

**ELIZABETHTOWN FIRE DISTRICT  
LIGHT DUTY  
RESCUE  
SPECIFICATIONS**

**FORD F550  
4 DOOR**

**4x4**

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## INTRODUCTION PROPOSAL REQUIREMENTS

### GENERAL INFORMATION

It is the intent of these specifications to secure apparatus constructed to withstand the severe and continuous use encountered during emergency firefighting services. The apparatus must be of the latest type, carefully designed and constructed with due consideration to the nature and distribution of the load to be sustained.

These specifications detail the requirements for general design criteria of cab and chassis components, aerial device, fire pump and related components, water tank, fire body, electrical components, painting, and equipment. In evaluating the bid proposals to determine which proposal is the most advantageous, these major items shall be considered.

Apparatus and equipment must meet the specific requirements and intent of the requirements as specified herein. All items of these specifications shall conform to the character of the proposed apparatus and the purpose for which it is intended. Criteria as specified by the National Fire Protection Association Pamphlet No. 1901, latest edition, entitled "Suggested Specifications for Motor Fire Apparatus", as approved by the American Insurance Association and International Association of Fire Chiefs, are hereby adopted and made a part of these specifications the same as if they were written out in full, insofar as they apply and are not specifically modified in the following detailed specifications. Each bidder shall provide only that equipment as required in the following specifications.

The fire apparatus and equipment to be furnished in meeting these specifications must be the products of an established, reputable fire apparatus and/or equipment manufacturer. Each bidder shall furnish satisfactory evidence of the manufacturer's ability to construct, supply service parts and technical assistance for the apparatus specified. Each bidder must state the location of the factory and location for post delivery service.

### BID COMPLIANCE INSTRUCTIONS

Each bidder must indicate his compliance with these specifications by marking "YES" or "NO" in the appropriate column for each individual paragraph of this specification. Indicating "YES" to a paragraph shall mean full compliance; indicating "NO" shall mean an exception is being taken. Any deviation from the specification, no matter how small, must be so annotated. All exceptions must be fully explained on a separate page, titled "Exceptions", giving reference to the page and paragraph where the exception is being taken. Failure to comply with this requirement shall result in the bid proposal being rejected.

The Elizabethtown Fire District shall be the sole arbiter as to what exceptions may be allowed or disallowed. In the event a bidder fails to make any indication of compliance for any or all provisions it will be assumed that the bidder is taking total exception to the specification and the bid shall be disallowed.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

**FIRE APPARATUS DOCUMENTATION**

The contractor shall supply, at the time of delivery, at least one (1) copy of the following documents:

The manufacturer's record of apparatus construction details, including the following information:

- Owners name and address
- Apparatus manufacturer, model and serial number
- Chassis make, model and serial number
- Front tire size and total rated capacity in pounds
- Rear tire size and total rated capacity in pounds
- Chassis weight distribution in pounds with water and manufacturer mounted equipment, front and rear
- Engine make, model, serial number, rated horsepower, rated speed and governed speed
- Type of fuels and fuel tank capacity
- Electrical system voltage and alternator output in amps.
- Battery make, model and total capacity in cold crank amps (CCA)
- Transmission make, model and serial number. If so equipped chassis transmission PTO(s) make, model and gear ratio
- Pump make, model, rated capacity in gallons per minute (liters per minute where applicable) and serial number
- Pump transmission make, model, serial number and gear ratio
- Auxiliary pump make, model, rated capacity in gallons per minute (liters per minute where applicable) and serial number
- Water tank certified capacity in gallons or liters
- Paint manufacturer and paint number(s)
- Company name and signature of responsible company representative
- Certification of slip resistance of all stepping, standing and walking surfaces.

If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of suction capability.

If the apparatus has a fire pump or an industrial supply pump, a copy of the apparatus manufacturer's approval for stationary pumping applications.

If the apparatus has a fire pump or an industrial supply pump, the engine manufacturers certified brake horsepower curve for the engine furnished, showing the maximum governed speed.

If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of hydrostatic test.

If the apparatus has a fire pump or an industrial supply pump, the Underwriters Laboratory certification of inspection and test for the fire pump (if applicable).

If the apparatus has an aerial device the Underwriters Laboratory certification of inspection and test for the aerial device.

If the apparatus has an aerial device, all the technical information required for inspections to comply with NFPA 1911, Standards for Testing Fire Department Aerial Devices.

If the apparatus has a fixed line voltage power source, the certification of the test for the fixed power source (if applicable).

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**Bidder  
Complies**

**Yes      No**

If the apparatus is equipped with an air system, test results of the air quality, the SCBA fill station, and the air system installation.

Weight documents from certified scale - showing actual loading on the front axle, rear axle(s) and overall vehicle (with the water tank full but without personnel, equipment and hose) shall be supplied with the complete vehicle to determine compliance with NFPA-1901.

Written load analysis and results of electrical performance tests.

If the apparatus is equipped with a water tank, the certification of water tank capacity by the tank manufacturer.

The chassis shall be certified by the apparatus manufacturer as conforming to all applicable Federal Motor Vehicle Safety Standards in effect at the date of contract. This shall be attested to by the attachment of a FMVSS certification label on the vehicle by the contractor who shall be recognized as the responsible final manufacturer.

## **VEHICLE RECORDS**

The successful bidder shall be responsible for preparing and maintaining a record file of parts and assemblies used to manufacture the apparatus. These records shall be maintained in the factory of the bidder for a minimum of twenty (20) years. File shall contain copies of any and all reported deficiencies, all replacement parts required to maintain the apparatus, and original purchase documents including specifications, contract, invoices, incomplete chassis certificates, quality control reports and final delivery acceptance documents. The Elizabethtown Fire District shall have access to any and all documents contained in this file upon official written request.

## **BIDDER INSTRUCTIONS**

Bids shall be addressed and submitted in accordance with the advertised "Bid Notice". The words "Fire Apparatus Bid", the date, and the bid opening time must be stated on the face of the bid envelope. It is the bidder's responsibility to see that their proposals arrive on time. Late proposals, telegram, facsimile or telephones bids shall not be considered.

Each bid shall be accompanied by a detailed description of the apparatus and equipment it proposes to furnish. It is the intent of these specifications to cover the furnishing and delivery of a complete and soundly engineered apparatus equipped as specified. Minor details of construction and materials, where not otherwise specified, are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features.

Brand names or model numbers have been specified for some items. These have been carefully selected because of their reliability and availability for replacement locally. In order to be most responsive, items named, or an item "equal to" the particular item specified by brand name or model, should be contained in the bid proposal. It is the bidder's responsibility to prove to the Elizabethtown Fire District that an item bid as "equal to" a particular specified item, is truly of equal quality, design, and function. The Elizabethtown Fire District maintains the right to make a final decision as to the acceptability of an item bid as "equal to" a particular specified item.

No exception shall be allowed for any of the aforementioned instructions. Bids not submitted in accordance with these instructions shall be rejected.

## **TIMELY PROPOSALS**

It is the bidder's responsibility to see that their proposals arrive on time. Late proposals, facsimiles, telegrams, or telephone bids shall not be considered.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## GENERAL CONSTRUCTION

The complete apparatus, assemblies, subassemblies, component parts, etc., shall be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subject. All parts of the apparatus shall be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in firefighting service. All parts of the apparatus shall be strong enough to withstand general service under full load. The apparatus shall be so designed that the various parts and readily accessible for lubrication, inspection, adjustment and repair. Bidder's specifications must meet minimum requirements of N.F.P.A. Pamphlet #1901; Underwriters Laboratories, Inc.; and all State and Federal Department of Transportation vehicle regulations at time of sale of unit.

The apparatus shall be designed and constructed, and the equipment so mounted, with due consideration to distribution of the load between front and rear axles that all specified equipment, including a full complement of specified ground ladders, full water tank, loose equipment, and firefighters shall be carried without overloading or injuring the apparatus.

## PRODUCT LIABILITY INSURANCE

Each bidder shall supply proof of product liability and facility insurance equal to or exceeding \$30,000,000.00. This shall be provided as part of the proposal.

## SINGLE-LINE RESPONSIBILITY

Since the Elizabethtown Fire District desires to eliminate divided responsibility on the part of the manufacturers, only manufacturers who build their own fire apparatus cab, chassis, body and aerial device shall be considered. The apparatus must be built and painted in a facility owned and operated by the bidder by a staff that is directly employed by the bidder. At least fifteen similar units must have been sold and delivered of the type described herein. The entire apparatus (to include cab, chassis, body, pump, water tank and aerial device) MUST be manufactured in the United States! NO EXCEPTION SHALL BE ALLOWED TO THIS REQUIREMENT!

The bidder shall state if single line responsibility is being proposed.

Yes/No: \_\_\_\_\_

## ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the specifications or other contract documents shall be made to any Bidder verbally. Every request for such interpretation shall be in writing and addressed to the Purchaser, and must be received at least ten days prior to the date fixed for the opening of the bids to be given consideration. Any and all such interpretations and any supplemental instructions shall be in the form of written addenda to the specifications which, if issued, shall be mailed by certified mail to all prospective Bidders not later than five days prior to the date fixed for the opening of bids. Failure of any Bidder to receive any such addendum or interpretation shall not relieve any Bidder from any obligation under his bid as submitted. All addenda so issued become a part of the contract documents.

## PAINT PERFORMANCE CERTIFICATION

The finish paint shall be certified by the apparatus manufacturer as conforming to all applicable Commercial Vehicle Paint Standards in effect at the date of contract. This shall be attested to by the attachment of a PPG certification.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## SERVICE CENTER AND PARTS DEPOT

The successful bidder shall have an authorized service center, with a staff of factory-trained mechanics, well versed in all aspects of service for all major components, of the apparatus within a 300-mile radius of the Elizabethtown Fire District. In addition, the bidder shall maintain a separate service facility at the manufacturing site, in order to satisfy the need for possible major emergency service work.

## SERVICE CENTER INFORMATION

The center must provide a full time staff of experienced technicians with all of the required equipment to provide modern, accurate and efficient service. Bidders shall state the size of their shop and officer area in square feet. They shall state the location of the facility and provide photos of both the exterior and interior of the center. Accuracy of the description of the service center is of great importance.

## SPECIAL CONDITIONS

No bid shall be considered unless the bidder can meet the special conditions stated herein.

The complete apparatus must be manufactured in the United States of America.

## PRICES AND PAYMENTS

The bid price shall be F.O.B. Destination, on a delivered and accepted basis at the Fire Department.

Total price on bidder's proposal sheet must include all items listed in these specifications. Listing any items contained in the specification as an extra cost item, unless specifically requested to do so in these specifications, shall automatically be cause for rejection.

Bidder shall compute pricing less federal and state taxes. It is understood that any applicable taxes shall be added to the proposed prices, unless the purchaser furnishes appropriate tax-exempt forms.

## BID EVALUATION

Purchaser, Fire Chief and Purchasing Agent shall evaluate bids received. This evaluation shall be based as a minimum on the following criteria:

- Commitment for expedient delivery.
- Commitment to the general conditions contained herein, including warranty.
- Completeness of the proposal, i.e. the degree that it responds to all requirements and requests for information contained herein.
- Manufacturing and delivery schedule.
- Contractor's demonstrated capabilities and qualifications.
- Equipment suppliers and/or local representative's demonstrated capabilities and qualifications.

## EXCEPTIONS TO SPECIFICATIONS

Exceptions shall be referenced to the paragraph and page of these specifications where the item appears. Drawings, photographs, and technical information about the exception shall be included as necessary. Any exceptions may be considered during the evaluation process, and the decision shall be final.

Proposals taking total exceptions to specifications shall not be accepted.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## "OR APPROVED EQUAL" CLAUSE

The mention in the specifications of apparatus, equipment or material by brand name or by such specified description of same as is hereby made, is intended to convey to the bidder's understanding, the degree of excellence required. Any article, equipment, or material, which shall conform to the standards and excellence so established, and is of equal merit, strength, durability and appearance to perform the desired function, is deemed eligible for offer as a substitute. The qualifications of the offering shall be judged as to their conformance with these specifications. Any equipment offered other than herein specified shall be subject to a competitive demonstration and evaluation shall be subject to a competitive demonstration and evaluation by the using department. Such demonstration to be provided on request within ten working days after the receipt of bids.

The result of that demonstration and evaluation shall be of prime importance in the recommendation to the governing body for the final contract award.

## TECHNICAL INFORMATION

Bidder shall furnish free of charge, upon request, technical information, graphs, charts, photographs, engineering diagrams, steering geometry, drive train certifications, instruction guides, or other documentation as requested to show that the equipment offered fully complies with these specifications.

## PROPRIETARY PARTS

It is the intention of the Purchaser for all bidder's to furnish the apparatus with major parts commonly used by the heavy-duty truck manufacturers and open market vendors whereas replacement parts are more readily available and at reduced cost. The use of proprietary parts such as but not limited to axles, suspensions, engines, transmissions, frontal air bags, electronic controls, multiplexing systems, seats, pumps, gauges, foam systems, etc., may not be acceptable by the purchaser.

## DELIVERY TIME

Each bidder shall state the completed apparatus delivery time based on the number of calendar days, starting from the date the sales contract is signed and accepted by the apparatus manufacturer.

Delivery Time: \_\_\_\_\_ Calendar days

## BOND REQUIREMENTS

Any bonds or sureties (bid, performance, or other) required by the Purchasing Organization shall be as specified below or as requested in the advertised "Bid Notice".

A bid bond shall be submitted with the bidder's proposal. The bond shall be for an amount equal to 10% of the proposed bid price. Failure to provide an original, acceptable, valid bid bond with the proposal shall result in the immediate rejection of the bidder's proposal.

The apparatus manufacturer must provide all bonds; bonds provided by a sales representative, dealer, distributor, or agent of the apparatus manufacturer are not acceptable.

With respect to the qualifications of proposed bonds or sureties, the bidder's bonding company must meet the following requirements:

- An acceptable surety as outlined by the department of treasury on their most recent federal register at a limit of at least \$10,000,000;

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**Yes      No**

- A.M. Best rating of "A" or better with a financial rating of at least "VIII"; and licensed as a surety in the state where the sale is to be made.

## **PERFORMANCE BOND**

A performance bond shall be supplied by the successful bidder upon acceptance of the signed sales contract for the apparatus. The performance bond shall be for an amount equal to the full contract price (i.e. 100% bond).

## **FAIR, ETHICAL AND LEGAL COMPETITION**

In order to ensure fair, ethical, and legal competition, neither original equipment manufacturer (O.E.M.) nor parent company of the O.E.M. shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

## **NON-COLLUSIVE BIDDING CERTIFICATION**

By submission of this bid, each bidder and each person signing on behalf of any bidder, certifies, and in the case of a joint bid, each party thereof certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief:

- The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for purpose of restricting competition, as to any matter relating to sale price with any other bidder or any competitor.
- Unless otherwise required by law, the prices that have been quoted in this bid have not been knowingly disclosed by the bidder and shall not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor.
- No attempt has been made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition.
- That all requirements of the law including amendatory provisions as to non-collusive bidding have been complied with.

## **MATERIAL AND WORKMANSHIP**

All equipment furnished shall be guaranteed to be new and of current manufacture, to meet all requirements of these specifications.

All workmanship shall be of high quality and accomplished in a professional manner so as to insure a functional apparatus with a pleasing, aesthetic appearance.

## **CONTRACT AWARD**

The Purchaser reserves the right to reject any or all bids deemed to be unresponsive. The Purchaser also reserves the right to waive any informalities, irregularities and technicalities in procedure.

The Purchaser reserves the right, before awarding the contract, to require a bidder to submit evidence of his qualifications as may be deemed necessary. Documentation, which may be required, is financial soundness, technical competency, and other pertinent qualifications of a bidder, including past performance (experience) with the Purchaser.

Upon award of contract, the sales contract shall be between the Purchaser and the manufacturer of the apparatus. Contracts between the Purchaser and a sales representative, dealer, distributor, or agent of the apparatus manufacturer shall not be acceptable. (No Exceptions.)

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## CONTRACT SPECIALIST

The successful bidder shall designate a contract specialist to provide a single point interface between the purchaser and the contractor on all matters concerning the contract.

## APPROVAL DRAWING

A detailed drawing of the apparatus shall be provided to the purchaser for approval before construction begins. A copy of this drawing shall also be provided to the manufacturer's representative. Upon purchaser's approval, the finalized drawing shall become a part of the total contract.

The drawing shall show, but is not limited to, such items as the chassis make and model, major components, location of lights, sirens, all compartment locations and dimensions, special suction, discharges, etc. The drawing shall be a visual interpretation of the apparatus as it is to be supplied.

## INSPECTION VISITS

The successful bidder shall provide one (1) factory inspection trip to the apparatus manufacturer's facility. Transportation, meals, lodging, and other requisite expenses shall be the bidder's responsibility.

Accommodations will be for three (3) Fire Department representatives per trip.

The factory visits will occur at the following stages of production of the apparatus:

- Pre-construction / blueprint review.

Travel arrangements less than 500 miles from the manufacturing facility shall be via ground transportation.

The Elizabethtown Fire District maintains the right to inspect the apparatus, within normal business hours, at any other point during construction. Expenses incurred during non-specified inspection visits shall be the responsibility of the Elizabethtown Fire District.

During inspection visits, the Elizabethtown Fire District reserves the right to conduct actual performance tests to evaluate completed portions of the unit. Testing shall be accomplished with the assistance and resources of the contractor.

## DELIVERY, DELIVERY ENGINEER, AND TESTING

Delivery of the apparatus to the Elizabethtown Fire District shall remain the bidder's responsibility.

On initial delivery of the fire apparatus, a qualified and responsible representative of the contractor shall demonstrate the apparatus and provide initial instruction to representatives of the customer regarding the operation, care, and maintenance of the apparatus and equipment supplied.

## INSTRUCTION MANUALS/DRAWINGS, SCHEMATIC

In accordance with standard commercial practices, applicable to each vehicle (including body and special equipment) furnished under the contract, the following listed manuals and schematics, in the quantity specified, shall be provided at time of delivery of each vehicle.

The contractor shall supply at time of delivery, two (2) CD copies of a complete operation and service manual covering the complete apparatus as delivered and accepted.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

The manual shall contain the following:

- Descriptions, specifications, and ratings of chassis, pump (if applicable), and aerial device.
- Wiring diagrams.
- Lubrication charts.
- Operating instructions for the chassis, any major components such as a pump and any auxiliary systems.
- Instructions regarding the frequency and procedures recommended for maintenance.
- Parts replacement information.

**VEHICLE FLUIDS PLATE**

As required by NFPA-1901, the contractor shall affix a permanent plate in the driver's compartment specifying the quantity and type of the following fluids used in the vehicle:

A permanent plate in the driving compartment shall specify the quantity and type of the following fluids used in the vehicle:

- Engine oil
- Engine coolant
- Chassis transmission fluid
- Pump transmission lubrication fluid
- Pump primer fluid
- Drive axle(s) lubrication fluid
- Air-conditioning refrigerant
- Air-conditioning lubrication oil
- Power steering fluid
- Cab tilt mechanism
- Transfer case fluid
- Equipment rack fluid
- Air compressor system lubricant
- Generator system lubricant
- Aerial systems

**PRINCIPAL APPARATUS DIMENSIONS & G.V.W.R.**

The bidder shall include the principal dimensions, front G.A.W.R., rear G.A.W.R., and total G.V.W.R. of the proposed apparatus. Additionally, the bidder shall provide a weight distribution of the fully loaded, completed vehicle; this shall include a filled water tank, specified hose load, miscellaneous equipment allowance in accordance with NFPA-1901 requirements, and an equivalent personnel load of 250 lbs. per seating position.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## BIDDER TO SUPPLY AND FILL- IN PROPOSED DIMENSIONS:

- OVERALL LENGTH: \_\_\_\_\_ 287"
- OVERALL WIDTH: \_\_\_\_\_ 92"
- OVERALL HEIGHT: \_\_\_\_\_ 96"
- WHEELBASE: \_\_\_\_\_ 176"

The axle and total weight ratings of the completed apparatus shall not be less than the following minimum acceptable weight ratings:

- MINIMUM FRONT G.A.W.R.: \_\_\_\_\_ 7,000 lbs.
- MINIMUM REAR G.A.W.R.: \_\_\_\_\_ 14,706 lbs.
- MINIMUM TOTAL G.V.W.R.: \_\_\_\_\_ 19,500 lbs.

## VEHICLE INSPECTION

The completed vehicle should include a safety inspection windshield sticker and/or the appropriate certification as required by the state Department of Transportation at time of delivery.

## BIDDERS BACKGROUND

All bidders shall state the ownership of the organization which shall actually construct the apparatus. Companies which are a division, subsidiary, wholly or partially owned subsidiary or other entity which is wholly or partially owned or controlled by another entity shall state their entire ownership lineage.

## PRIMARY PLANT CONSTRUCTION

In order to insure top quality construction, maximum assembly line and engineering communication and the highest level of manufacturing supervision the entire apparatus shall be built at the bidders' primary (headquarters) manufacturing facility. Apparatus constructed at satellite plants will not be considered.

## REQUIRED PROPOSAL BLUEPRINT

A scale drawing of the specific apparatus being proposed shall be submitted WITH THE BID. Drawings of similar units or demo units shall not be permitted. Bidders should be clear that this provision is requiring a SCALE drawing of the truck which is actually being bid. The drawing shall be done at the manufacturer's facility by the manufacturer's engineering department in order to guarantee the accuracy of the drawing. Failure to comply with this requirement shall be grounds for rejection of the bid!

## BODY CONSTRUCTION LIMITATIONS

Apparatus bodies which are either bolted together or make excessive use of adhesives shall not be considered. Similarly, body construction techniques which rely upon space consuming extrusions for structural support shall not be permitted.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## FAMA COMPLIANCE

The apparatus manufacturer must be a current member of the Fire Apparatus Manufacturer's Association (FAMA).

## U.S.A. MANUFACTURER

The entire apparatus shall be assembled within the borders of the Continental United States to insure more readily available parts (without added costs and delays caused by tariffs and customs) and service.

## QUALITY MANAGEMENT

The manufacturer shall operate a Quality Management System that is certified to ISO 9001 by an organization that is accredited by the ANSI-ASQ National Accreditation Board (ANAB). This type of business management system shall allow the manufacturer to monitor processes to ensure they are effective; keep adequate records; check output for defects, with appropriate and corrective action where necessary; regularly review individual processes and the quality system itself for effectiveness; and facilitate continual improvement.

A copy of the registration certificate must be included in the proposal, NO EXCEPTIONS.

## TABLE OF CONTENTS

As all manufacturers present their specifications in a different order, each manufacturer will provide a table of contents for ease of bid comparison and to clearly locate all proposed items.

## STEPPING, STANDING, & WALKING SURFACES

All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be Alcoa No-Slip type. This material shall be a minimum 3/16 (0.1875") in thickness. Upon request by the purchaser, the manufacturer shall supply proof of compliance with this requirement. All vertical surfaces on the body, which incorporate aluminum tread plate material, will utilize the same material pattern to provide a consistent overall appearance.

## AMP DRAW REPORT

The bidder shall provide with their bid proposal and at the time of delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

A written load analysis, which shall include the following:

- The rating of the alternator.
- The minimum continuous load of each component that is specified per: Applicable NFPA-1901.
- Additional loads that, when added to the minimum continuous load, determine the total connected load.
- Each individual intermittent load.

All of the above listed items shall be provided by the bidder per the applicable NFPA-1901.

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Bidder  
Complies

Yes No

## COOPERATIVE PURCHASING

The Manufacturer shall be pleased to allow other public agencies to use the purchase agreement resulting from this invitation to bid unless the bidder expressly notes on the proposal form that prices are not available for tag-on. The condition of such use by other agencies shall be that any such agency must make and pursue contact, purchase order/contract, and all contractual remedies with the successful bidder. Such tag-ons shall be done so that the original purchasing agency has no responsibility for performance by either the manufacturer or the agency using the contract.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

**BIDDERS AFFIDAVIT**

**Bidders Name:**

**Address:**

I, \_\_\_\_\_ as the authorized agent for \_\_\_\_\_ do hereby swear and affirm that the following information is true and that the proposal that our firm is submitting complies with all the General Instructions, Requirements, and Specifications contained in this Bid Package, except where indicated below.

- |   |              |
|---|--------------|
| 1. The apparatus offered is manufactured in North America:  | YES___ NO___ |
| 2. The apparatus proposed is not a prototype:   | YES___ NO___ |
| 3. The performance tests shall be performed in compliance with the specifications:                          | YES___ NO___ |
| 4. All pages of the General Instructions, Requirements, and Specifications have been received and reviewed: | YES___ NO___ |
| 5. All questionnaires and blanks have been completed and filled in:   | YES___ NO___ |
| 6. Bid Bond is enclosed:  | YES___ NO___ |
| 7. Bidder complies with Specifications without Exception:   | YES___ NO___ |
| 8. Bidder complies with Design Criteria:  | YES___ NO___ |
| 9. Bidder has included Apparatus Drawings per Specifications:   | YES___ NO___ |
| 10. Apparatus proposed complies with dimensional requirements:  | YES___ NO___ |
| 11. Does the Manufacturer provide a program for the familiarization of the fire department:                 | YES___ NO___ |
| 12. Does the manufacturer meet the \$30,000,000.00 product liability insurance requirement:                 | YES___ NO___ |
| 13. Are all specified warranties included:  | YES___ NO___ |
| 14. Are all proposed warranties in compliance with specifications:  | YES___ NO___ |
| 15. Body structure covered by a _____ month warranty:   | YES___ NO___ |
| 16. Body sub frame covered by a _____ month warranty:   | YES___ NO___ |
| 17. Cab structure covered by a _____ month warranty:  | YES___ NO___ |
| 18. Paint covered by a _____ month warranty:  | YES___ NO___ |
| 19. Aerial device covered by a _____ month structural warranty:   | YES___ NO___ |
| 20. Chassis frame rails and cross members covered by a "lifetime" warranty:                                 | YES___ NO___ |
| 21. Are the proposed apparatus and equipment new in all respects:   | YES___ NO___ |
| 22. Is a complete copy of the bidders detailed proposal included:   | YES___ NO___ |
| 23. Is a separate sheet of exceptions attached:   | YES___ NO___ |
| 24. Service Ability form completed and attached:  | YES___ NO___ |
| 25. State the dimensions of the proposed apparatus:   | YES___ NO___ |

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

- Overall Height: \_\_\_\_\_
- Overall Length: \_\_\_\_\_
- Overall width: \_\_\_\_\_

26. Is the proposed device proof load tested as required in these specifications: YES\_\_\_ NO\_\_\_

27. Is the manufacturer a sole source manufacturer, including  
the entire; chassis, cab, body and aerial device: YES\_\_\_ NO\_\_\_

Delivery of the apparatus shall take place within \_\_\_\_ calendar days after the execution and acceptance of a contract.

Manufacturers Name: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Person for Questions Regarding Bid: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Name of Authorized Agent: \_\_\_\_\_

Signature of Authorized Agent: \_\_\_\_\_ Date: \_\_\_\_\_

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

**UNDERWRITERS LABORATORIES INC. (UL) EXAMINATION AND TEST PROPOSAL**

If required by the specific chapters of NFPA-1901, the proposed unit shall be tested and certified by Underwriters Laboratories Inc. (UL) Underwriters Laboratories Inc. (UL) is recognized worldwide as a leading third party product safety certification organization for over 100 years. UL has served on National Fire Protection Association (NFPA) technical committees for over thirty years.

**INDEPENDENT TESTING ORGANIZATION QUALIFICATIONS**

- UL is a nationally recognized testing laboratory recognized by OSHA.
- UL complies with the American Society for Testing and Materials (ASTM) Standard ASTM E543 "Determining the Qualifications for Nondestructive Testing Agencies."
- UL has more than 40 years of automotive fire apparatus safety testing experience and 16 years of factory aerial device testing and Certification experience. UL has more than 100 years of experience developing and implementing product safety standards.
- UL does not represent, is not associated with, nor is in the manufacture or repair of automotive fire apparatus.
- All test work for fire pumps outlined in NFPA 1901, Edition shall be conducted.
- UL has included a list of all factory aerial device manufacturers for whom testing is currently being conducted on a regular basis.
- UL carries ten million dollars in excess liability insurance for bodily injury and property damage combined.

UL provides the manufacturer a complete written examination and test report for each inspection performed at the manufacturer's facility. This report specifies the points of inspection and results of such examinations and tests.

The UL inspectors performing the test work on the units are certified to Level II in the required NDT methods, under the requirements outlined in ASNT document CP-189.

The actual person(s) performing the inspection shall present for review proof of Level II Certification in the required NDT methods.

The apparatus manufacturer shall designate, in writing, who is qualified to witness and certify these test results.

Prior to submittal to the automotive fire apparatus manufacturer, the final Report shall be reviewed by the Supervisor of Fire Equipment Services and a Registered Professional Engineer, both of whom are directly involved with the aerial device certification program at UL.

When the unit successfully meets all the requirements outlined in NFPA 1901, 2009 Edition, UL shall issue a Certificate of Automotive Fire Apparatus Examination and Test stating the unit's compliance with NFPA- 1901.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

**SERVICE ABILITY FORM**

Service Center Location:

Distance in miles (one way) from Local Service Center Location to the Purchaser's Location is:  
\_\_\_\_\_ miles.

Please answer the following questions:

Is this shop an authorized warranty center for the apparatus builder?      Yes \_\_\_\_ No \_\_\_\_

Is the Service Center enclosed and heated?      Yes \_\_\_\_ No \_\_\_\_

Number of full time Service Center Employees:      \_\_\_\_\_

Number of Fire Pump Manufacturers Certified Employees:      \_\_\_\_\_

Number of fully equipped service vans:      \_\_\_\_\_

Is your shop equipped to handle the following repair work:

Cab & Chassis Repairs:      Yes \_\_\_\_ No \_\_\_\_

Body Repairs:      Yes \_\_\_\_ No \_\_\_\_

Paint Work:      Yes \_\_\_\_ No \_\_\_\_

Water Tank Repairs:      Yes \_\_\_\_ No \_\_\_\_

Major Pump Repairs:      Yes \_\_\_\_ No \_\_\_\_

General Welding:      Yes \_\_\_\_ No \_\_\_\_

Frame & Spring Repairs:      Yes \_\_\_\_ No \_\_\_\_

Aerial Device Repairs:      Yes \_\_\_\_ No \_\_\_\_

Aerial Weldment Repairs:      Yes \_\_\_\_ No \_\_\_\_

Aerial Hydraulic System Repairs:      Yes \_\_\_\_ No \_\_\_\_

Aerial Electrical System Repairs:      Yes \_\_\_\_ No \_\_\_\_

Power Train Repairs:      Yes \_\_\_\_ No \_\_\_\_

This form was completed and submitted by:

\_\_\_\_\_

(Please print or type full name)

Title of Individual: \_\_\_\_\_

Signature of individual: \_\_\_\_\_

SUBSCRIBED AND SWORN before me

Notary's Stamp

This \_\_\_\_ day of \_\_\_\_\_

20\_\_

Notary Public: \_\_\_\_\_

Commission Expires: \_\_\_\_\_

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## GENERAL APPARATUS DESCRIPTION "SPECIAL SERVICE FIRE APPARATUS"

The unit will be designed to conform fully to the "Special Service Fire Apparatus" requirements as stated in the NFPA 1901 Standard (2009 Revision), which will include the following required chapters as stated in this revision:

- Chapter 1 Administration
- Chapter 2 Referenced Publications
- Chapter 3 Definitions
- Chapter 4 General Requirements
- Chapter 10 Special Service Fire Apparatus
- Chapter 12 Chassis and Vehicle Components
- Chapter 13 Low Voltage Electrical Systems and Warning Systems
- Chapter 14 Driving and Crew Areas
- Chapter 15 Body, Compartments and Equipment Mounting

## CAB SAFETY SIGNS

The following safety signs will be provided in the cab:

- A label displaying the maximum number of personnel the vehicle is designed to carry will be visible to the driver.
- "Occupants will be seated and belted when apparatus is in motion" signs will be visible from each seat.
- "Do Not Move Apparatus When Light Is On" sign adjacent to the warning light indicating a hazard if the apparatus is moved (as described in subsequent section).
- A label displaying the height, length, and GVWR of the vehicle will be visible to driver.
- This label will indicate that the fire department will revise the dimension if vehicle height changes while vehicle is in service.

## CHASSIS DATA LABELS

The following information will be on labels affixed to the vehicle:

Fluid Data

- Engine Oil
- Engine Coolant
- Chassis Transmission Fluid
- Pump Transmission Lubrication Fluid
- Pump Primer Fluid (if applicable)
- Drive Axle(s) Lubrication Fluid
- Air Conditioning Refrigerant
- Air Conditioning Lubrication Oil
- Power Steering Fluid
- Cab Tilt Mechanism Fluid
- Transfer Case Fluid (if applicable)
- Equipment Rack Fluid (if applicable)
- Air Compressor System Lubricant
- Generator System Lubricant (if applicable)
- Front Tire Cold Pressure
- Rear Tire Cold Pressure
- Aerial Hydraulic Fluid (if applicable)
- Maximum Tire Speed Rating

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## Chassis Data

- Chassis Manufacturer
- Production Number
- Year Built
- Month Manufactured
- Vehicle Identification Number

## Manufacturers weight certification:

- Gross Vehicle (or Combination) Weight Rating (GVWR or GCWR)
- Gross Axle Weight Rating, Front
- Gross Axle Weight Rating, Rear

## ROLLOVER STABILITY

The apparatus will meet the criteria defined in 4.13.1 for rollover stability as defined in the 2009 NFPA Standard for Automotive Fire Apparatus.



## *Vehicle Profile*

**2015 Ford F-550 Chassis**  
4x4 SD Crew Cab 176" WB DRW XL  
(W5H)

### Powertrain

Powerstroke 6.7L V-8 OHV direct diesel injection 32 valve intercooled turbo diesel engine \* 357 amp dual alternator \* 750 amp (total) 78 amp hours (Ah) (total) battery dual batteries with run down protection \* Engine block heater \* 6-speed electronic SelectShift automatic transmission with overdrive, lock-up, driver selection \* Part-time four-wheel drive with manual transfer case shift, manual locking hubs \* Limited slip differential, driveline traction control, power take-off provision \* 4.88 axle ratio \* Stainless steel exhaust

### Steering and Suspension

Hydraulic power-assist re-circulating ball steering \* 4-wheel disc brakes with front and rear vented discs \* Firm ride suspension \* Mono-beam non-independent front suspension \* Front anti-roll bar \* Front coil springs \* HD front shocks \* Rigid rear axle \* Rear leaf suspension \* Rear anti-roll bar \* HD rear leaf springs \* HD rear shocks \* Front and rear 19.5" x 6.00" argent steel wheels \* LT225/70SR19.5 BSW AS front tires \* AT rear tires\* 19,500 GVWR

### Safety

4-wheel anti-lock braking system \* Dual airbags, seat mounted driver and passenger side-impact airbags, curtain 1st and 2nd row overhead airbags \* Front height adjustable seatbelts \* SecuriLock immobilizer, panic alarm, security system

### Comfort and Convenience

Air conditioning, underseat ducts \* AM/FM stereo, clock, seek-scan, in-dash mounted single CD, MP3 decoder, 6 speakers, speed sensitive volume, fixed antenna \* Cruise control with steering wheel controls \* 2 12V DC power outlets, \* Analog instrumentation display includes tachometer, engine temperature gauge, turbo/supercharger boost gauge, transmission fluid temp gauge, engine hour meter, exterior temp, systems monitor, trip odometer \* Warning indicators include oil pressure, engine temperature, battery, lights on, key, low fuel, door ajar, service interval, brake fluid \* Steering wheel with tilt and telescopic adjustment \* Manual front and rear windows with light tint \* Variable intermittent front windshield wipers \* Passenger side vanity mirror \* Day-night rearview mirror \* Interior lights include dome light with fade, front and rear reading lights \* Full overhead console with storage, glove box, front cupholder, instrument panel bin, dashboard storage \* Upfitter switches

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

**Seating and Interior**

Seating capacity of 6 \* 40-20-40 split-bench front seat with adjustable head restraints, center armrest with storage \* 4-way adjustable driver seat includes lumbar support \* 4-way adjustable passenger seat \* 60-40 folding rear split-bench seat with FlexFold flip forward cushion/seatback, 3 adjustable rear head restraints \* Vinyl faced front seats with vinyl back material \* Vinyl faced rear seats with carpet back material \* Full cloth headliner, full vinyl/rubber floor covering, urethane gear shift knob, chrome interior accents

**Exterior Features**

Side impact beams, front license plate bracket, fully galvanized steel body material \* Black fender flares \* Black side window moldings, black front windshield molding \* Black door handles \* Black grille \* 4 doors \* Trailer harness \* Driver and passenger manual black folding, manual extendable trailer outside mirrors \* Front chrome bumper with front tow hooks \* Aero-composite halogen headlamps \* Additional exterior lights include cab clearance lights, underhood light \* Clearcoat monotone paint \* Ambulance Prep Package

**Warranty**

Basic .....	36 months/36,000 miles	Powertrain .....	60 month/60,000 miles	
Corrosion .....	60 month/Unlimited miles	Roadside .....	60 month/60,000 miles	Diesel
.....	60 month/100,000 miles			

**Dimensions and Capacities**

Output .....	300 hp @ 2800 rpm	Torque .....	660 lb-ft @ 1600 rpm	1st
gear .....	3.974	2nd gear .....	2.318	3rd
gear .....	1.516	4th gear .....	1.149	5th
gear .....	0.858	6th gear .....	0.674	
Reverse gear .....	3.128	Curb Weight .....	8,635 lbs	
GVWR .....	19,500 lbs	Front GAWR .....	7,000 lbs	
Rear GAWR .....	14,706 lbs	Payload .....	10,098 lbs	
Front Curb Weight .....	5,060 lbs	Rear Curb Weight .....	3,575 lbs	
Front Axle Rating .....	7,000 lbs	Rear Axle Rating .....	14,706 lbs	
Front Spring Rating .....	7,000 lbs	Rear Spring Rating .....	15,000 lbs	
Front Tire/Wheel Rating .....	7,500 lbs	Rear Tire/Wheel Rating .....	15,000 lbs	
Towing .....	16,000 lbs	5th Wheel Towing .....	16,400 lbs	
Front Shoulder Room .....	68.0 "	Rear Shoulder Room .....	68.0"	
Passenger Area .....	133.5 cu. ft.	Length .....	261.9"	
Wheelbase .....	176"	Cab to Axle .....	60"	
Axle to End of Frame .....	47.6"	Turning Radius .....	25.8'	
Fuel Capacity .....	40.0 gallons			

**2009 NFPA COMPLIANT CHASSIS**

**SEAT BELT CUSHION SENSORS AND BELT SENSORS**

The apparatus shall be equipped with a seat belt warning system. The system shall consist of a Seat Belt module, cushion sensors, dash mounted display and audible alarm.

There will be a total of five (5) seats connected to the seat belt system. They will consist of; driver, officer and three (3) crew. The center seat between the driver and officer will be removed as it will not meet NFPA 1901, 2009 compliance

Each seat belt will be red in color in order to comply with NFPA.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## VEHICLE DATA RECORDER

A Vehicle Data Recorder (VDR) system shall be provided. The system shall include an NFPA compliant "Black Box" with reporting software that shall be capable of data storage to coincide with the NFPA requirements.

Data storage capabilities shall include interfaces with the following systems:

- Display module (Master Optical Warning Device)
- VDR, date & time stamp
- Max Vehicle speed (MPH)
- Vehicle acceleration / deceleration (MPH/Sec.)
- Engine Speed (RPM)
- ABS event
- Data password protected
- Data sampled once per second, in 48-hour loop
- Data sampled min by min for 100 engine hours
- Throttle position (% of Throttle)
- Data software
- PC / Mac Compatible
- Data summary reports

## SEAT BELT CLARIFICATION

Red seat belts will be provided if available from the chassis manufacturer. The apparatus manufacturer will not change commercial chassis seat belts.

## EMBER SEPARATOR

The apparatus manufacturer will install a stainless mesh screen ember separator to the commercial chassis air intake system. The ember separator will prevent matter larger than 0.039 in (1.0 mm) in diameter from reaching the air filter element.

## WHEEL TRIM KITS

Wheel trim kits consisting of chrome baby moon hubcaps and chrome lug nut covers will be installed on the front and rear axles of the single rear axle chassis.

## CAB RUNNING BOARDS

Custom tread plate cab running boards will be provided at each cab entry.

## CENTER CONSOLE

A center console will be furnished and will be located between the driver and officer's seats.

The forward area of the console will have a mounting surface for emergency lighting switch panels and/or electronic siren control boxes within reach of the driver or officer. In addition, the console will be equipped with two (2) map/notebook storage pockets at the rear of the console.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## ANTENNA INSTALLATION

One (1) antenna mounting base(s) model #MATM with 17' of coaxial cable will be provided and installed on the cab roof. The attached antenna wire(s) will be run to the right side cab console.

The Fire Department is responsible to have the correct antenna whip installed once the apparatus is delivered.

## TIRE PRESSURE MONITORING DEVICES

Each tire will be equipped with an LED tire alert pressure management system (Vecsafe equal) that will monitor tire pressure. A chrome plated brass sensor will be provided on the valve stem of each tire.

The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 20 and 120 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 8 psi.

Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start blinking.

\*\*\*\*\* CHASSIS/BODY ELECTRICAL & ACCESSORIES \*\*\*\*\*

## COMMERCIAL CHASSIS ELECTRICAL SYSTEM

The commercial chassis electrical system will be provided as furnished by the original manufacturer. A customized interface will be provided and designed, so as not to disturb any of the required chassis functions. The necessary interfaces will only be provided in areas where load management is allowed or with accessory components provided on the chassis.

## 12 VOLT ELECTRICAL SYSTEM TESTING

The apparatus low voltage electrical system will be tested and certified by the manufacturer. The certification will be provided with the apparatus. All tests will be performed with air temperature between 0°F and 100°F.

The following three (3) tests will be performed in order. Before each test, the batteries will be fully charged.

### TEST #1-RESERVE CAPACITY TEST

The engine will be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine will be shut off and the minimum continuous electrical load will be activated for 10 minutes. All electrical loads will be turned off prior to attempting to restart the engine. The battery system will then be capable of restarting the engine. Failure to restart the engine will be considered a test failure.

### TEST #2-ALTERNATOR PERFORMANCE TEST AT IDLE

The minimum continuous electrical load will be activated with the engine running at idle speed. The engine temperature will be stabilized at normal operating temperature. The battery system will be tested to detect the presence of battery discharge current. The detection of battery discharge current will be considered a test failure.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## TEST #3-ALTERNATOR PERFORMANCE TEST AT FULL LOAD

The total continuous electrical load will be activated with the engine running up to the engine manufacturers governed speed. The test duration will be a minimum of 2 hours. Activation of the load management system will be permitted during this test. However, an alarm sounded due to excessive battery discharge, as detected by the system, or a system voltage of less than 11.7 volts DC for a 12 volt system, for more than 120 seconds, will be considered a test failure.

## LOW VOLTAGE ALARM TEST

Following completion of the preceding tests, the engine will be shut off. The total continuous electrical load will be activated and will continue to be applied until the excessive battery discharge alarm is activated.

The battery voltage will be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts will be considered a test failure. The battery system will then be able to restart the engine.

At time of delivery, documentation will be provided with the following information:

- Documentation of the electrical system performance test
- A written load analysis of the following;
- Nameplate rating of the alternator
- Alternator rating at idle while meeting the minimum continuous electrical load
- Each component load comprising the minimum continuous electrical load.
- Additional loads that, when added to the minimum continuous load, determine the total connected load.
- Each individual intermittent load.

## ELECTRICAL MANAGEMENT SYSTEM

A Class 1 ES-Key Electrical Management System will be utilized on the chassis for all functions applicable. The system will consist of the following components:

The High Density I/O Node (Super Node) will have the ability to perform the following functions:

- A modem with a RS232 computer interface and standard telephone jack used to not only program the multiplex system but also serve as a factory direct gateway into the vehicle from any Class 1 multiplex authorized service facility.
- A Universal System Manager (USM), which acts as the main controlling component of the multiplexing system will be provided and factory programmed to DOT, NFPA, SAE, the manufacturer and Elizabethtown Fire District specifications. The programming will be done by the manufacturer's engineering department. The ES-Key system installation will comply with SAE J 551 requirements regarding Electromagnetic and Radio Frequency interference (EMI, RFI), as well as utilize components and wiring practices that insure the system is protected against corrosion, excessive temperatures, water, excessive physical, and vibration damage by any equipment installed on the vehicle at the time of delivery.
- A series of Multiplexing Input/Output jacks will be provided. The Input/Output jacks will permit the multiplexing system to reduce the amount of wiring and components used as compared to non-multiplexed apparatus. These jacks will vary in I/O configuration and will possess individual output internal circuit protection.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

The System will also consist of a Smart Programmable Switch (SPS) panel that will be installed and allow the operator to control the programmed functions of each individual switch.

Diagnostic software will be provided to download data from the on board ES-KEY system. This software will have the ability to view system input/output (I/O) information, and include a connection from a computer to the vehicle.

## **BATTERY DISCONNECT SWITCH**

The chassis batteries will be wired in parallel to a single 12 volt electrical system, controlled through a heavy duty master disconnect switch. The master disconnect switch will be located within easy access of the driver upon entering or exiting the cab.

## **120 VOLT SHORELINE CONNECTION - "SUPER" AUTO EJECT**

One (1) Kussmaul "Super" Auto Eject model 091-55-20-120, automatic, 120 volt, 20 amp shoreline disconnect will be provided for the on board, 110 volt battery charging systems.

The disconnect, will be equipped with a NEMA 5-20 P male receptacle, which will automatically eject the shoreline when the vehicle starter is energized. The mating connector will be included with the auto eject and will be provided as loose equipment. A label will be provided indicating voltage and amperage ratings.

## **SHORELINE POWER INLET PLATE**

A shoreline power receptacle information plate will be permanently affixed at or near the power inlet. The plate will indicate the following:

- Type of Line Voltage
- Current Rating in Amps Power Inlet Type (DC or AC).

The Kussmaul auto-eject connection will be equipped with a Red weatherproof cover.

The shoreline receptacle will be located in the driver's cab step well.

## **BATTERY CHARGER SYSTEM**

A Kussmaul model # 091-170-12, "Auto Charge 12 HO" high output, fully automatic battery charger will be provided for maintaining the vehicle battery system. Remote voltage sensing will be provided to compensate the charger output for the voltage drop in the charging wires. Output current will be 20 amperes @ 12 volt DC. A built-in ammeter will be provided.

## **"DO NOT MOVE APPARATUS" WARNING LIGHT WITH AUDIBLE ALARM**

A 1" round, red flashing warning light with an integral audible alarm, will be functionally located in the cab to signal when an unsafe condition is present such as an open cab door or body compartment door, an extended ladder rack, a deployed stabilizer, an extended light tower or any other device which is opened, extended or deployed which may cause damage to the apparatus if it is moved.

This light will be activated through the parking brake switch to signal when the parking brake is released. This light will be labeled "DO NOT MOVE TRUCK".

## **12 VOLT ACCESSORY CIRCUIT - CAB CONSOLE**

One (1) dedicated circuit; 12 volt, 40 Amp, power and ground on 3/8 stud and fused at battery will be provided in the cab console. The circuit will be for future installation of radios or accessories.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## DOT MARKER LIGHTS AND REFLECTORS

Cab marker lights and signaling devices will be as provided on the commercial chassis cab from the original chassis manufacturer. FMVSS reflectors will also be provided as required.

Truck-Lite Model #18 red LED marker lights with integral reflectors will be provided at the lower side rear, one (1) each side.

Truck-Lite Model #19 red LED clearance lights will be provided on the apparatus rear upper, one (1) each side at the outermost practical location.

Truck-Lite Model # 33740R LED 3-lamp identification bar will be provided on the apparatus rear center. The lights will be red in color.

Truck-Lite # 98034R red reflectors will be provided on the apparatus rear, one (1) each side at the outermost practical location.

## LICENSE PLATE LIGHT - REAR

One (1) Weldon model # 9186 license plate light will be provided above the mounting position of the license plate. The light will be clear and will have a chrome finish.

## TAIL, STOP, TURN AND BACK-UP LIGHTS

Two (2) Code 3, 65STR 4" x 6", red LED combination tail and stop lights, will be mounted one each side at the rear of the body.

Two (2) Code 3, 65STA 4" x 6", amber LED arrow turn signal lights, will be mounted one each side, on a vertical plane with the tail/stop lights.

Two (2) Code 3, 61RV 4" x 6", white halogen backup lights, will be mounted one each side, on a vertical plane with the turn/tail/stop signals. These lights will activate when the transmission is placed in reverse gear.

Two (2) Code 3 65STK4 mounting flanges, installed one (1) on each side, will be provided to mount the lights described above in one common mounting flange. The fourth opening will be for the lower rear warning lights.

The lights will be mounted in order, from top to bottom, as described above.

## BODY STEP LIGHTS

Polished stainless steel, TecNiq Eon 3-LED horizontal surface mounted body step lights will be provided and controlled with marker light actuation. Step lights will be located to properly illuminate all body access steps and walkway areas and will include a mounting gasket to provide a watertight seal.

## GROUND LIGHTS - CAB

One (1) ROM V4 12" LED ground light will be provided under each side cab door entrance step, four (4) total. The lights will be mounted in ROM standalone aluminum mounting track with mounting slots at each end. The ground lights will turn on automatically with each respective door jamb switch and also by a master ground light switch in the warning light switch console.

Each light will illuminate an area at a minimum 30" outward from the edge of the vehicle.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## GROUND LIGHTS - REAR

One (1) ROM V4 12" LED ground light will be provided under each rear body corner, two (2) total. The lights will be mounted in ROM standalone aluminum mounting track with mounting slots at each end. The ground lights will be activated by a master ground light switch in the cab and will be wired through the load management system.

The lights will be positioned to illuminate the ground under the rear tailboard.

## **\*\*\*\* BODY ELECTRICAL SYSTEM \*\*\*\***

### 12 VOLT BODY ELECTRICAL SYSTEM

All electrical lines in the body will be protected by automatic circuit breakers, conveniently located to permit ease of service. Flashers, heavy solenoids and other major electrical controls will be located in a central area near the circuit breakers.

All lines will be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram. A complete wiring diagram will be supplied with the apparatus.

Wiring will be carefully protected from weather elements and snagging. Heavy duty loom will be used for the entire length. Grommets will be utilized where wiring passes through panels.

In order to minimize the risk of heat damage, wires run in the engine compartment area will be carefully installed and suitably protected by the installation of heat resistant shielded loom.

All electrical equipment will be installed to conform to the latest federal standards as outlined in NFPA 1901.

### BODY ELECTRICAL JUNCTION COMPARTMENT

A weather resistant electric junction compartment will be provided within the body or pump enclosure, depending on vehicle configuration. This compartment will provide an easily accessible enclosure to house all of the body wiring junction points, terminal strips, solenoids, etc. The design of this compartment will not decrease the storage capacity area of the compartment or area in which it is located. A removable panel will be provided for access to this compartment.

### ENGINE COMPARTMENT WORK LIGHTS

Two (2) Peterson model #M391 lights will be provided inside the engine enclosure that will provide a minimum of 20 candlepower illumination. Each light will have their own independent switch incorporated into the light head.

### ROM TRACK MOUNTED COMPARTMENT LIGHTS - LED

Each individual, equipment storage compartment will be equipped with the ROM LED V4 lights on the forward and rear edge of each body door opening. The lights will be mounted in an anodized aluminum track provided by ROM either as a stand alone, unit or an integrated part of the roll up shutter door track. The lights will be designed and manufactured to be water proof meeting the IPX7 industry standard and will include a streamline optic lens and a fixed lumen output across 9-16vdc. Each LED module will be of interlocking design and will be able to be serviced/replaced without the removal of light assembly or shutter door.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## **RECESSED 150W PIONEER LED FLOODLIGHTS – DRIVER SIDE**

Two (2) Whelen Pioneer model # PFP2 recessed lights will be installed one rearward and one forward on the driver side of the body using the Whelen # PBA203 recessed bracket.

Each lamp head will have two (2) white LED modules and will draw 13 amps and generate 16,000 lumens.

## **RECESSED 150W PIONEER LED FLOODLIGHTS – OFFICER SIDE**

Two (2) Whelen Pioneer model # PFP2 recessed lights will be installed one rearward and one forward on the officer side of the body using the Whelen # PBA203 recessed bracket.

Each lamp head will have two (2) white LED modules and will draw 13 amps and generate 16,000 lumens.

## **OFFICER SIDE OF BODY LIGHT SWITCHING - CAB**

A switch will be provided in the cab warning light switch console to turn the officer side of body lights on and off.

## **DRIVER SIDE OF BODY LIGHT SWITCHING - CAB**

A switch will be provided in the cab warning light switch console to turn the driver side of body lights on and off.

## **NFPA AUDIBLE AND LIGHTING WARNING PACKAGE**

The following warning light package will include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901 Fire Apparatus Standard. The lighting as specified will meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode.

## **LIGHT PACKAGE ACTUATION CONTROLS**

The entire warning light package will be actuated with a single warning light switch located on the cab switch panel. The wiring for the warning light package will engage all of the lights required for "Clearing Right of Way" mode when the vehicle parking brake is not engaged. An automatic control system will be provided to switch the warning lights to the "Blocking Right of Way" mode when the vehicle parking brake is engaged.

## **WARNING LIGHT FLASH PATTERN**

All of the perimeter warning lights will be set to an NFPA compliant flash pattern by the apparatus manufacturer.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## UPPER LEVEL LIGHTING - CODE 3

### NFPA ZONE A, UPPER

A Code 3 2758NFPA P1 "RX 2700 Prizm II Series", 58" LED cab roof warning light bar will be furnished and rigidly mounted on top of the cab roof.

The light bar will be equipped with the following:

- Red Upper Lenses
- Clear Lower Lenses
- Six Forward Facing Red - Eight LED Reflector Prizm II Modules
- Four Corners Red - Twelve LED Reflector Prizm II Modules.

If equipped, the forward facing white lights will be automatically disabled for the "Blocking Right of Way" mode.

### NFPA ZONE C, UPPER

Two (2) Code 3 3712\*BZ-75, PriZm II LED lights, will be furnished and mounted one (1) each side at the rear, upper portion of the apparatus.

Each light head will be equipped with red LED's and a colored lens.

The lights will be installed with a chrome plated mounting flange.

### NFPA ZONES B & D REAR, UPPER

Two (2) surface mounted Code 3 378\*BZ-75 PriZm II LED light heads will be furnished and will be mounted one (1) each side on the upper side face, towards the rear of the body, facing to each side of the unit.

Each light head will be equipped with red LED's and a colored lens.

The lights will be installed with a chrome plated mounting flange.

### NFPA ZONES B & D FRONT, UPPER

Two (2) surface mounted Code 3 378\*BZ-75 PriZm II LED light heads will be furnished and mounted; one (1) each side on the upper side face, towards the front of the body, facing to each side of the unit.

Each light head will be equipped with red LED's and a colored lens.

The lights will be installed with a chrome plated mounting flange.

## LOWER LEVEL LIGHTING - CODE 3

### NFPA ZONE A, LOWER

Two (2) Code 3 LXEX1F-\* LED light heads will be provided and installed one (1) each side.

Each light head will be equipped with red LED's and a clear lens.

The lights will be installed with a brushed aluminum mounting flange.

The lower zone A warning lights will be mounted in the commercial chassis grille.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## NFPA ZONE C, LOWER

Two (2) Code 3 65BZ\* LED light heads will be provided and installed; one (1) each side directly below the DOT stop, tail, turn and backup lights.

Each light head will be equipped with red LED's and a colored lens.

The lights will be installed in the common bezel with the taillights.

## NFPA ZONES B & D FRONT, LOWER

Two (2) Code 3 XT4\*\* LED light heads will be provided and installed one (1) each side.

Each light head will be equipped with red LED's and a clear lens.

The lights will be installed with a black mounting flange.

The lower zone B & D warning lights will be mounted on the sides of the bumper extension.

## NFPA ZONES B & D REAR, LOWER

Two (2) Code 3 378\*BZ-75 PriZm II LED light heads will be provided and installed one (1) each side.

Each light head will be equipped with red LED's and a colored lens.

The lights will be installed with a chrome plated mounting flange.

## WARNING LIGHT SYSTEM CERTIFICATION

The warning light system(s) specified above will not exceed a combined total amperage draw of 45 AMPS with all lights activated in either the "Clearing Right of Way" or the "Blocking Right of Way" mode.

The warning light system(s) will be certified by the light system manufacturer(s), to meet all of the requirements in the current revision of the NFPA 1901 Fire Apparatus Standard as noted in the General Requirements section of these specifications. The NFPA required "Certificate of Compliance" will be provided with the completed apparatus.

## ARROW STICK WARNING LIGHT

One (1) Code 3 LEDX, "Narrow Stik" Model #NASL847, 47" rear directional light will be installed on the rear of the body. The light will be equipped with eight (8) lamps. The light will be controlled from the cab. The control module will be conveniently located near the driver's position. The rear directional light will be wired through the load management system of the unit.

\*\*\*\*\* AUDIBLE WARNING EQUIPMENT \*\*\*\*\*

## BACK-UP ALARM

A Code 3, model # D450C, 87dBA back-up alarm, will be provided and installed at the rear of the apparatus under the tailboard. The back-up alarm will activate automatically when the transmission is placed in reverse gear and the ignition is "on".

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## ELECTRONIC SIREN

One (1) Whelen # 295SLSA1, 100 watt electronic siren will be provided featuring: bottom mount control head in cab, "Si-Test" self-diagnostic feature, six (6) function siren, radio repeat and public address.

The electronic siren and speaker will meet the NFPA required SAE certification to ensure compatibility between the siren and speaker.

One (1) Whelen, model # SA122FMP polished aluminum siren speakers will be provided, recessed in the front bumper and wired to the electronic siren.

## RESCUE BODY DESIGN CONSTRUCTION

The body side and compartment assemblies will be designed and assembled to provide maximum strength and durability under all operating conditions.

Special attention will be taken to minimize rust on all fabricated parts and structural members of the body. All bolt-on components will be provided with a dissimilar metals isolation barrier to prevent electric corrosion. The body design will also incorporate removable panels to access spring hangers, rear body mounts and fuel tank sending units.

The body will be an all Heliarc welded construction for maximum strength and integrity for the entire life of the apparatus. The body assembly will be a single unit completely isolated from the cab.

## BODY AND COMPARTMENT FABRICATION - 1/8" & 3/16" ALUMINUM

All compartment panels and body side sheets will be 1/8" and 3/16" aluminum (5052-H32). Each side compartment assembly will be both plug welded and stitch welded to ensure proper weld penetration on all panels while avoiding the possible warping caused by a full seam weld. The side compartments will be welded on a fixture to ensure true body dimensions of all door openings. The side compartments and body side panels are then set into a body squaring fixture where the super structure is installed and the entire body is aligned to be completely symmetrical. The super structure is then welded to the compartment side panels and reinforcement plates are inserted which allows the compartment panels to become an integral component of the body support structure. A full seam weld will not be used due to the applied heat which will distort sheet metal and remove the protective coating from the perimeter of the welded area. All seams will be caulked prior to finish paint to ensure proper compartment seal.

## 92" WIDE RESCUE BODY

The rescue body will be 92" wide to provide the maximum amount of usable compartment space, and to extend the body fenderettes outward for better tire tread coverage.

## SUPER STRUCTURE - ALUMINUM

The body super structure will be an all welded configuration utilizing a combination of 3" x 1-1/2" 6061-T6 thick walled structural tubing and 6061 structural channel.

This structure will be designed to totally support the full length and width of the body and will be welded to the body side compartments by use of reinforcement plates to incorporate the compartments into an integral part of the body weldment.

The super structure will be bolted to the sides of the chassis frame at four (4) points.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## STEPPING, STANDING, & WALKING SURFACES

All stepping, standing, and walking surfaces on the body will meet NFPA #1901 anti-slip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces will be ALCOA No Slip type. Upon request by the Purchaser, the manufacturer will supply proof of compliance with this requirement.

## ROOF CONSTRUCTION

The apparatus body and roof panel construction will be integral and reinforced for maximum strength.

The roof will be 3/16" 3003H-12 aluminum tread plate welded to the interior roof members and vertical interior compartment walls. The roof perimeters will be fabricated to overlap the body side sheets to allow a weather tight seal.

All roof seams will be continuously welded. Heliarc welding will be used for this process.

The roof members will be 2" x 2" x 1/4" wall square tubing welded in place and supported by the side vertical wall members. Attachment of the roof skin with pop rivets or sheet metal screws, or support of the roof surface with plywood are not acceptable and grounds for rejection.

***Centered overtop of compartments L1/R1 shall be a recessed well for installation of the generator. The well shall be large enough to allow appropriate airflow to cool the generator during operation.***

*LD ROLL-UP THREE (3) COMPARTMENT WALK AROUND, 60" CA*

## LEFT SIDE COMPARTMENT #1

- 60" high x 31-1/4" wide x 24" deep
- Roll-Up door
- Door opening: 56" high x 28" wide
- Clear opening: 50" high x 25" wide

Compartment L-1 will be transverse over the frame rails.

The following accessories will be installed:

## LEFT SIDE COMPARTMENT #2

- 35" high x 51-1/2" wide x 24" deep
- Roll-Up door
- Door opening: 31" high x 47" wide
- Clear opening: 25" high x 44" wide

Compartment L-2 will be transverse over the frame rails.

The following accessories will be installed:

One (1) rollout, drop down tray(s)

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## LEFT SIDE COMPARTMENT #3

- 60" high x 38-1/8" wide x 24" deep
- Roll-Up door
- Door opening: 56" high x 36" wide
- Clear opening: 50" high x 33" wide

The following accessories will be installed.

One (1) #500, 70%, floor mounted rollout tray(s)

## RIGHT SIDE COMPARTMENT #1

- 60" high x 31-1/4" wide x 24" deep
- Roll-Up door
- Door opening: 56" high x 28" wide
- Clear opening: 50" high x 25" wide

Compartment R-1 will be transverse over the frame rails.

The following accessories will be installed:

One (1) adjustable shelf(s)

One (1) #250 floor mounted rollout tray(s)

## RIGHT SIDE COMPARTMENT #2

- 35" high x 51-1/2" wide x 24" deep
- Roll-Up door
- Door opening: 31" high x 47" wide
- Clear opening: 25" high x 44" wide

Compartment R-2 will be transverse over the frame rails.

The following accessories will be installed:

One (1) rollout, drop down tray(s)

## RIGHT SIDE COMPARTMENT #3

- 60" high x 38-1/8" wide x 24" deep
- Roll-Up door
- Door opening: 56" high x 36" wide
- Clear opening: 50" high x 33" wide

The following accessories will be installed:

## REAR COMPARTMENT

A rear compartment measuring 42" wide with a minimum height of 47-3/4" and a depth equal to the width of the rearmost compartment which is NOT Transverse.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## UPPER REAR STEP COMPARTMENT

A compartment will be provided above the rear step compartment for the storage of long equipment. The compartment will be 44" wide x 12" high x body length. Fiberglass angle will be provided on the compartment floor for the storage of ground ladders or a stokes basket. A horizontally, top hinged tread plate door with a quarter turn "D" handle will be provided to access the compartment.

One (1) #500, 70%, floor mounted rollout tray(s)

## TRAILER HITCH AND RECEIVER

A trailer receiver will be provided at the rear of the body and will be constructed from 2 1/2" seamless structural steel tubing fastened to the chassis frame.

A seven (7) flat pin connector will be provided for towing purposes.

## ROLL-UP DOORS

Roll-up doors will be provided on all compartments. The roll-up doors will be constructed from aluminum extruded slats which will have a flexible seal between each slat for proper sealing of the door.

A synthetic rubber seal will be provided at each side, top and bottom edge of the door to prevent entry of dirt into the compartment.

The door will be equipped with a lift bar style latch mechanism which will latch at the bottom of the door mounting extrusion.

The roll-up door assembly will be furnished with a spring-loaded, counter balance assembly to assist in door actuation.

All running board and high side compartments will be equipped with roll-up doors.

## ROBINSON ROLL-UP DOORS

The roll-up doors will be Robinson (ROM) brand roll-up doors, equipped with a brushed aluminum finish, with a PVC inner seal to prevent metal to metal contact and to repel moisture. The slats will be double-wall extrusion 1.366" high by .315" thick with interlocking end shoes to prevent the slats from moving side-to-side and binding the door. All slats are to have interlocking joints to prevent penetration by sharp objects.

## SWEEP-OUT COMPARTMENT FLOORS

Compartment floors will be welded to the compartment walls and have a sweep out design for easy cleaning.

Compartments with hinged doors will have the door opening flanges bend down to produce the sweep-out design.

Compartments with roll-up style doors will have the external floor flange stepped down, 1/2" high x 2" deep, to produce a sealing surface for the roll-up doors below the compartment floor. The sweep out design will also permit easy cleaning.

## COMPARTMENT DRIP MOLDING

Drip molding will be provided directly over all of the compartment doors.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## COATED FASTENERS

All exterior fasteners will be coated stainless steel screws. Screw threads will be coated with reusable, self-locking, sealing material to provide vibration resistance. Screw heads will be coated with a sealing element to prevent galvanic corrosion between dissimilar metals. Non-coated screws will only be provided as part of vendor supplied component installations.

## COMPARTMENT LOUVERS

Ventilation between compartments to atmosphere will be provided and located to avoid water entry into compartments.

## ACCESS PANELS

Removable access panels will be provided in all lower compartments (if applicable) to access spring pins, fuel tank sender, electrical junction compartment and rear body mounts.

Protective panels will be located in the rear compartments providing access to the lights and associated wiring. The covers will also serve as protective covers to prevent inadvertent damage to lights or wiring from tools or equipment located in the compartment.

## BODY PROTECTION PANELS

The front face of the body side compartments, including the entire forward area of the body, will be overlaid with a polished aluminum tread plate, full height protection panel.

## BODY PROTECTION PANELS

The rear surface of the body, around the rear compartment access doors will be overlaid with a polished aluminum tread plate, full height protection panel to protect the painted surfaces around the rear compartment during usage.

## BODY RUB RAILS

Sacrificial C-Channel style rub rails will be mounted at the base of the body, extend outward from the body. The rub rails will extend the full length of the main body. Rub rails will be designed to bolt to the body from the bottom side of the compartment area, so as not to damage the body side panels on initial impact and to provide for ease of replacement.

## REAR BUMPER

An 8" rear bumper will be provided at the rear of the body for protection. The framework shall and will be integral to the subframe with a bolt on treadplate overlay to allow for ease of replacement or repair. The bumper will be fabricated from aluminum tread plate with mitered corners to prevent snagging.

## GRAB RAILS

All hand rails will be 1-1/4" outer diameter, knurled bright anodized aluminum extrusion, designed to meet NFPA 1901 requirements.

Molded gaskets will be installed between the handrail stanchion castings and body surfaces to prevent electrolytic reaction between dissimilar metals and to protect paint.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

## **GRAB RAIL LOCATIONS:**

Grab rails will be provided at the following specified locations. Additional grab rails will be provided adjacent to any additional steps specified to comply with NFPA 1901.

Two (2) at the rear of the rescue body, one (1) each side

## **SAFETY SIGN(S) AT REAR STEP AND CROSS WALKWAY(S)**

Safety sign(s) will be located on the vehicle at the rear step, and at any cross walkway(s), to warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.

## **REAR WHEEL WELL LINERS**

Fully removable, bolt-in, 1/8" aluminum fender liners will be provided. The wheel well liners will extend from the outer wheel well body panel, into the truck frame. Removable vertical splash shields, inward of the wheels, will be provided to give access to the hydraulic components. The completely washable fender liners will be designed to protect the front and rear compartments and main body supports from road salts, dirt accumulation and corrosion.

## **REAR FENDERETTES**

The rear fenders will be equipped with easily replaceable, polished extruded aluminum fenderettes. The fenderettes will be equipped with a rubber gasket molding between the body panel and the fenderette.

## **AIR BOTTLE STORAGE COMPARTMENTS**

A total of three (3) SCBA air bottle storage compartments (8" high x 8" wide x 26" deep) will be inserted into the body fender area on a 5 degree pitch. The compartments will be located with one (1) on the driver side and two (2) on the officer side of the rear body fender panels. The lower portion of the compartments will be non-abrasive to absorb shock and help secure the bottle.

Each storage compartment will be equipped with a polished stainless steel door that will be tied to the "Do Not Move Apparatus" warning system.

## **REAR MUD FLAPS**

Heavy duty mud flaps will be provided behind the rear wheels.

## **REAR TOW EYES**

Two (2) painted tow eyes will be furnished on the rear of the vehicle. The tow eyes will be made from plate steel and will be bolted directly to the chassis frame rails with grade 8 bolts and will extend below the body. The tow eyes will be smooth and free from sharp edges, and have a minimum eyelet hole of 2-1/2". The tow eyes will be painted.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## \*\*\*\* COMPARTMENT ACCESSORIES \*\*\*\*

### ADJUSTABLE SHELVING

Compartment shelving will be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports. Shelving will be vertically adjustable with spring nuts in aluminum strut channel.

Adjustable shelves will be located as indicated at each compartment description.

One (1) in the right side compartment #1

### SLIDE OUT FLOOR MOUNT SHELVING

Slide out floor mount compartment shelving will be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports attached to #250 rated slides. Slide out floor mount shelving will have gas shocks to hold the tray in and out.

Slide out floor mount shelving will be as indicated at each compartment description.

One (1) in the right side compartment #1

### 500 POUND FLOOR MOUNTED ROLL OUT TRAYS

Floor mounted roll-out trays will consist of heavy duty, roller bearing slide tracks with a load rating of 500 pounds, securely fastened to the compartment floor. The tray will be fabricated from 3/16" brushed aluminum with a minimum 2" high flange on each of the four sides to assist in retaining the equipment stored on each tray. The slide tracks will have a 70% extension.

The 500 pound floor mounted roll out trays will be as indicated at each compartment description.

One (1) in the left side compartment #3

One (1) in the rear compartment

### ROLL-OUT/ DROP DOWN TRAYS

The roll out/tilt tray will consist of a 3/16" brushed aluminum finished aluminum tray with a minimum 2" lip on all four sides. Heavy duty aluminum Unistrut "C" channel tracking material will be utilized to securely fasten the slide tracks to the compartment walls, while allowing height adjustment.

The slide mechanism will consist of a low-weight high-strength plastic to create a robust front bracket to support the aluminum tray. The rear of the tip down tray will be mounted on a slider with an integral pivot plate. This slider and pivot plate will be mounted inside an aluminum rail for maximum strength. The tray will be released from the stowed position with the use of a push button and will be capable of auto latching to the stowed position. The front handle/latch will be designed with a double hand hold to control the tray when deployed or stowed. The roll out/tilt tray will be rated for 330# capacity.

Roll out/Tilt trays be as indicated at each compartment description.

One (1) in the left side compartment #2

One (1) in the right side compartment #2

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## FLOOR EXTENSIONS

Floor extensions constructed of 3/16" aluminum will be provided to extend the transverse floor area above the frame rails to the door opening. Installed immediately below, will be a bottom reinforcement to prevent distortion from accessories mounted on the extension.

Floor extensions will be as indicated at each compartment description.

One (1) in the rear compartment

## VERTICAL PULL OUT TOOL BOARD

Two (2) vertical pull out tool board(s) will be provided and mounted in Compartment R3. The tool board(s) will be constructed of 3/16" smooth aluminum allowing mounting of equipment on both sides of the tool board(s). The tool board will be attached to #250 rated slides, one at the top and one at the bottom of the tool board. 3/16" aluminum angles will attach the slides to tracking to allow horizontal adjustments. A gas shock will be used to secure the tool board in the stored and deployed position.

## **\*\*\*\*120/240 VOLT A.C. ELECTRICAL AND GENERATOR SECTION\*\*\*\***

### 120/240 VOLT ELECTRICAL SYSTEM TESTING

All line voltage wiring and permanently connected devices and equipment will be subjected to a dielectric voltage withstand test of 900 volts for one minute. The test will be conducted between live parts and the neutral conductor and between live parts and the vehicle frame with any switches in the circuits closed. The test will be conducted after all bodywork has been completed. The dielectric tester will have a minimum 500 VA transformer with a sinusoidal output voltage that can be verified.

Electrical polarity verification will be made of all permanently wired equipment and receptacles to determine that connections have been properly made.

### OPERATIONAL TESTING

The apparatus manufacturer will perform the following operation test and will certify that the power source and any devices that are attached to the line voltage electrical system are properly connected and in working order.

The generator will be started from a cold start condition and the line voltage electrical system will be loaded to 100 percent of the nameplate voltage rating.

The following items will be monitored and documented every 15 minutes:

- The cranking time until the generator starts and runs.
- The voltage, frequency, and amperes at continuous full rated load.
- The generator oil pressure, water temperature, transmission temperature, hydraulic temperature, and the battery rate charge, as applicable.
- The ambient temperature and altitude.

The generator will operate at 100 percent of its nameplate wattage for a minimum of two (2) hours.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## HYDRAULIC GENERATOR

Smart Power, model LRT-6, fully enclosed 6200 watt hydraulic generator will be provided.

The generator system will come with a standard 5 year/1,000 hour fully transferable warranty from the manufacturer.

The unit will come equipped with: enclosed generator tray assembly (which includes the generator, hydraulic motor, cooler, fan, electronics package, 10 micron spin-on fluid filter and internal reservoir), hydraulic gear pump with complete installation kit (including PTO for F-Series installations, or engine mounting bracket/clutch kit for other applications), and Command and Control Center (CCC) display with all required wiring harnesses. The CCC will be an interactive operator control center, equipped with smart touch solid state buttons, with displays for voltage, frequency, amperage, hour meter, service reminders, operator warnings, system faults and diagnostics. Standard electronics package will include smart start engagement to reduce mechanical stress, precise voltage and frequency control, cold start system, automatic load and temperature compensation, integrated diagnostics system, and other automated control features to protect system, vehicle and operator.

The hydraulic motor, generator, fan, cooler, reservoir and other necessary hydraulic components will be mounted in a rugged stainless steel case.

The body of the generator tray assembly will be 32" long x 13.5" wide x 17" high and weigh approximately 190 pounds. The reservoir will be mounted internally.

The wiring from the generator to the breaker box will be type SO with suffix WA flexible cable.

### Ratings and Capacity\*

- Rating: 7500 watts peak - 6200 watts continuous
- Volts: 120/240 volts
- Phase: Single, 4 wire
- Frequency: 60 Hz
- Amperage: 46 amps @ 120 volts or 23 amps @ 240 volts
- Engine Operation Speed: 1350 RPM (stationary operation only)

### Testing

The generator will be tested in accordance with all current N.F.P.A. 1901 standards.

### Notes

\*All ratings and capacities will be derived utilizing current NFPA 1901 test parameters.

## GENERATOR PTO

A hot shift PTO will be provided on the transmission for the Smart Power generator that will allow the generator to operate while the vehicle is stationary. The PTO will be controlled from the cab and will include a PTO engagement switch and a PTO engaged indicator light.

## GENERATOR WARRANTY

The specified generator will have a five (5) year or one thousand (1000) hour warranty as provided by the generator manufacturer. A copy of the generator warranty will be provided at time of delivery.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## LINE VOLTAGE ELECTRICAL SYSTEM CERTIFICATION

When the unit successfully meets all the requirements outlined in NFPA 1901, 2009 Edition, UL shall issue a Certificate of Automotive Fire Apparatus Examination and Test stating the unit's compliance with the required line voltage section of NFPA.

## GENERATOR LOCATION

The generator will be permanently mounted on top of the body.

Locating the generator greater than 144" from the main breaker panel may require the installation of an additional power disconnecting means.

## 120/240 VOLT LOAD CENTER

The generator output line conductors will be wired from the generator output connections to a Square D, model #QO112L125G breaker panel. The breaker panel will be equipped with a properly sized main breaker using two (2) of the twelve (12) spaces which leaves a total of ten (10) available spaces.

The generator output conductors will be sized to 115% of the main breaker rating and will be installed as indicated in the wiring section.

Ten (10) appropriately sized, 120 volt, circuit breakers will be provided.

The breaker panel will be located on the rear wall of the driver side front compartment.

## 120/240 VOLT WIRING METHODS

Wiring/conduit will not be attached to any chassis suspension components, water or fuel lines, air or air brake lines, fire pump piping, hydraulic lines, exhaust system components or low voltage wiring.

All wiring will be installed at a minimum of 12 inches away from any exhaust piping and a minimum of 6 inches from any fuel lines.

All wiring will be securely clamped within 6 inches of any junction box and at a minimum of every 24 inches of run. All supports will be of nonmetallic material or corrosion protected metal. All supports will not cut or abrade conduit or cable and will be mechanically fastened to the vehicle.

All power supply assembly conductors, including neutral and grounding conductors, will have an equivalent amperage rating and will be sized to carry not less than 115% of the main breaker rating.

All Type SO or Type SEO cable not installed in a compartment will be installed in wire loom. Where Type SO or Type SEO cable penetrates a metal surface, a rubber or plastic grommet or bushing will be provided.

The installation of all 120/240 wiring will meet the current NFPA-1901 Standards.

## 120/240 VOLT WIRING IDENTIFICATION

All line voltage conductors located inside the main breaker panel box will be individually and permanently identified. When pre-wiring for future power wiring installations, the non-terminated ends will be labeled showing function and wire size.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## 120/240 VOLT GROUNDING

The neutral conductor of the power source will be bonded to the vehicle frame only at the power source.

The grounded current carrying conductor (neutral) will be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. The neutral conductor will be colored white or gray.

In addition to the bonding required for the lower voltage return current, each body and driving/crew compartment enclosure will be bonded to the vehicle frame by a copper conductor. The conductor will have a minimum amperage rating of 115 percent of the name plate current rating of the power source specification label.

## 120/240 VOLT CIRCUIT BREAKER / RECEPTACLE INSTALLATION

The system will be installed by highly qualified electrical technicians to assure the required level of safety and protection to the fire apparatus operators. When multiple circuit are required, the circuits will be wired to the breaker panel in a staggered configuration to minimize electrical loads on each breaker or generator (leg) circuit. The wiring, electrical fixtures and components will be to the highest industry quality standards available on the domestic market. The equipment will be the type as designed for mobile type installations subject to vibration, moisture and severe continuous usage.

## 120/240 VOLT RECEPTACLE INSTALLATIONS

Any receptacle installed in a wet location must be a minimum of 24 inches above the ground and provided with an approved wet location cover. Wet receptacles may not be mounted at more than 45 degrees from vertical, nor can they be mounted in a face-up position.

One (1) 120 volt, NEMA L5-20, 20 amp, Single twist-lock receptacle with a grey thermoplastic, corrosion resistant, weatherproof cover will be installed at each side of the of the rear body panel. (Total of two (2))

Each receptacle will require one (1) 20 amp, 120 volt circuit breaker to be installed in the load center, for a total of two (2) breakers.

## ELECTRIC CABLE REEL

One (1) Hannay Model #ECR-1616-17-18, 120 volt, electric rewind cord reel will be provided and wired to the breaker panel. The reel will be securely mounted and equipped with a rewind control adjacent to the reel.

The cord reel will be ceiling mounted in the lower rear step compartment.

The circuit breaker used to protect any device attached to the cord reel will be sized to the smallest electrical connection used.

One (1) reel rewind switch(s) will be provided on the compartment wall

One (1) Hannay 4-way stainless steel roller assembly will be provided. The roller assembly opening will be the full width of the reel drum.

One (1) cable ball stop(s) will be installed on the cable to keep the end from passing through the roller assembly.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

**ELECTRIC CABLE**

Two hundred (200) feet of Type SO black 12/3 heavy duty electric cable will be provided on the reel.

One (1) NEMA L5-15R, 15 amp, three prong twist-lock receptacle will be provided on the end of the cable.

**LIGHTING (TRI-POD) - AS DIRECTED**

Two (2) Whelen, model #PFP2AP1 150 watt LED telescoping lights will be provided. Each light will be mounted to a Whelen tripod lighting stand that will be provided and installed on the exterior body as directed by the Fire Department. The lighting stand will be UL listed for fire service use. The tripod stand will have a 30" body with 20" legs and the raising and lowering of the light will be locked in place by a twist lock tightening mechanism. The use of a knob or latch to release the pole in order to raise and lower the telescoping portion of the pole will not be accepted.

The lights will be mounted on the body as directed by the fire department, one (1) each side. Wiring used for the lighting will be a minimum of 16 gauge three (3) wire cable that is properly supported and protected from damage.

The tripod lights will be equipped with a pig tail cord equipped with an L5-15 120V plug and a weatherproof "on-off" switch on the light head.

One (1) 120V, L5-15 amp receptacle will be provided and installed near the mounting position of each tripod light for a total of two (2) receptacles. Both receptacles will require one (1) 15 amp, 120V circuit breaker to be installed in the load center. The tripod lights will be equipped with a pig tail cord equipped with appropriate 120V plug and a weatherproof "on-off" switch on the light head.

The tri-pod lights will be controlled from the following location(s):

- At breaker panel, with breaker

**WILL-BURT 1.8 LIGHT TOWER**

A Will-Burt Nightscan 1.8, model NS 1.8-600 WHL surface mounted light tower will be provided and mounted as specified.

The light tower will be equipped with four (4) 150-watt, 120-volt Whelen LED spot/flood light fixtures to provide a total of 600 watts of lighting. The light tower uses an RCP (Remote Control Positioner) attached to the top of the tower to allow full rotation and tilt of the light fixtures at any vertical height to ensure total scene coverage above or beside the vehicle. The light tower extends to a maximum height of six (6) feet from the mounted surface.

The four (4) 150-watt light heads will require one (1) 120-volt, single pole 15-amp circuit breaker.

The light towers functions including "auto stow," are operated by a pistol grip remote control. The light tower control will be mounted in the proximity of the electrical breaker panel.

An emergency stop button will be integrated into the wired hand held control for added safety.

The light tower will be mounted on top of the body, centered near the rear.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## ADDITIONAL ITEMS SUPPLIED WITH THE VEHICLE

- 1 - Pint of touch up paint for each color
- 1 -Bag of assorted stainless steel nuts and bolts

## LOOSE EQUIPMENT

The following items will be provided and shipped loose with the completed apparatus at the time of delivery:

## WHEEL CHOCKS

Two (2) ZICO #SAC-44 folding wheel chocks will be mounted forward of the rear wheels on the driver side below the side running board compartments.

## \*\*\*\* PAINT SECTION \*\*\*\*

## PAINT, PREPARATION AND FINISH

The PPG Delta, Low V.O.C., polyurethane finishing system, or equal, will be utilized. A "Clear Coat" paint finish will be supplied to provide greater protection to the quality of the exterior paint finish.

All removable items, such as brackets, compartment doors, etc. will be painted separately to insure finish paint behind mounted items. All compartment unwelded seams exposed to high moisture environments will be sealed using permanent pliable caulking prior to finish paint.

## BODY PRIMER & PREPARATION

All exposed welds will be ground smooth for final finishing of areas to be painted. The compartments and doors are totally degreased and phosphatized. After final body work is completed, grinding (36 and 80 grit), and finish sanding will be used in preparation for priming.

## BODY FINISH PAINT

The body will be finish sanded and prepared for final paint. Upon completion of final preparation, the body will be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint. Finish paint will be applied in multiple coats to ensure proper paint coverage with a high gloss finish.

The entire body will be buffed and detailed.

## BODY PAINT

The inside and underside of the complete body assembly will be painted job color using a PPG Delta System, prior to installation of the body on the chassis or torque box.

## COMPARTMENT PAINT

The interior of the body compartments will be painted with Line-X material.

The Line-X coating will be light gray in color.

## BODY PAINT

The body paint finish will be PPG Delta System in a single color, to match customer furnished paint codes and requirements.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## CHASSIS CAB PAINT

The commercial cab exterior will be finish painted in a single color by the chassis manufacturer with Purchaser's choice of color as available.

## COMMERCIAL CAB PAINT FINISH GUIDELINES

The chassis will be painted and detailed as provided from Ford and will meet their quality guidelines.

## WHEEL PAINT

The chassis wheels will be painted as provided by the commercial chassis manufacturer.

## TOUCH-UP PAINT

One (1) pint of each exterior color paint for touch-up purposes will be supplied when the apparatus is delivered to the end user.

## FINALIZATION & DETAILING

Prior to delivery, the vehicle, the interior and exterior be cleaned and detailed. The finalization process detailing will include installation of NFPA required labels, checking fluid levels, sealing and caulking required areas of the cab and body, rust proofing, paint touch-up, etc.

## RUST PROOFING

The entire unit will be thoroughly rust proofed utilizing rustproof and sound deadening materials applied in manufacturer recommended application procedures. Rust proofing will be applied during the assembly process and upon completion to insure proper coverage in all critical areas.

## **\*\*\*\* LETTERING AND STRIPING \*\*\*\***

## GRAPHICS- LETTERING ALLOWANCE

A Lettering/Graphics allowance in the amount of 3000.00 as requested by the purchaser. The allowance will provide Lettering or Graphics on the completed unit.

All of the Lettering/Graphics requirements will be detailed to the manufacturer at or near the time of the final inspection. Any customer required Lettering/Graphics will be charged to this allowance. The manufacturer will maintain a detailed summary of all labor and materials applied to meet the Fire Department requirements and upon completion, will either provide a credit to the Department for labor and materials not consumed by this project or a secondary invoice will be submitted to the Fire Department for all expenditures, which are over and above the original allowance.

## LETTERING

The sales representative will supply all gold leaf or equal lettering, decals, special emblems and non NFPA required striping.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## \*\*\*\* NFPA REQUIRED SCOTCH-LITE STRIPING \*\*\*\*

### SCOTCH-LITE STRIPE

A four (4) inch high "Scotch-Lite" stripe will be provided. The stripe will be applied on a minimum of 60 percent of each side of the unit, 60 percent on the rear of the unit and 40 percent on the front of the unit. The Scotch-Lite stripe layout will be determined by the Fire Department.

The Scotch-Lite will be white in color.

### REAR CHEVRON STRIPING

At least 50% of the rear facing vertical surface will be covered with alternating strips of reflective striping.

The striping will be 6" Diamond Grade Scotch-Lite.

The Diamond Grade Scotch-Lite will be Red and Fluorescent Yellow Green in color.

## \*\*\*\*\* WARRANTIES & REQUIRED INFORMATION \*\*\*\*\*

### WARRANTY - FORD CHASSIS

A one (1) year new vehicle warranty shall be provided, upon delivery and acceptance of the vehicle. The warranty shall ensure that the vehicle has been manufactured to the contract specifications and shall be free from defects in material and workmanship that may appear under normal use and service within the warranty period. The warranty may be subject to different time and mileage limitations for specific components and parts. This warranty is issued to the original purchaser of the vehicle.

The warranty shall not apply to any parts or components that are warranted directly by their manufacturers. The warranty shall not apply to routine maintenance requirements as described in the service and operators manual. No warranty whether expressed, implied, statutory or otherwise including, but not limited to any warranty of merchantability or fitness for purpose shall be imposed.

The manufacturer or representative shall be notified in writing within the warranty period of any failure of the vehicle to comply with the specified warranty. If requested, the purchaser shall promptly return the apparatus, component or part to the manufacturer for inspection of any defect in material or workmanship occurring within the applicable time limits.

The manufacturer shall either repair or replace any defective components or parts. Repair or replacement of the defective item shall be at the sole discretion of the manufacturer. The Basic Vehicle Warranty covers all components and parts unless specifically covered by other descriptions or otherwise excluded herein. Repair or replacement of components shall be done without cost to the purchaser when performed within the warranty period. Warranty repairs shall not constitute an extension of the original warranty period, either for the entire apparatus or any specific components or parts.

The warranty shall be inclusive and in lieu of all other warranties whether written, oral or implied, including but not limited to any warranty of merchantability or fitness for purpose. The warranty shall be void and the manufacturer shall not be obligated to repair or replace any component or part where the necessity of such replacement or repair, in the opinion of the manufacturer, is due in whole or in part to loads in excess of factory rated capacities, modification or alteration, accident or other misuse or abuse of the vehicle. In no event shall the manufacturer be liable for special or consequential damages including but not limited to injuries to persons or damage to property or loss of vehicle use.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

The apparatus shall be maintained and serviced, by the purchaser, according to the prescribed schedules outlined in the operators and service manuals. As a condition of the warranty the manufacturer may require that receipts or other evidence be provided to verify that maintenance and service has been performed.

## **COMPONENT WARRANTY INTERVALS** **COMMERCIAL CHASSIS**

The commercial chassis and all of the chassis related components shall only be covered by the Chassis Manufacturer's warranty as provided to the vehicle manufacturer. A copy of the chassis manufacturer's warranty shall be supplied to define additional details of the warranty provisions.

## **ITEMS EXCLUDED FROM WARRANTY**

To better understand the warranty, the following is a description of some conditions that are not covered by this warranty.

**LOOSE FASTENERS:** Nuts, bolts and screws may loosen due to road shocks, engine vibration, etc. Maintaining necessary tightness is your responsibility.

Glass and lens breakage and scratches.

Chrome, aluminum, or stainless components with bright finishes - general rust and/or staining, bluing or yellowing, rust pits and/or nicks caused by road debris, streaks, stains and corrosion caused by severe wash solutions or road salts.

**OTHER:** Some further examples that we are not responsible for are as follows: Traveling expense; Road calls; Unauthorized towing charges; Accident repairs, loss of apparatus use; Communications charges; Cost of rental equipment; Repair or replacement of items not furnished or installed by us. Road tests or Dynamometer testing.

Tires are covered by their respective manufacturer's warranty.

## **MODIFICATIONS TO ORIGINAL EQUIPMENT**

If dealers or customers cause any vehicle modifications or equipment installations to be performed and these modifications or installations adversely affect other vehicle components or vehicle performance, we shall not accept any product liability or claims under the terms of this warranty. These claims and any required repairs would be the responsibility of the person doing the modification or installation.

## **CHANGES IN COMPONENT SPECIFICATIONS**

Specifications for components (make or model) installed on the apparatus, manufactured by companies other than the apparatus manufacturer are subject to change without notice. Specifications for such components shall be as available at the time of manufacture of the apparatus. The apparatus manufacturer shall not be held liable for any specification deviations from original contract specifications on such components made by the original component manufacturer.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

## WARRANTY - NEW PRODUCT - COMMERCIAL CHASSIS

The bidder hereby warrants to the original purchaser (first end users) that any new products shall be free from defects in material and workmanship under normal use, maintenance and service for a period of one (1) year from date of delivery, subject to the conditions and exceptions stated herein.

Under this warranty, the manufacturer's obligation is limited to the repair or replacement at their option, at its factory, by its representative, or by its authorized service facility, of any part found to be defective by the manufacturer. If the manufacturer deems it necessary, all parts for which warranty claim is made, shall be returned to the manufacturer, transportation charges prepaid, for examination by the manufacture, who will be the sole judge as to whether such part was defective in material or workmanship under normal use, maintenance or service.

## WARRANTY LOCATION

All possible warranty work shall be performed at the buyer's fire station when possible. If the apparatus must return to the service center then the successful bidder shall supply drivers to transport the vehicle to and from at no additional charge to the Fire District.

## WARRANTY - BODY STRUCTURE

The body shall be warranted against structural defects for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions are included in the specific warranty document.

## WARRANTY - CORROSION

The body shall be warranted against rust-through or perforation, due to corrosion from within, for a period of ten (10) years. Perforation is defined as a condition in which an actual hole occurs in a sheet metal panel due to rust or corrosion from within. Surface rust or corrosion caused by chips or scratches in the paint is not covered by this warranty.

## WARRANTY - PAINT

The paint finish shall be warranted for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions are included in the specific warranty document.

## WARRANTY – LETTERING (APPARATUS MANUFACTURE SUPPLIED LETTERING)

The apparatus manufacturer will provide a five (5) year warranty against defects in material and workmanship for all graphic processes. Any valid claims must be made in writing within 15 days of the determination of any defects to the manufacturer's fire apparatus. The manufacturer will at its option make any necessary repairs either at a local authorized service center or at the factory, if required. The manufacturer will make the final decision as to where the repairs are to be made and any transportation cost are the owner's responsibility. The manufacturer will at its option, repair or replace any verified defects in workmanship or materials at no cost to the owner provided all the requirements of this warranty have been met.

The manufacturer will not be liable to the original purchaser or anyone else for consequential, incidental, special or direct damages, including, but not limited to, any claims for loss of profits, down time, loss of use or inconvenience. THE COMPANY MAKES NO OTHER WARRANTY, EXPRESSED OF IMPLIED, AND SPECIFICALLY, DISCLAIMS ANY IMPLIED WARRANTY INCLUDING THE WARRANTY OF MERCHANTABILITY.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

Bidder  
Complies

Yes No

The manufacturer continually strives to improve its products and therefore, reserves the right to make improvements or changes without incurring any obligations to make such changes or additions on equipment previously sold.

## **WARRANTY - BRIGHTWORK**

The manufacturer warrants all bright finish components used in the construction of their apparatus against defects and workmanship provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original user-purchaser for a period of one (1) year from the date of delivery / acceptance to the original user-purchaser, whichever occurs first.

The expressed warranty excludes corrosion or degradation of bright finished components caused by damage to the component.

## **WARRANTY - CLASS 1 - PRODUCTS**

Class 1 warrants that any equipment of our own manufacture (or manufactured for us pursuant to our specifications) found to have defects in material or workmanship during normal use and service, shall be repaired or replaced (at our opinion) free of charge, provided that written notice of such defect is received by us within two (2) years, (three 3 years on liquid filled gauges) after initial shipment.

## **WARRANTY - GENERATOR**

The specified generator shall have a five (5) year or one thousand (1,000) hour warranty, all parts and labor, as provided by the generator manufacturer. A copy of the generator warranty shall be provided at time of delivery.

## **NFPA REQUIRED LOOSE EQUIPMENT, PROVIDED BY FIRE DEPARTMENT**

The following loose equipment as outlined in NFPA 1901, 2009 edition in accordance with the applicable requirements, will be provided by the fire department. All loose equipment will be installed on the apparatus before placed in emergency service, unless the fire department waives NFPA section 4.21.

### **Section 10.4.1 Ground Ladders.**

It is the responsibility of the purchaser to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

10.4.1.1 Ground Ladders. If fire department ground ladders are carried on the apparatus, they shall meet the requirements of NFPA 1931, Standard for Manufacturer's Design of Fire Department Ground Ladders, except as permitted by 10.4.1.2.

10.4.1.2 Stepladders and other types of multipurpose ladders shall be permitted provided they meet either ANSI A14.2 or ANSI A14.5 with duty ratings of Type 1A or 1AA.

### **Section 10.4.2 Suction Hose or Supply Hose.**

If the special service fire apparatus is equipped with a pump, the requirements in 10.4.2.1 through 10.4.2.3 shall apply. It is the responsibility of the purchaser to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

10.4.2.1 A minimum of 20 ft (6 m) of suction hose or 15 ft (4.5 m) of supply hose shall be carried.

10.4.2.1.1 Where suction hose is prodded, a suction strainer shall be furnished.

10.4.2.1.2 Where suction hose is provided, the friction and entrance loss of the combination suction hose and strainer shall not exceed the losses listed in Table 16.2.4.1 (b) or Table 16.2.4.1(c).

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

- 10.4.2.1.3 Where supply hose is provided. It shall have couplings compatible with the local hydrant outlet connection on one end and the pump intake connection on the other end.
- 10.4.2.2 Suction hose and supply hose shall meet the requirements of NFPA 1961, Standard on Fire Hose.

Section 10.5 Minor Equipment.

It is the responsibility of the purchaser to ensure that all required equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

- (1) Two portable hand lights mounted in brackets fastened to the apparatus
- (2) One approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus
- (3) One 2 1/2 gal (9.5 L) or larger water extinguisher mounted in a bracket fastened to the apparatus
- (4) One self-contained breathing apparatus (SCBA) complying with NFPA 1981, Standard on Open-Circuit Self Contained Breathing Apparatus (SCBA) for Emergency Services, for each assigned seating position. But not fewer than four, mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer
- (5) One spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space
- (6) One first aid kit
- (7) Two or more wheel chocks. Mounted in readily accessible locations, that together will hold the apparatus. When loaded to its GVWR or GCWR, on a hard surface with a 20 percent grade with the transmission in neutral and the parking brake released
- (8) One traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, Standard for High-Visibility Public Safety Vests, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front
- (9) Five fluorescent. orange traffic cones not less than 28 in. (711 mm) in height, each equipped with a 6 in. (152 mm) retroreflective white band no more than 4 in. (102 111m) from the top of the cone, and an additional 4 in. (102 mm) retroreflective white band 2 in. (51 mm) below the 6 in. (152 mm) band
- (10) Five illuminated warning devices such as highway flares, unless the live fluorescent orange traffic cones have illuminating capabilities
- (11) One automatic external defibrillator (AED)

14.1.8.4 Fire Helmet.

It is the responsibility of the purchaser to ensure that "Fire helmets shall not be worn by persons riding in enclosed driving and crew areas any time the apparatus in placed in service.

- 14.1.8.4.1 A location for helmet storage shall be provided.
- 14.1.8.4.2 If helmets are to be stored in the driving or crew compartment, the helmets shall be secured in compliance with 14.1.11.2.

14.1.10 SCBA Mounting.

It is the responsibility of the purchaser to ensure that any SCBA equipment has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

- 14.1.10.1 Where SCBA units are mounted within a driving or crew compartment, a positive latching mechanical means of holding the SCBA device in its stowed position shall be provided such that the SCBA unit cannot be retained in the mount unless the positive latch is engaged.
- 14.1.10.2 The bracket holding device and its mounting shall retain the SCBA unit when subjected to a 9 G force and shall be installed in accordance with the bracket manufacturer's requirements.

# COMMERCIAL LIGHT DUTY RESCUE SPECIFICATION

**Bidder  
Complies**

**Yes      No**

14.1.10.3 If the SCBA unit is mounted in a seatback, the release mechanism shall be accessible to the user while seated.

### 14.1.11 Equipment Mounting.

It is the responsibility of the purchaser to ensure that any equipment installed on the apparatus by them or their subcontractor meets the following requirements prior to placing it in service.

14.1.11.1 All equipment required to be used during an emergency response shall be securely fastened.

14.1.11.2 All equipment not required to be used during an emergency response, with the exception of SCBA units, shall not be mounted in a driving or crew area unless it is contained in a fully enclosed and latched compartment capable of containing the contents when a 9 G force is applied in the longitudinal axis of the vehicle or a 9G force is applied in any other direction, or the equipment is mounted in a bracket(s) that can contain the equipment when the equipment is subjected to those same forces.

### Section 15.9.3 Reflective Striping.

It is the responsibility of the purchaser to ensure that Reflective Striping has been supplied and installed on the apparatus in order to achieve compliance with the standard prior to placing it in service.

15.9.3.1" A retroreflective stripe(s) shall be affixed to at least 50 percent of the cab and body length on each side, excluding the pump panel areas, and at least 25 percent of the width of the front of the apparatus.

15.9.3.1.1 The stripe or combination of stripes shall be a minimum of 4 in. (100 mm) in total width.

15.9.3.1.2 The 4 in. (100 mm) wide stripe or combination of stripes shall be permitted to be interrupted by objects (i.e., receptacles, cracks between slats in roll up doors) provided the full stripe is seen as conspicuous when approaching the apparatus.

### 15.10 Hose Storage.

It is the responsibility of the purchaser to ensure that any hose storage area includes a positive means to prevent unintentional deployment in order to achieve compliance with the standard prior to placing it in service.

15.10.7 Any hose storage area shall be equipped with a positive means to prevent unintentional deployment of the hose from the top, sides, front, and rear of the hose storage area while the apparatus is underway in normal operations.