on a hard surface with a 20 % grade, with the transmission in neutral, and the parking brake released.
  - The wheel chock(s) shall be mounted behind rear wheels, below body on streetside.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **REMAINING NFPA MINOR EQUIPMENT BY PURCHASER**

All other minor equipment not specified above, but required by NFPA 1901 for special service vehicles, section 10.9.3 shall be supplied and mounted by Guilford Fire Department before the unit is placed in emergency service.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **IHT**

The apparatus shall be equipped with a Harrison Hydraulic Solutions Integrated Hydraulic Technology (IHT) system to supply hydraulic power to the following components:

Auxiliary Circuit #1: TNT Quad PTO Pump

The Harrison IHT system shall be comprised of, but not limited to the following components:

Variable displacement piston pump; (provided with the Harrison Generator or with the Harrison IHT system when a generator is not used).

Hydraulic Function Manifold; (Provided with the Harrison IHT system).

Hydraulic Reservoir

Proportional Meter Head; as required.

Heat Exchangers

Upgraded Standard Generator Components as needed to work with the Harrison IHT system; as required. The variable displacement piston pump shall be capable of supplying all required flows and pressures for the system. Gear pumps shall not be allowed.

The custom designed hydraulic function manifold shall route the fluid to the required Auxiliary Circuits as selected by the apparatus operator.

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. The Harrison IHT system shall be fully operable with the vehicle in motion or stationary.

There shall be an OEM SUPPLIED Master Hydraulic power switch located on the cab dash switch panel. When activated, this switch shall engage the transmission mounted PTO for the variable displacement piston pump.

There shall be OEM SUPPLIED control switches for Auxiliary Circuit #1 and Auxiliary Circuit #2 that shall only be active once the Master Hydraulic power switch is on. The Auxiliary Circuit #1 and Auxiliary Circuit #2 switches shall provide simultaneous or independent operation for each circuit.

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.

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.

The Harrison Hydraulic Solutions Integrated Hydraulic Technology (IHT) system shall be designed, engineered, and manufactured by a single manufacturer with a minimum of 40 years of hydraulic experience, no exceptions. Hydraulic system suppliers who do not manufacture their own pumps and manifolds shall not be considered.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TNT PTO QUAD PUMP**

A TNT model PTO-Quad pump is to be installed on the apparatus and plumbed by authorized TNT dealer or installer.

Hydraulic fluid shall be mineral base. Power Unit shall operate four (4) hydraulic tools simultaneously (simo\*) with no power loss to any tool. Power unit shall operate with a minimum 10,000psi and a maximum 10,500psi. Power unit shall have a minimum hydraulic oil reservoir of 5 U.S. Gallons.

Power Unit shall have four (4) Hydrostatic single stage radial piston over piston hydraulic pumps that share one reservoir. Each hydraulic pump shall have a control lever to engage or disengage the hydraulic. Power unit shall have four (4) internal safety relief valves to prevent over pressurization. Pump shall be supplied with two (2) return line manifolds, to facilitate direct return lines and/or multiple return lines from remote valves. Return manifolds shall also be supplied with one (1) each return hose to the pump reservoir

To assure proper operation the pump shall be powered by a bent shaft hydraulically driven motor, with a maximum input pressure of 3000 psi, and a 10 gpm flow.

Pump to reel connections(whips) shall be 3/8 ID TNT hydraulic hose for maximum flow.

Power unit maximum dimensions shall not exceed 29 3/4” long x 20 1/4” wide x 17 1/2” tall. shall have a maximum deployment weight of 200 lbs.

Power unit to be mounted in a remote location with protection from the elements.

Pump shall be built to be compliant with NFPA 1936 *Standard on Powered Rescue Tools*, 2015 Edition.

Power unit shall be manufactured and assembled wholly within the United States of America. Power unit must carry a lifetime warranty on materials and workmanship, on all components manufactured by the Rescue Tool Manufacturer.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

### **TNT HYDRAULIC REEL HOSE COAX**

TNT hydraulic reel hose model HRH-100-Coax shall be provided on each reel. Coax single point push to connect hot swappable locking coupler will be provided. Hoses shall be color coded for ease of identification Hoses shall be color coded for ease of identification. Hoses shall be a Rubber coated bonded hose. (Zip ties and metal bands do not constitute professional banding or bonding.) Hoses shall successfully pass testing by a third party as required by NFPA 1936 *Standard on Powered Rescue Tools*, current Edition.

Does your RFP comply? Yes\_\_\_\_ No\_\_\_\_

## **OPTIONS**

The following equipment shall be priced separate from the base unit price.

### **TNT HYDRAULIC RESCUE TOOLS**

- (1) TNT S200-28 Spreader
- (1) TNT S200-32 Spreader
- (2) TNT BMF 320 Cutter
- (1) TNT CSC-40RCV Coax Confined Space Cutter
- (2) TNT TLS 25 Telescoping Ram
- (2) TNT TLS 50 Telescoping Ram
- (1) TNT XR-TLS Ram Accessory Kit
- (1) TNT ATT6.5-Coax Gas Pump with accelerator
- (2) TNT EXTH30-Coax Extension Hose
- All Tools will be equipped with Coax Connectors

### **HIGH PRESSURE HOSE REEL**

- One (1) Hannay EFH1514-17-18 high pressure air hose reel(s) shall be provided in this compartment. Reel shall be designed to hold 110% of the capacity needed.
  - Power rewind control(s) shall be in a position where the operator can observe the rewinding operation and shall be marked with a label indicating its function and shall be guarded to prevent accidental operation.
  - A label shall be provided in a visible location adjacent to reel with following information: (1) Utility air or breathing air, (2) Operating pressure, (3) Total hose length, (4) Hose size (ID).
- The hose reel shall be equipped with 200' of 3/16" Parker 6,000 PSI, high pressure air hose. A molded plastic ball clamp shall be provided on the hose to stop it at the 4-way roller. The hose shall be Gray in color with a red color-coded end.
  - The fitting on the end of the high-pressure air hose reel shall be a CGA-347 high pressure fitting.

- The air supply shall be from the mobile breathing air system. A reel shut-off valve, pressure regulator, and 0-6,000 psi gauge shall be provided at the air control panel.
- The air supply shall be from the specified mobile breathing air system.
- The fairlead roller shall be mounted directly to the reel.

### **LIGHT TOWER**

One (1) Command Light, CL Series light tower(s) shall be provided and installed on the completed unit. A flashing warning light shall be provided in cab, indicating when a light tower is not in nested position as required by NFPA 1901.

The Command Light shall be covered by a five (5) year limited warranty from defects in materials and workmanship. An operation, maintenance, and parts manual shall be provided with the completed unit.

The light tower shall extend 131" above the mounting surface and shall extend to full upright position in less than 15 seconds. The overall size of nested light tower shall be approximately 42" wide x 74" long x 12" high and weigh approximately 300 pounds.

#### **Light Tower Construction and Design**

The Command Light assembly shall be of aluminum construction, with stainless steel shafts and bronze bushings for long life and low maintenance.

The electrically controlled unit shall not require usage of the vehicle's air supply for operation, thereby eliminating the chance for air leaks in the vehicle braking system. Hydraulic or pneumatic type floodlights are not acceptable alternatives to the specified all electric light tower.

The light tower shall be tested to in wind conditions of 90 mph (150 kph) minimum. Light towers that have not been tested to these conditions are not acceptable.

The light tower shall be capable of overhanging the side or back of the vehicle to provide maximum illumination to the vicinity adjacent to the vehicle for the safety of emergency personnel in high traffic conditions. Light towers that are only capable of rotation at the top of a pole are not acceptable to the specified light tower.

#### **Light Tower Electrical System**

The light tower shall be a two-stage articulating device with a lighting bank on top of the second stage capable of continuous 360-degree rotation. The light shall be elevated by electric linear actuators, one (1) actuator shall elevate the light bank and one (1) actuator shall adjust the light bank angle from 0 to 110 degrees. Power for the light bank shall be supplied through power collecting rings thus allowing continuous 360-degree rotation in either direction.

The tower base shall have a light that illuminates the envelope of motion during any movement of the light tower mast as required by NFPA 1901.

### Light Tower Floodlights

The Command Light model CL615A-FO shall be equipped with the following bank of floodlights:

Floodlight manufacturer: Fire Research  
Number of lamp heads: Six (6) FRC Optimum  
Voltage: 230 volts  
Watts of each lamp head: 1500 watt  
Total watts of light tower: 9000 watts  
Total lumens of light tower: 214,800 lumens  
Configuration: The light heads shall be mounted with three (3) on each side of the light tower, giving two (2) vertical lines of three (3) when the lights are in the upright position.

### Light Tower Strobe Indicator

The floodlight tower shall have a strobe indicator located on the top of the upper section.

The lens color for the strobe light shall be green.

### Light Tower Backlight Option

A backlight option shall be provided on the light tower. The lower pair of light heads shall be capable of being rotated about a horizontal axis 180 degree, providing light down on the vehicle or to the opposite side of the vehicle while allowing the fixed lights to remain pointed at the scene.

The hand-held remote control shall have an additional switch supplied for the backlight rotation option.

### Light Tower Paint

The light tower shall be electro-statically powder coated with a hammer tone gray color.

### Light Tower Controls

The light tower(s) shall be operated with a hand-held 15-foot umbilical line remote control. The storage station for the remote-control unit shall be equipped with a button to activate the "Auto-Park" automatic nesting feature. The remote control shall be located per the itemized compartment list and include;

Three (3) switches; one (1) for each pair of lights.  
One (1) switch for light bank rotation.  
One (1) switch for elevating lower stage.  
One (1) switch for elevating upper stage.  
One (1) switch for optional light bank rotation.  
One (1) switch for the optional strobe.



One (1) indicator light to indicate when light bank is out of the roof nesting position.

One (1) indicator light to indicate when light bank is rotated to proper nesting position.

### Light Tower Mounting

The specified light tower(s) shall be recessed into the roof of body to allow light tower(s) to be stowed below roof level. The floor and side walls of recessed area shall be fabricated as a separate module from 3/16" aluminum treadplate with an overlapping 3" flange around perimeter roof line. The recessed area shall be completely water tight. All electrical connections made to light tower shall be located on sidewalls for a water tight connection.

The recessed area shall have two (2) water drain holes (in opposite corners) with flexible 1" diameter hose routed to the area below the body. The drains shall be provided with sheet metal screen to prevent debris from clogging drain hoses.

### FLASHLIGHTS

- Six (6) Streamlight Fire Vulcan C4 LED flashlight(s) with shoulder strap shall be provided with 80,000 candelas and 3 hour run time. Each flashlight shall be orange in color and have a 12-volt DC charger and vehicle mount kit. Each flashlight shall have an LED spotlight style bulbs and reflectors. The flashlight(s) shall be wired to battery direct unless otherwise specified by Guilford Fire Department.

The flashlight(s) shall be mounted in the cab and crew area as specified during the pre-construction meeting.

### ASME BOTTLES

ASME breathing air cascade bottles in place of the DOT breathing air cascade bottles.

### BREATHING AIR FILL STATION

- One (1) Resolve Specialty Space Saver model 300H horizontal mobile filling station(s) designed for SCBA and SCUBA cylinders shall be provided. Fill station shall be capable of simultaneously filling (2) cylinders, with door safety interlocks. The fill enclosure shall meet NFPA 1901 testing certification, and shall be approx. 13.00" high x 42.50" wide (53" wide with door in open position) x 25.00" deep and weigh 400 lbs. If a cascade air fill control panel is provided it will be located above fill station or remotely.

- The Resolve Space Saver fill station shall be provided with a four (4) bank, manual control cascade air fill control panel with black non-glare control panel. Panel is designed with embedded color graphics to help assure proper operation in the field. All gauges are premium glycerin filled which have a 1.5% accuracy rating. Panel includes; shielded LED light, safety gauges, charge and bleed valves and pressure regulator for automatic SCBA filling. The panel housing swings open from the front to allow for easy access to gauges and valves in the event service is needed. A refill port for re-filling air storage with female fitting S252P with S44-2 dust cap is provided on front of panel. Panel shall be 42.50" x 9.75" x 18.00".
  - The fill station fill whip(s) shall terminate in a high pressure CGA-347 threaded connectors for 4,500 - 5,500 PSI air pack cylinders.

### **BREATHING AIR FILL STATION BOOSTER PUMP**

A Breathing Air Systems model 58985-2 pneumatically driven air booster shall be provided and integrated into the specified breathing air storage system.

**IV.**

**TOWN FORM CONTRACT**

**SUCCESSFUL BIDDER WILL BE REQUIRED TO EXECUTE THE TOWN CONTRACT TO  
BE PROVIDED, UPON AWARD, WITHOUT EXCEPTION**

V.

**NON-COLLUSIVE/NON-CONFLICT AFFIDAVIT OF BIDDERS**

**FOR: RFP #1-1718 HEAVY RESCUE VEHICLE**

The undersigned bidder, having fully informed themselves regarding the accuracy of the statements made herein certifies that:

1. the bid has been arrived at by the bidder independently and has been submitted without collusion with, and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or services described in the invitation to bid, designed to limit independent bidding or competition;

2. the contents of the bid have not been communicated by the bidder and its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid, and will not be communicated to any such person prior to the official opening of the bid;

3. no Selectman or other officer or employee or person whose salary is payable in whole or in part from the Town of Guilford, nor any immediate family member thereof, is directly or indirectly interested in the Bid/Proposal, or in the supplies, materials, equipment, work or labor to which it relates, or in any profits thereof; and

4. he/she has read the Guilford Code of Ethics, set forth in Chapter 31 of the Code of the Town of Guilford, which is available on the Town website and he/she agrees on his/her behalf and on the behalf of his/her firm/company that he/she nor his/her firm/company are in violation of the Code with respect to this bid.

The undersigned further certifies that this statement is executed for the purpose of inducing the Town of Guilford to consider the bid and make an award in accordance therewith.

Business Name: \_\_\_\_\_  
Business Address: \_\_\_\_\_

\_\_\_\_\_  
*Signature and Title of Bidder*

Subscribed and sworn to me

this \_\_\_\_\_ day of \_\_\_\_\_, 2017.

\_\_\_\_\_  
Notary Public

My Commission Expires \_\_\_\_\_  
Date

**VI.**

**AFFIRMATIVE ACTION EEO AFFIDAVIT**

**FOR: RFP #1-1718 HEAVY RESCUE VEHICLE**

**Concerning Equal Employment Opportunities and/or Affirmative Action Policy**

I/we, the respondent, certify to the TOWN OF GUILFORD that:

1. I/we are in compliance with the equal opportunity clause as set forth in Connecticut state law (Executive Order No. Three, <http://www.cslib.org/xeorder3.htm>).
2. I/we do not maintain segregated facilities.
3. I/we have filed all required employer's information reports.
4. I/we have developed and maintain written affirmative action programs.
5. I/we list job openings with federal and state employment services.
6. I/we attempt to employ and advance in employment qualified handicapped individuals.
7. I/we are in compliance with the Americans with Disabilities Act.
8. I/we (check one)

\_\_\_\_\_ have an Affirmative Action Program, or  
 \_\_\_\_\_ employ 10 people or fewer

Business Name: \_\_\_\_\_  
 Business Address: \_\_\_\_\_

\_\_\_\_\_  
*Signature and Title of Bidder*

Subscribed and sworn to me

This \_\_\_\_\_ day of \_\_\_\_\_, 2017.

\_\_\_\_\_  
 Notary Public

My Commission Expires \_\_\_\_\_  
 Date

VII.

**BID PROPOSAL FORM**

**Board of Selectmen  
Town of Guilford  
31 Park Street  
Guilford, CT 06437**

**Attention: Purchasing Department  
SECOND FLOOR**

**Re: RFP #1-1718 Heavy Rescue Vehicle  
Bid Opening Date: December 8, 2017 at 2 p.m.**

**BIDDER**

Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

To the Board of Selectmen:

We submit for your consideration our bid for the above referenced bid. We have read the bidding documents including the Town of Guilford’s General Conditions and Instructions to Bidders and the bid specifications and are submitting our bid in full compliance with all terms and conditions except as noted below under “Exceptions.” We have enclosed our original bid bond/cashier’s check in the amount of 10% of our total base bid. *We acknowledge receipt of all addendums to the bid documents and assume full responsibility to access those addendums from the Town website and/or DAS website, as applicable.*

We will provide the following within five (5) business days after receipt of a notice of award from the Purchasing Department:

- (i) The requested Certificate of Insurance from the following company:

\_\_\_\_\_  
And

- (ii) Performance Bond from the following company:\_\_\_\_\_.

Within five (5) business days after receipt of final contract from Town, we will forward to the Purchasing Department three original contracts, in the a form provided by the Town, executed by an authorized officer.

We agree to perform the work described in the bid specifications within the time period set forth in the specifications for a **TOTAL BASE BID** amount of:

\$ \_\_\_\_\_ (\$ \_\_\_\_\_)  
Write amount in words Write dollar amount

On site construction, installation, delivery and storage shall be coordinated with the following Town Department Head: Charles Herrschaft.

Exceptions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

We agree that the allowable mark-up for overhead and profit on any charges shall not exceed a TOTAL (all tiers) of ten percent (10%).

The undersigned authorized representative hereby submits the above bid to the Town of Guilford.

Name of Contractor Entity: \_\_\_\_\_

By \_\_\_\_\_

Print Name and Title: \_\_\_\_\_

*Duly authorized*

**END OF RFP #1 – 1718  
HEAVY RESCUE VEHICLE  
FOR THE FIRE DEPARTMENT  
TOWN OF GUILFORD**