REQUEST FOR QUOTATION/BID
SEDGWICK COUNTY, KANSAS
Division of Finance
PURCHASING DEPARTMENT

604 N. Main - SUITE FWICHITA, KANSAS 67203
Internet Address: http://www.sedgwickcounty.org/purchasing

RFQ# 02-6434 **This is NOT an Order.**

DATE SENT: 09-30-02 MUST BE RETURNED BY: 1:45 P.M. CSDT 10-22-02
TO ABOVE ADDRESS.

TO:

DIRECT ALL QUESTIONS TO:
Sedgwick County Purchasing
Carol Bevelhymer, C.P.M.
PHONE: (316) 383-7532
FAX: (316) 383-7055
e-mail:sedgwickcounty.org/purchasing

VENDOR: YOU ARE INVITED TO QUOTE/BID ON THE FOLLOWING FOR SEDGWICK COUNTY

QTY	UNIT	DESCRIPTION:	UNIT PRICE	TOTAL
1	each	2003 Triple Combination Pumper (Per attached specifications)	$_____	$_____
		Make_____ Model_____		
		Delivery Date (stated in weeks)_____		
			Total	$_____
		Quote with/without the following Trade-in		
1	each	1988 GMC Brigadier (2-0291)	$_____	
			Total for Trade-ins:	$_____
			Grand Total Less Trade-ins:	$_____

Will the quoted prices be guaranteed for the purchase of additional units through December 31, 2002? Yes____ No_____
Extend contract for an additional three (3), one (1) year contracts? Yes_____ No_____
State per unit maximum increase for:
2003 Triple Combination Pumper (effective January 1, 2003 unit here_____%
2004 Triple Combination Pumper (effective January 1, 2004 unit here_____%
2005 Triple Combination Pumper (effective January 1, 2005 unit here_____%

ALL QUOTATION MUST BE F.O.B. DESTINATION AND INCLUDE COST OF PACKING AND SHIPPING

FED I.DNUMBER_____COMPANYAME_____ADDRESS_____

SS NUMBER_____CITY,STATE,ZIP_____

PHONE_____SIGNATURE_____PRINT NAME_____

FAX_____TITLE_____DATE_____

General Information
The purpose of this document is to select a Triple Combination Pumper for the Sedgwick County Fire District, hereinafter called the "District", to provide and meet the requirements and needs of personnel and the citizens they serve.

It shall be the intent of these specification to cover the furnishing and delivery of a complete apparatus equipped as hereinafter specified. Apparatus bid shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in the current edition at time of contract execution. Loose equipment shall be provided only as stated on page34-35 of document.

Bids shall only be consider from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 20 years or 10,000 units worldwide. Further, vendors will maintain the following:

- ?? 24/7 communication system in the event an emergency service problem arises.
- ?? Dedicated service facility within 500 miles of Sedgwick County.
- ?? Render prompt service and able to furnish replacement parts in a timely manner.
- ?? Delivery time is a major factor, please state exactly when to expect delivery. The District will consider a "demo unit" as long as it meets or exceeds these specifications and does not exceed 6,000 miles at time of delivery.

The vendor shall furnish satisfactory evidence of their ability to construct the apparatus specified and state where the apparatus is to be built. The bid shall be accompanied by a set of Cad drawings consisting of a detailed description of the apparatus and equipment proposed and to which the apparatus furnished will conform.

Quality and Workmanship

The design of the apparatus shall embody the latest approved automotive engineering practices. The workmanship shall be of the highest quality in its respective field. Special consideration shall be given to the following points:

- ?? Accessibility of the various units, which require periodic maintenance
- ?? Ease of operation (including both pumping and driving) and symmetrical proportions.

Construction shall be rugged and amply safety factors shall be provided to carry the loads specified and to meet the conditions set forth under "Performance Tests and Requirement". Welding shall not be employed in the assembly of the apparatus in a manner that shall prevent the ready removal of any component part for service or repair. All steel welding shall follow American Welding Society D1.1-96 recommendations for structural steel welding. All aluminum welding shall be done to American Welding Society and AMSI D1.2-96 requirements for structural welding of aluminum. The manufacturer is required to have an American Welding Society certified welding inspector in plant during working hours to monitor weld quality.

Delivery
Apparatus, to insure proper break in of all components while still under warranty, will be delivered, F.O.B. destination, under its own power, rail or truck freight will not be acceptable. A qualified delivery engineer shall deliver the apparatus and remain for sufficient length of time (TBD), to instruct personnel in the proper operation, care and maintenance of the equipment at the vendor's expense. Fleet Management will not accept ownership until vehicles have been inspected for compliance with the specifications in this document.

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

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

- ?? The apparatus, when fully equipped and loaded, shall have not less that 25% nor more than 50% of the weight on the front axle, and not less than 50% nor more than 75% on the rear axle.
- ?? The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.
- ?? The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to the Federal Motor Vehicle Safety Standards (FMVSS) 121.
- ?? The apparatus, fully loaded, shall be capable to obtaining a speed of 70 mph on a level concrete highway with the engine not exceeding its governed rpm (full load).

In the event, the apparatus fails to meet the test requirements of these specifications on the first trail, second trials may be made at the option of the bidder within 30 days of the date of the first trial. **Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection.** Failure to comply with changes to conform to any clause of the

specifications, within thirty (30) days after notice is given to the bidder of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the District or its use by the District during the above specified period with the permission of the bidder shall not constitute acceptance.

Liability
The successful bidder shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under this document.

Response to Bid Requirements
Bidders shall indicate in the "yes/no" column if their bid **complies on each item specified**. Exceptions shall be allowed if they are equal to or superior to that specified and by providing such information in the "Comments" field. All exceptions shall be stated no matter how seemingly minor. Any exceptions not taken shall be assumed by the District to be included in the bid, regardless of the cost to the vendor. Bids taking total exception to specifications shall not be acceptable.
Bids shall be submitted on the document provided in the same sequence as specifications for ease of evaluation, comparison and checking of compliance.

Commercial General Liability Insurance
The successful bidder shall, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

- ?? Products/Completed Operations Aggregate $2,000,000.00
- ?? Personal and Advertising Injury $1,000,000.00
- ?? Each Occurrence $1,000,000.00

Coverage shall be written on a Commercial General Liability form. The policy shall be written on an occurrence form and shall include Contractual Liability coverage. The policy shall include the County as an additional insured as their interest may appear. The required limits can be provided, by one or more policies, provided all other insurance requirements are met.
Coverage shall be provided by a carrier(s) that is rated "Excellent" by A.M. Bests.

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

- ?? Aggregate: $25,000,000.00
- ?? Each Occurrence: $25,000,000.00

The policy shall be written on an occurrence basis and at a minimum, provide the same coverage's as Bidder's General Liability, Automobile Liability and Employer's Liability policies. The County shall be included as an additional insured on the General Liability and Automobile Liability policies as their interest may appear. The required limits can be provided buy one or more policies provided all other insurance requirements are met.
Bidder agrees to furnish owner with a current Certificate of Insurance with the coverage's listed above along with its bid. The certificate shall be made out to the County and be an original, no photocopies shall be accepted. The Certificate of insurance shall provide that County be given 30 days advance notice of cancellation, non-renewal or material change in coverage.

Bid Bond
A bid bond in the form of a cashier check or valid bond issued by a recognized and acceptable bonding agency, for an amount equal to five (5) percent of the total amount bid is required. The bid bond of the successful bidder shall be retained until an acceptable contract is entered into within a reasonable time frame. Failure to enter into such contract shall be cause for forfeiture of bond.

Performance Bond
The successful vendor shall be required to post a performance bon in the form of a cashier's check or valid bond issued by a recognized and acceptable bonding agency for the amount equal to one-hundred (100) percent of the total amount bid. Failure to provide the apparatus(s) as specified shall be cause for forfeit of bond. Bond will be retuned to the successful vendor upon receipt of a properly executed contract. Bonds of unsuccessful bidders shall be retuned upon award of contract

All inquires regarding information on Trade-in, may be directed to Marvin Duncan at 316-660-7480.

The following specifications are for the procurement of One (1) Triple Combination Pumper. SIMILAR OR EQUIVALENT IS INTENDED TO ESTABLISH A LEVEL OF QUALITY AND IS NOT TO BE INTERPRETED AS A PREFERENCE FOR A PATICULAR BRAND. QUOTATIONS FOR OTHER BRANDS MEETING THE LISTED MINIMUM REQUIREMENTS WILL BE ACCEPTED. COMPLETE PRODUCT INFORMATION MUST BE SUPPLIED WITH YOUR QUOTATION. SEDGWICK COUNTY RESERVES THE RIGHT TO SELECT THE EQUIPMENT, WHICH BEST MEETS ITS QUALITY REQUIREMENTS AND DURABILITY EXPECTATIONS. Any additions, deletions, or variations from the general specifications must be noted. Any items appearing in the vehicle Manufacturers regular published specifications furnished by the bidders are assumed to be included in the bid.

SPECIFICATIONS	YES	NO	COMMENTS

Chassis: Shall be a Kenworth, Model T300			
Seating Capacity: Five (5) in the cab			
Wheelbase: Shall be no greater that approximate 250.00 inches			
GVW Rating: Shall be a minimum of 38,000			
Frame Rails: Shall be formed from 110,000 psi yield, heat treated alloy steel			
Frame Liner: A C-Channel frame insert shall be provided.			
Front Axle: **1.** Shall be an "I" Beam type, made of forged steel. **2.** It shall be a Meritor Model FF-961, with a ground rating capacity of 12,000 pounds			
Front Suspension: **1.** Taper leaf, capacity at ground of 12,000 pounds **Shock Absorbers:** 1. Double acting, and provided on the front axle			
Rear Axle: Single reduction rear axle shall be a Meritor, Model RS-26-185, with a ground rating capacity of 26,000 pounds**.**			
Brake Chambers: Shall be forward mounted and the brakes shall be 16.50" x 7.00", S-Cam type			
Parking Brake: Shall be spring set and located on the rear axle service brake.			
Rear Axle Ratio: The ratio of rear axle shall be provided by the chassis manufacturer			
Rear Suspension: Shall be Reyco multi-leaf with a capacity@ ground of 26,000 pounds**.**			
Dust Shields: Shall be provided for both front and rear brakes.			
Anti-lock brake system: The vehicle shall be equipped with a Wabco, Model 4S/4M, four (4) channel anti-lock braking system. The ABS shall provide anti-locking braking control on both the front and rear wheels, and be a digitally controlled system that utilizes microprocessor technology to control the system. Each wheel will be monitored by the system.			
Front Brakes: Shall be S-Cam, 16.50" x 5.00" and have Eaton automatic slack adjusters.			
Engine Exhaust Brake: A Jacobs"Extrader" engine exhaust brake shall be installed with the control located on the instrument panel within easy reach of the driver.			
Air Compressor, Brake System: The air compressor shall be a Wabco with 18.7 cubic feet per minute output. Unit will have a Bendix AD-SP air dryer with heater			
Air Inlet: A single air inlet with a male coupling shall be provided. It shall allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet shall be located on the driver side of pump panel. A check valve shall be provided to prevent reverse flow of air. The inlet shall discharge into the "wet" tank of the brake system. A mating female coupling shall also be provided with the loose equipment.			
Engine: Electronic Cummins ISC-315 Six (6) Cylinders, rated brake horsepower of 315 at 2200rpm, peak torque of 950 at 1300 rpm, Governed rpm at 2200, turbocharger, charge air cooled, fuel system hydraulically actuated, electronically controlled unit injectors.			
Specifications	**Yes**	**No**	**Comments**
Engine Accessories:			

Air Cleaner: Dry type, with restriction indicator in cab. **Fuel Filters:** Dual, with check valve **Governor:** Limiting speed type(Limit TBD) **Lube Oil Cooler** **Lube Oil Filter**: Full Flow **Starting Motor**: 12-volt **Spin on water filter** **Oil fill and level gauge**			
Radiator: Pressurized System, Tube and Fin Deaeration Tank and Sight Glass Anti-Freeze protection –30 Degrees Fahrenheit			
Exhaust System: Shall be 4" diameter and exit on the right side ahead of the rear wheels. A heat deflector shield shall be provided where the tail pipe is routed under any side compartmentation.			
High Idle Switch: Shall be provided, inside the cab, on the instrument panel, that shall automatically maintain a preset engine rpm. A switch shall be installed, at the cab instrument panel for activation/deactivation. The high idle shall be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light shall be provided, adjacent to the switch. The light shall illuminate when the above conditions are met. The light shall be labeled, "OK To Engage High Idle"			
Coolant Lines: Hose lines shall be Gates or Goodyear for all engine coolant lines installed by the chassis manufacturer**.** All hose clamps shall be of a design commonly called "constant torque type".			
Fuel Tank: A minimum of 56 gallon polished aluminum tank. Tank will be mounted at the right-hand cab step.			
Auxiliary Fuel Cooling System: A supplementary fuel cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the chassis engine fuel. The heat exchanger shall be a cylindrical type and shall be a separate unit. The cooler shall operate any time the pump is discharging water and shall be plumbed to the master drain valve**.**			
Transmission: An Allison, Model MD3060P, five (5)-speed torque converting automatic transmission. Touch pad shift module shall be mounted to right of driver. The shift position indicator shall be indirectly lit for after dark operation. Power takeoff provision shall be provided. A transmission temperature gauge shall be installed on the cab instrument panel. Ratios of the transmission shall be: 1st - 3.49 to 1.00 2nd - 1.86 to 1.00 3rd - 1.41 to 1.00 4th – 1.00 to 1.00 5th - 0.75 to 1.00 R – 5.03 to 1.00			
Transmission Shift Control: A push button shift module shall be mounted to right of driver and the shift position indicator shall be indirectly lit for after dark operation.			
Transmission Cooler: An external transmission oil cooler shall be provided.			
Drivelines: Drivelines shall be a heavy-duty metal tube equipped with universal joints properly sized for the application. A splined slip joint shall be provided in each drive shaft.			
Specifications	**Yes**	**No**	**Comments**
Steering: Steering shall consist of a hydraulically driven Sheppard, Mode 100P, steering system. The steering			

wheel shall be a stationary 18.00" diameter. (Tilt is acceptable**)**			
Tires: **1. Front tires** shall be Michelin 11R22.50, 14- ply highway tread with a capacity of 12,080 pounds **2. Rear tires** shall be Michelin 12R22.50, 16 ply mud and snow tread. They shall have a capacity of 26,440 pounds. **Wheels:** 1. **Front** shall be 22.50 x 8.25, steel disc, 10 hole pattern **2. Rear** shall be 22.50 x 8.25, steel disc, 10 hole pattern			
Lug Nut Covers: Chrome plated covers shall be installed on all lug nuts.			
On-Spot Chains: There will be one (1) set of On-Spot automatic tire chains installed on the rear axle. The switch will be located within easy reach of the driver's position			
Mud Flaps: Mud flaps shall be installed behind the rear and front wheels.			
Wheel Covers: Stainless Steel wheel covers (Real Wheels, American Road Series) with oval cutouts shall be furnished on the front wheels. The wheels shall be painted black.			
Wheel Liners: Stainless steel full depth wheel liners (Real Wheels, American Road Series) with oval cutouts shall be provided on the rear wheels including a full hub cover and chromed lug nut covers.			
Cab: Conventional four door (engine forward) **Windows:** All to Tinted Glass **Interior:** Gray Vinyl Upholstery **Floor-mats:** Black Rubber **Sun-visors:** Dual **Cab Entrance Handrails:** Extrude aluminum fluted and knurled, two (2) each side. **Windshield Washer:** Electric Windshield Wipers two (2) speed electric with delay. **Permanent plate:** shall be mounted in the Driver's compartment which specifies the quantity and type of fluids required for apparatus. **Interior light:** Dome light with map light. **Heater/Defroster:** Fresh air system. **Hood Mounted Grill**: Bright Metal			
Cab Access Steps: The left-hand/right hand cab and crew cab access steps shall be constructed of bright aluminum tread-plate. All stepping surfaces shall meet NFPA standards.			
Mirrors: West Coast 16.00" x 7.00", with stainless steel finish. Auxiliary down-view mirror shall be provided above the passenger side door.			
Bumper: A one (1)-piece, full width, polished stainless steel clad aluminum bumper shall be attached to the front of the chassis frame.			
Bumper Gap: The standard bumper furnished with the chassis shall be used.			
Tow Pins: Two (2) removable tow pins, designed with a capacity to pull the vehicle's full GVWR shall be provided. Both tows shall be of a "receiver" style design.			
Specifications	**Yes**	**No**	**Comments**
Setting: Cab- shall consist of a Seats, Inc air ride driver seat and a Seats, Inc. #911 SCBA officer seat with			

applicable seatbelts. **Crew Cab-** shall consist of three (3) Seats Inc. 911 Companion seats. All seats shall be forward facing, located against the back wall of the crew cab. Outboard seats shall have three (3) point, shoulder type seat belts. The center shall have lap belts. Seat belts shall have automatic retractors. Extensions shall be provided with seat belts.			
Air Bottle Holders: The seats in the crew cab shall be SCBA type. Mounted in each backrest shall be Ziamatic model KD-UH-6-SFCRS SCBA holder with a "knock-down" bracket and collision restraint holding strap. The bracket shall be adjustable up and down. The SCBA cavity in each seat shall be adjustable front to rear in 1.00" increments to accommodate different size SCBA bottles. There shall be a quantity of four (4).			
Engine compartment Lights: Two (2) engine compartment light shall be installed under the engine hood.			
Air Conditioning: Air conditioning with integral heater and defroster			
Cab Instruments: Shall be comprised of the following: 1. Engine temperature gauge and warning buzzer. 2. Engine oil pressure gauge and warning buzzer. 3. Speedometer with Odometer 4. Engine Tachometer 5. Engine Hour meter 6. Fuel level Gauge 7. Voltmeter: Low voltage red warning light and audible alarm 8. Air Brake Pressure Gauge 9. Air Restriction Indicator 10. Circuit Breakers: For protection of electric circuits 11. Ignition Switch: Keyless type 12. Windshield wiper control with intermittent feature. 13. Windshield washer controls			
Battery System: A single starting battery system shall be provided consisting of three (3)-12 volt, 650 CCA, maintenance-fee, group 31 batteries. A master battery switch shall be provided inside the cab within easy reach of the driver. A master battery disconnect switch shall be wired between the starter solenoid and the remainder of the electrical loads on the apparatus. A green "Battery On" indicator light shall be provided that is visible from the driver's position. Battery charging receptacle location shall be on the left side pump panel.			
Alternator: Shall be a Leece Neville with a capacity of 12-volt 270 amps.			
Electronic Load Management: A Kussmaul Load Manager 2 shall be provided on the apparatus to monitor the vehicles' 12-volt electrical system.			
Exterior Lighting: Shall meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements in effect at time of bid. **Front headlight:** shall be halogen type and comply with all FMVSS requirements. **Clearance and marker lights:** Five (5) shall be installed across the leading edge of the cab. **Front Warning Lights**: Located on the front grille will be a pair of Code3, Model OL135, 35 watt OsciLaser warning lights. A switch shall be provided inside the cab on the			

switch panel for actuation. Lens color shall be red.			
Back-up Alarm: An ECCO, Model SA917-Pm2, solid state electronic audible back-up alarm shall be provided. The device shall sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum five (5) dba above surrounding environmental noise level.			
Water Tank: Booster tank shall have a **Capacity:** of 1000 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Inc., and shall be t-shaped to provide for deep side compartments and serve as a large sump. **Seams & Joints:** Shall be nitrogen welded inside and out **Baffled:** In accordance with NFPA Bulletin 1901 requirements. Baffles shall have vent openings at both the top and bottom to permit movement of air and water between compartments **Longitudinal partitions:** Shall be constructed of .38" polypropylene plastic and shall extend from the bottom of the tank through the top cover.			
Transverse partitions: Shall extend from 4.00" off the bottom of the tank to the underside of the top cover			
All partitions: Shall interlock and shall be welded to the tank bottom and sides			
Tank top: shall be constructed of .50" polypropylene. It shall be recessed .38" and shall be welded to the tank sides and the longitudinal partitions. Tank top shall be sufficiently supported to keep it rigid during filling conditions.			
Construction: shall include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels shall be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes			
Sump: Shall be provided at the bottom of the water tank that is 8.00" long x 8.00" wide x 6.00" deep. Sump shall include a drain plug and the tank outlet.			
Installation: Tank shall be installed in a fabricated cradle assembly constructed of structural steel. Sufficient cross-members shall be provided to properly support bottom of tank. Cross-members shall be constructed of steel bar channel or rectangular tubing. Tank shall "float" in cradle to avoid torsional stress. Rubber cushions, .50" thick x 3.00" wide, shall be placed on all horizontal surfaces that the tank rests on. Stops or other provision shall be provide to prevent an empty tank from bouncing while moving vehicle. Mounting system shall be approved by the tank manufacturer			
Fill tower: Shall be constructed of .50" polypropylene screen and a hinged cover			
Overflow pipe: Shall be installed approximately halfway down the fill tower and extend through the water tank and dump to the rear of the rear axle. This will be constructed of 4.00" schedule 40 polypropylene.			
Specifications	**Yes**	**No**	**Comments**
Hose Bed: Shall be fabricated of .125"-5052 aluminum with a 38,000 psi tensile strength. 1. Width shall be a minimum of 68.00" inside **2.** Upper and rear edges of side panels shall Have a double break for rigidity, a split tube			

Finish will not be acceptable. 3. Upper inside area of the beavertails shall Be covered with brushed stainless steel to prevent damage to painted surface. 4. Flooring of the hose bed shall be Removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats shall be a minimum of .50" x 4.50" with spacing between slats. 5. Hose bed shall accommodate 1500 feet of 2.50" and 400 feet of 1.50" hose 6. One (1) adjustable hose-bed divider shall be furnished for separating hose 7. Each divider shall be constructed of a .125" brushed aluminum sheet fitted and welded into a slotted, radius extrusion along the tip, bottom and rear edge. Divider shall be held in place by two (2) bolts, one (1) at each end. Acorn nuts shall be installed on all bolts in the hose bed, which have exposed threads.			
Running boards: Shall be fabricated of .125" bright aluminum tread-plate, supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure. Dimension shall be 12.75" deep and spaced .50" away from the pump panel. Splash- guard will be provided below the running board tread-plate.			
Tailboard: Rear step shall be constructed of .125" bright aluminum tread-plate and spaced .50" from the body and supported by a structural steel assembly. Rear tailboard shall be 16.00" deep, with the exterior side flanged down and in. Flanges will be notched. Entire rear surface between the beavertails shall be covered with .125" bright aluminum tread plate. Inside surface of each beavertail in the hose bed shall be covered with polished stainless steel. The remaining inside surface of the beavertails shall be Covered with .125" bright aluminum tread-plate.			
Tow Eyes (Rear): Two (2) tow eyes (properly reinforced) shall be installed below the rear tailboard compartment for towing of vehicle.			
Specifications	**Yes**	**No**	**Comments**
Compartmentation: Body and compartments shall be fabricated of .125", 5052-H32 aluminum with tensile strength range of 31,000 to 38,000 psi. 1. Side compartments will be an integral			

assembly with the rear fenders. 2. Circular fender liners shall be provide for prevention of rust pockets and ease of maintenance. 3. Compartment flooring shall be of the sweep out design with the floor higher than the compartment door lip. 4. Compartment door opening shall be framed by flanging the edges in 1.75" and bending out again.75" to form an angle. 5. Drip protection shall be provided above the doors by means of bright aluminum extrusion or formed bright aluminum tread-plate. 6. Top of the compartment shall be covered with bright aluminum tread-plate rolled over the edge on the front, rear and outward side. These covers shall have the corners "TIG" welded. 7. Side compartment covers shall be separate from the compartment tops. 8. Front facing compartment walls shall be Covered with bright aluminum tread-plate. 9. All screws and bolts which protrude into a compartment shall have acorn nuts on the ends.			
Underbody Support System: Method of body and compartment support suitable for the intended load shall be provided. 1. Backbone of the support system shall be the Chassis frame rails. 2. Support system shall include .25" formed Vertical and horizontal steel angle supports bolted to the chassis frame rails with .625" diameter bolts. 3. A steel frame shall be mounted on the top of Of these supports to create a "floating substructure" which shall result in a 400 pound equipment support rating per lower side compartment and 500 pound equipment support rating for the rear tailboard compartment. The floating structure shall be separated from the horizontal members with neoprene elastomer isolators. 4. The isolators shall have a board load range, proven viability in vehicular applications, be of fail-safe design and allow for all necessary movement in three (3) transitional and rotational modes. 5. The neoprene isolators shall be installed in a Modified "V" three (3)-point mounting pattern. 6. A design with body compartments hanging on the chassis in an unsupported fashion shall not be acceptable.			
Aggressive walking surface: All exterior surfaces designated, as stepping, standing, and walking areas shall comply with the required average slip resistance of NFPA section 13-7.3.			
Louvers: All body compartments shall have a minimum of one (1) set of louvers stamped into a wall to provide proper airflow inside compartment. These louvers shall be formed into the metal and not added to the compartment as a separate plate.			
Specifications	**Yes**	**No**	**Comments**
Compartmentation, Driver's Side: 1. A full height vertically hinged, single door compartment ahead of the rear wheels shall be provided. 2. Interior dimensions of this compartment shall be			

34.50” wide x 67.63” high x 25.88” deep in the lower 26.00” of the compartment and 12.00” deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. 3. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 30.00” wide x 63.00 high. A positive door holder shall be furnished with this compartment. 4. A horizontally hinged, single lift-up door compartment over the rear wheels shall be provided. The interior dimensions of this compartment shall be 66.50” wide x 32.88” high x 12.00” deep. The depth of the compartment shall be calculated with the compartment door closed. The clear door opening of this compartment shall be 59.50” wide x 28.25” high. 5. The lift-up door shall be furnished with two gas-charged cylinders to assist in opening of the door and to maintain the door in an open position. There shall be a field adjustable, three (3)-position bracket mounted on the vertical side door opening that shall allow the door to be held open at 87, 90, or 93 degrees. 6. Closing the door shall not require releasing, unlocking, or unlatching any mechanism. 7. A full height, vertically hinged, single door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 31.50”side x 67.63” high x 25.88” deep in the lower 26.00” of the compartment and 12.00” deep in the remaining upper portion. The depth of the compartment shall be calculated with the compartment door closed. 8. The compartment interior shall be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment shall be 30.00” wide x 63.00 high. A positive door holder shall be furnished.			
Specifications	**Yes**	**No**	**Comments**
Compartmentation, Passenger’s Side: A vertically hinged, single door compartment in the lower area ahead of the rear wheels shall be provided. 1. The interior dimensions of this compartment shall be 34.50” wide x 33.63” high x 25.88” deep in the lower 26.00” of the compartment and 12.00” deep in the remaining upper portion. The depth of the compartment shall be calculated with the			

compartment door closed. The clear door opening of this compartment shall be 30.00” wide x 29.00” high. A positive door holder shall be furnished with this compartment. 2. A vertically hinged, single door compartment in the lower area behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 31.50” wide x 33.63” high x 25.88” deep in the lower 26.00” of the compartment and 12.00” deep in the remaining upper portion. The clear door opening of the compartment shall be 30.00” wide x 29.00” high. A positive door holder shall be furnished with this compartment.			
Doors, Side Compartment: 1. All hinged compartment doors shall be lap style with double panel construction and shall be a minimum of 1.50” thick. A “C” section reinforcement shall be installed between the outer and interior panels. 2. Doors shall be provided with closed cell rubber gasket around the surface that laps onto the body. A second heavy-duty automotive rubber molding with a hollow core shall be installed on the door framing that seals onto the interior panel, to ensure a weather-resisting compartment. **3.** All compartment doors shall have polished stainless steel continuous hinge with a pin diameter of .25”, which is bolted or screwed on with E-Zinc plated fasteners. (Hinges which are welded on shall not be acceptable) **4.** All door lock mechanisms shall be fully enclosed within the door panels. **5.** Doors shall be latched with recessed, polished stainless steel “D” ring handles and Eberhard 106 locks, **6.** To prevent corrosion caused by dissimilar metals, compartment door handles shall not be attached to outer door panel with screws. A rubber gasket shall be provided between the “D” ring handle and the door.			
Specifications	**Yes**	**No**	**Comments**
Compartmentation, Rear: A roll-up door compartment above the rear tailboard shall be provided. 1. Interior dimensions of this compartment shall be 40.00” wide x 54.13” high x 25.88” deep in the lower 45.25” of height and 15.75” deep in the remaining upper portion. Depth of the compartment shall be calculated with the compartment door closed.			

2. A louvered, removable access panel shall be furnished on the back wall of the compartment. 3. Rear compartment shall be open into the rear side compartments. 4. Clear door opening of this compartment shall be 33.25" wide x 45.25" high. 5. Closing of the door shall not require releasing, unlocking, or unlatching any mechanism, and easily operated with one hand. 6. Roll-up door shall be of an anodized satin- finish, double faced, aluminum construction and manufactured by A & A Manufacturing (Gortite) 7. Lath sections shall be an interlocking rib design and shall be individually replaceable without complete disassembly of door. 8. Between each slat at the pivoting joint shall be a PVC inner seal to prevent metal-to-metal contact. Seals shall allow door to operate in extreme temperatures ranging from plus 180 to minus 40 degrees Fahrenheit. Side, top and bottom seals (Santoprene) shall be provided. 9. All hinges, barrel clips and end pieces shall be nylon 66. All nylon components shall withstand temperatures from plus 300 to minus 40 degrees Fahrenheit. Hardened plastic shall not be acceptable. 10. A polished stainless steel lift bar shall be provided for opening door. Lift bar shall be located at the bottom of door and have latches on the outer extrusion of the doors frame. A ledge shall be supplied over lift bar for additional area to aid in closing the door. 11. Door(s) shall be constructed from an aluminum box section. The exterior surface of each slat shall be flat. The interior surfaces shall be concave to provide strength and jamming the door from the inside. 12. The spring roller assembly shall not exceed 3.00" in diameter. A roll-up door that retracts below the compartment ceiling (garage door style) shall not be acceptable. 13. A heavy-duty magnetic switch shall be used for control of "open compartment door" warning light. 14. The header for the roll-up door assembly shall not exceed 4.00".			
Scuff-plate, Inside Door Pan: One (1) compartment door shall include a polished stainless steel scuff-plate to cover the lower portion of the inside door pan of each door. Each scuff-plate shall be 8.00" high and full-width of the compartment door pan. Scuff-plate shall be located left rear door.			
Specifications	**Yes**	**No**	**Comments**
Pull-out Adjustable Height Tray: There shall be one (1) slide-out tray with 2.00" sides and a minimum capacity of 500 pounds. Capacity rating shall be in the extended position 1. Slides shall be Jonathan brand with ball bearings for ease of operation. **2.** Tray location shall be rear compartment above reel.			

3. Automatic locks shall be provided for both the “in” and “out” positions. The trip mechanism shall be located at the front of the tray. **4.** Each tray shall be adjustable up and down within the compartment.			
Adjustable Shelves: There shall be three (3) shelves, with a minimum capacity of 215 pounds. 1. The shelf construction shall consist of .125” pan-shaped aluminum with 2.00” sides. 2. Each shelf shall be infinitely adjustable by means of a threaded fastener, which slides in a track. 3. Location shall be one (1) in each full height compartment in upper section and one (1) in the rear compartment in upper section. 4. There shall be six (6) sets of tracks for Mounting shelf(s) in all compartments. They shall be installed vertically to support adjustable shelf(s).			
Rub Rail: Bottom edge of the side compartments shall be trimmed with a bright aluminum extruded rub rail. 1. Trim shall be 2.12” high with 1.38” flanges turned outward for rigidity. **2.** The rub rail shall not be an integral part of the body construction.			
Body Fender Crowns: Stainless steel fender crowns shall be provided around the rear wheel opening. 1. A rubber welting shall be provided between the body and the crown to seal the seam and restrict moisture. **2.** A dielectric barrier shall be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.			
Hose Troughs: **1.** Shall be two (2) V-shaped troughs, one (1) each side, and held in place by chrome plated, quarter turn, spring loaded clamps. **2.** Troughs shall be constructed of steel and painted job color.			
Handrails: 1. The handrails shall be 1.25” diameter anodized aluminum extrusion, with ribbed design. 2. Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces. 3. Drain holes shall be provided in the bottom of all vertically mounted handrails. 4. One (1) handrail shall be provided on each side of the top mount control panel. 5. One (1) vertical handrail, not less than 29.00” long, shall be located on each rear beavertail. **6.** One (1) full width horizontal handrail shall be provided below the hose bed at the rear of the apparatus**.**			
Specifications	**Yes**	**No**	**Comments**
Air Bottle Storage: 1. A total of four (4) air bottle compartments shall be provided, two (2) each side of the body. 2. Air bottle compartment shall be in the form of a PVC round tube to accommodate different size air bottles. **3.** A Cast Products door with latch shall be provided to contain the air bottle.			
Ground Ladders:			

1. Duo-Safety ladders shall be furnished and must meet or exceed the latest NFPA standards. 2. One (1) 24 feet, two (2) section, aluminum, Series 900- 3. One (1) 14 feet roof, aluminum, Series 775-A 4. Ladders shall be installed on the right side of the hose body in lined brackets and held in place by chrome plated, quarter-turn spring loaded clamps. 5. Clamp shall be such that when the roof ladder is removed, the clamps can be moved a half turn to hold the extension ladder in place. 6. The ladder brackets shall be adjustable up and down.			
Folding ladder: **1.** One (1) 10' aluminum, Duo-Safety, Series 585-A shall be installed on top of right side compartment**.**			
Steps: **Front:** A step shall be provided on the front of each fender compartment. The front step shall be a bright finished folding type. **Rear:** Bright aluminum tread-plate corner steps shall be provided at the rear. All steps shall provide adequate surface for stepping. An 10.00" deep, full width bright aluminum tread-plate step shall be provided at the rear of the body. The step shall be located above rear compartment.			
Specifications	**Yes**	**No**	**Comments**
Pump: 1. Pump shall be a Waterous CSY, 1250 gpm, single stage mid-ship mounted centrifugal type. 2. Pump shall be class "A" type. **3.** Pump shall deliver the percentage of rated discharge at pressure indicated below: ?? 100% of rated capacity at 150 psi net pump pressure ?? 70% of rated capacity at 200 psi net			

pump pressure ?? 50% of rated capacity at 250 psi net pump pressure. 4. Pump body shall be close-grained gray iron bronze fitted and must be horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly(including wear rings). 5. Pump shall be designed for complete servicing from the bottom of the truck, with out disturbing the pump setting or apparatus piping. 6. Pump case halves shall be bolted together on a single horizontal face. No end flanges may be used. 7. Discharge manifold of the pump shall be cast as an integral part of the pump body assembly, and shall provide a minimum of three (3) 3.50" openings, for flexibility in providing various discharge outlets for maximum efficiency. The 3.50" openings shall be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold. 8. Impeller shaft shall be stainless steel accurately ground to size, and supported at each end by oil or grease lubricated, anti-friction ball bearings, for rigid precise support. 9. Bearings hall be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings shall be used. 10. Stuffing boxes shall be of the conventional Two (2) piece, split-gland type, to permit ad-justment or replacement of Grafoil packing without disturbing the pump. Water shall be fed into stuffing box lantern rings for proper lubrication and cooling when the pump is operating. 11. Wear rings shall be bronze and easily Replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.			
Pump Transmission: 1. Shall be made of a three (3) piece, high tensile gray iron, horizontally split casing. Power transfer to pump shall be through pressure lubricated, Morse HY-VO drive chain. **2.** Drive shafts shall be a minimum of 2.35" diameter hardened and ground alloy steel. All shafts shall be ball bearing supported. The case shall be designed as to eliminate the need for water-cooling.			
Specifications	**Yes**	**No**	**Comments**
Air Pump Shift: 1. Pump shift engagement shall be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control shall also be located on the driver's side pump panel. 2. Two (2) indicator lights shall be provided adjacent to the pump shift inside the cab. One (1) green			

light shall indicate the pump shift has been completed and be labeled “pump engaged”. The second green light shall indicate when the pump has be engaged and that the chassis transmission is in pump gear. This indicator light shall be labeled “OK to pump”. **3.** Another green indicator light shall be installed adjacent to the hand throttle on the pump panel and indicate either the pump disengaged and the road transmission is in pump gear, or the road transmission is in neutral and the pump is not engaged. This indictor light shall be labeled “Warning: Do not open throttle unless light is on”.			
Transmission Lock-Up: 1. The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control, in the cab, is activated.			
Auxiliary Cooling System: A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water. 1. Heat exchanger shall be cylindrical type and shall be a separate unit. 2. It shall be installed in the pump or engine compartment with the control located on the pump operator’s control panel. 3. Exchanger shall be plumbed to the master drain valve. **4.** Engine water lines shall be run inside plastic conduit.			
Intake Relief Valve: 1. An Elkhart relief valve shall be installed on the suction side of the pump, preset at 125 psig. 2. Relief valve shall have a working range of 75psig to 250 psig. 3. Outlet shall terminate below the frame-rails with a 2.50” National Standard hose thread adapter and shall have a “Do not cap” warning tag. **4.** Control shall be located behind an access door at the right (passenger’s) side pump panel.			
Specifications	**Yes**	**No**	**Comments**
Pressure Governor: 1. A Class 1 “Captain” pressure sensing governor (PSG) system shall be provided. The PSG system shall eliminate the need for a discharge pressure relief valve. 2. Pressure governor system shall be connected directly to the engine mounted Electronic Control Module (ECM) or may be an integral part of the engine ECM. A pressure transducer shall be installed in the water discharge manifold on the pump.			

There shall be no user serviceable items or maintenance required on the PSG system. The PSG system shall not require a mechanical drive, oil, or air supply for a means of control. 3. The pressure sensor governor system shall be operable only after the vehicle parking brake has been set, the transmission is in the pumping mode, and the fire pump has been engaged. 4. The pressure sensor governor system shall have two (2) modes of operation: pressure mode or rpm mode. 5. When in the pressure mode, the PSG system shall automatically maintain the the discharge pressure set by the operator regardless of flow (within engine/pump operating capabilities) 6. In the rpm mode, the PSG system shall Automatically maintain a set engine speed Regardless of engine load (within engine operation capabilities). 7. A pump cavitation protection feature shall be provided, which shall return the engine to idle should the pump cavitate. 8. A VHS video tape describing the operation of the pressure governor, and troubleshooting procedures shall also be provided with the apparatus.			
ESP Priming Pump: 1. Priming pump shall be a positive displacement vane type, electrically driven, and conforming to standards outline in NFPA pamphlet #1901. 2. One (1) priming control shall open the priming valve and start the priming motor. **3.** Primer shall be environmentally safe and self-lubricating**.**			
Heat Enclosure: A heat enclosure shall be installed, trapping hot air radiated from the engine exhaust system, which shall warn the fire pump. The enclosure shall consist of a 12-gauge galvanneal steel understructure, with easily removable panels. Also a covering above the pump shall be provided, so warm air cannot escape freely.			
Specifications	**Yes**	**No**	**Comments**
Plumbing: 1. All inlet and outlet plumbing 3.00” and smaller shall be plumbed with either stainless steel pipe or synthetic rubber hose reinforced with hi-tensile polyester braid. 2. Small diameter secondary plumbing such as drain lines shall be stainless steel, brass or hose. 3. Were vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with victaulic or rubber couplings.			

4. Plumbing manifold bodies shall be ductile cast iron or stainless steel. 5. All lines to drain through either a master drain valve or shall be equipped with individual drain valves. All individual drain lines for discharges shall be extended with a hose to drain below the chassis frame. **6.** All water carrying gauge lines shall be flexible polypropylene tubing. All foam piping that is in contact with the foam concentrate or foam/water solution shall be stainless steel.			
Main Pump Inlets: 1. A 6.00" pump manifold inlet shall be provided on each side of the vehicle. 2. The suction inlets shall include removable die cast zinc screens that are designed to provide cathodic protection for the pump. **3.** The main pump inlets shall have National Standard Threads with a long handle chrome cap.			
Short Suction Tube: 1. Suction tubes on the mid-ship pump shall have "short" suction tubes to allow for installation of adapters without excessive overhang.			
Valves: 1. All ball valves shall be Akron Bras in-line valves. 2. These valves shall have two (2) self-adjusting seats to hold both pressure and vacuum in either direction. **3.** A Norkalon ball shall provided for the swing-out ball valves.			
Inlet (Left Side) 1. On the left side pump panel there shall be one (1) 2.50" auxiliary suction, terminating in 2.50" National Standard Hose Thread. 2. The auxiliary suction shall be provided with a strainer, chrome swivel and plug. **3.** Inlet valve location shall be behind the pump panel			
Inlet Control: 1. Gating shall be accomplished at the top-mount panel by means of a control lever, similar to that used for the discharge.			
Inlet Bleeder Valve: 1. A .75" ball type bleeder valve shall be provided for each side-gated inlet. 2. The valves shall be located behind the panel with a hand-wheel type knob for the control extended to the outside of the panel. **3.** The water, which is discharged by the valve, shall be routed below the chassis frame rails.			
Specifications	**Yes**	**No**	**Comments**
Tank to Pump: 1. The booster tank shall be connected to the intake side of the pump with 3.00" piping and a quarter turn 3.50" Waterous valve with the control remotely located at the operator's panel. 2. Tank to pump line to run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling shall be included in this line to prevent damage from vibration or chassis flexing. **3.** A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank			

Tank Refill: 1. A 1.50” combination tank refill and pump bypass line shall be provided, using a quarter-turn full flow ball valve controlled from the pump operator’s panel.			
Discharge Outlets (Left Side): **1.** There shall be two (2) discharge outlets with a 2.50” valve on the left side of the apparatus, terminating with a male 2.50: national Standard hose thread adapter**.**			
Discharge Outlets (Right Side): **1.** There shall be one (1) discharge outlet 2.50” valve on the right side of the apparatus, terminating with a male 2.50 National Standard hose thread adapter.			
Discharge Outlet (Rear): 1. There shall be one (1) discharge outlet piped to the rear of the hose bed, on the driver’s side. 2. Installation will have proper clearance provided for spanner wrenches or adapters. **3.** Plumbing shall consist of 2.50” piping along with a 2.50” full flow ball valve with the control from the pump operator’s panel			
Discharge Caps: **1.** Chrome plated, rocker lug, caps with chains shall be furnished for all side discharge outlets**.**			
Outlet Bleeders: 1. A .75” quarter turn type, bleeder valve shall be provided for each outlet 1.50” or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application. 2. The valves shall be located behind the panel with a hand-wheel type control extended to the outside of the side pump panel. 3. Bleeders shall be located in a horizontal line at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed into. 4. The water discharged by the bleeders shall be routed below the chassis frame rails.			
Specifications	**Yes**	**No**	**Comments**
Elbows, Left Side Outlets: 1. The 2.50” discharge outlets, located on the left side pump panel, shall be furnished with a 2.50” (F) National Standard hose thread x 2.50”(M) National Standard hose thread, chrome plated, 45 degree elbow. **Elbows, Right Side Outlets:** 1. Same as Left side. **Elbows, Rear Outlets:** 1. Same as above.			
Discharge Outlet Controls: 1. Discharge outlets shall incorporate a quarter-turn ball valve with the control located at the pump			

operator's panel. **2.** The valve operating mechanism shall indicate the position of the valve or an indicator shall be provided to show when the valve is closed.			
Deluge Riser: 1. A 3.00" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. 2. Piping shall be installed securely so no movement develops when the line is charged. 3. The riser shall be gated and controlled at the pump operator's panel. **4.** The deluge riser shall have a 3.00" four (4) bolt flange for mounting the monitor.			
Crosslay Hose Beds: 1. Two (2) crosslays with 1.50" outlets shall be provided. 2. Each bed to be capable of carrying 200 feet of 1.75" double jacketed hose and shall be plumbed with 2.00 i.d. pipe and gated with a 2.00" quarter turn ball valve. 3. Outlets to be equipped with a 1.50" National Standard hose thread 90-degree swivel located in the hose bed so the hose may be removed from either side of apparatus. 4. Crosslay controls shall be at the pump operator's panel. 5. The center crosslay dividers shall be fabricated of .25" aluminum and shall provide adjustment from side to side. The dividers shall be unpainted with a DA finish. The remainder of the crosslay bed shall be painted job color. 6. Vertical scuff-plates, constructed of stainless steel, shall be provided at the front and rear ends of the bed on each side of the vehicle. **7.** Crosslay bed flooring shall consist of removable perforated brushed aluminum.			
Crosslay Cover: 1. A hinged .125"aluminum tread-plate cover shall be installed over the crosslay hose beds. It shall include a latch at each end of the cover to hold it securely in place, a chrome grab handle at each end for opening and closing the cover. 2. A foam rubber gasket where the cover comes into contact to a painted surface			
Specifications	**Yes**	**No**	**Comments**
Booster Hose Reel: 1. A Hannay electric rewind booster hose reel shall be installed in the rear compartment. 2. Compartment floor shall be covered with bright aluminum tread-plate. 3. Roll-up door for this compartment shall not interfere with the hose reel. 4. A polished control shall be provided at the pump operator's panel. 5. Plumbing to the reel shall consist of 1.50" Aeroquip (or equivalent) hose and a 1.50" valve. 6. Reel motor shall be protected from overload with a sized automatic reset circuit breaker.			

7. Electric rewind control shall be a rubber- covered button adjacent to the reel. 8. Booster hose, 1.00” diameter and 150 feet, with chrome plated Barway, or equal couplings shall be provided. 9. Working pressure of the booster hose shall be a minimum of 800 psi. **10.** Capacity of the hose reel shall be 200 feet of 1.00” booster hose.			
Foam System: 1. There shall be a Hypro/Foam Pro, Model 1600, direct injection foam proportioning system furnished and installed on the apparatus. 2. The system shall be a single agent system capable of handling Class “A” foam concentrate. 3. The foam system shall be plumbed to two (2) discharges. 4. The discharges capable of dispensing foam shall be the #1 crosslay and the exact discharges to be stated later. 5. The proportioning operation shall be based on an accurate direct measurement of water flows with no water flow restriction. 6. The foam system shall be installed in accordance with the manufacturer recommendations. 7. System shall be equipped with a control module. It shall be installed on the pump operator’s panel and enable the pump operator to perform the following functions: a. Activate the foam system b. Change foam concentrate proportioning rates from .1% to 1% c. Flash a “low concentrate” warning light when the foam concentrate tank runs low of concentrate and if foam concentrate is not added to tank, shut the foam pump down within two (2) minutes. 8. The foam system shall have a 12volt, 1/3 hp electric motor driven positive displacement piston type foam concentrate pump with a rated capacity of .01 to 1.6 gpm with operating pressures up to 400psi. 9. A full flow check valve shall be provided in the discharge piping to prevent foam contamination of the fire pump and water tank. **10.** A 5-psi opening pressure check-valve shall be installed in the concentrate line.			
Specifications	**Yes**	**No**	**Comments**
Foam Tank: 1. Foam tank shall be an integral portion of the polypropylene water tank. The cell shall have a capacity of 30 gallons of foam (shall reduce the capacity of the water tank) with the intended use of Class “A” foam. 2. The foam cell shall have a screen in the fill dome and a breather in the lid. **3.** The foam tank drain shall be a 1.00” drain valve located inside the pump compartment accessible through a door on the passenger’s side pump panel.			
Pump Compartment: 1. The pump compartment shall be separate from the hose body and compartments so that each			

may flex independently of the other. 2. It shall be a fabricated assembly of steel tubing, angles and channels, which support both the fire pump and the side running boards. 3. Compartment shall be mounted on chassis frame rails with rubber biscuits in a four-point pattern to allow for chassis frame twist. **4.** Pump compartment, pump, plumbing and gauge panels must be removable from the chassis as a single assembly.			
Pump Mounting: 1. Pump shall be mounted to substructures, which shall be mounted to the chassis frame rail using rubber isolators. **2.** The mounting shall allow chassis frame rails to flex, independently.			
Pump Control Panels (Top Mount) 1. All pump controls and gauges to be properly marked and located above the pump to the rear of the walkway. Operator to face the rear of the truck when viewing the control panel from the operating position. 2. The control panel shall be in two (2) planes. 3. The upper plane shall be hinged at the bottom with a full-length stainless steel hinge. 4. Both planes to be full width of the pump house structure. 5. The side pump panels shall be 42.00" wide. They shall be removable for ease of maintenance. 6. Polished stainless steel trim collars to be installed around all inlets and outlets. 7. Controls shall have chrome-plated bezels encircling the opening securely mounted to the pump panel. 8. Identification tags for the discharge controls shall be recessed within the same bezel. Tags shall be color coded, with each discharge having its own unique color. 9. All remaining identification tags shall be mounted on the pump panel in chrome-plated bezels.			
Walkway: 1. A 19.00" wide walkway shall be provided for access to the top control panel. The walkway shall be constructed of bright aluminum tread-plate and properly reinforced. **2.** Bright aluminum tread-plate shall be installed below the rear windows of the cab, as a minimum, to protect the paint on the rear of the cab.			
Specifications	**Yes**	**No**	**Comments**
Pump and Gauge Panel: 1. The pump and gauge panels shall be constructed of black vinyl covered aluminum. The company that supplies the product shall bond the black vinyl to the aluminum. 2. A polished aluminum trim molding shall be provided on both sides of the pump panel. 3. The passenger's side pump panel shall be removable and fastened with swell type fasteners. 4. The following shall be provided on the pump and gauge panels in a neat and orderly fashion: a. Engine oil pressure gauge with visual and audible warning. b. Engine water temperature gauge with visual and audible warning			

c. Tachometer: electric d. Master Pump Drain Control e. Voltmeter f. Check Transmission Warning Indicator Light. g. Stop Engine Warning Indicator Light **h.** Check Engine Warning Indicator Light.			
Master Gauges, Vacuum and Pressure: 1. The pump master vacuum and pressure gauge shall be fluid filled, NOSHOK, Model 40.921. The fluid fill shall be an environmentally friendly synthetic anti-freeze agent, acting as a lubricant and shock absorber 2. The gauge accuracy shall comply with ANSI B40.1 Grade A requirements. 3. Temperature range shall be –40 degrees F to + 160 degrees F. 4. Gauge construction shall be a heavy-duty 304 stainless steel case. Crystal shall be a molded Plexiglas with captive O-ring and secured with a rolled 304 highly polished stainless steel bezel. 5. Gauges shall be a minimum of 100mm(4" nom.) in diameter and shall be compound style gauge with a vacuum/pressure range of 30"-0-600 psi. 6. Gauges shall have white faces with black markings and shall include an orange tip pointer for easy readability. 7. The individual pressure gauge shall be installed as close to the outlet control as practical.			
Specifications	**Yes**	**No**	**Comments**
Pressure Gauges: 1. The individual" line pressure gauges for the discharges shall be fluid filled NOSHOK, model 25.911. The fluid fill shall be an environmentally friendly synthetic anti-freeze agent, acting as a lubricant and shock absorber. 2. The gauge accuracy shall comply with ANSI B40.1 Grade A requirements. 3. Temperature range shall be form –40 degrees F to + 160 degrees F. 4. Gauges construction shall be a heavy-duty 304 stainless steel case. Crystal shall be molded Plexiglas with captive O-ring and secured with a rolled 304 highly polished stainless steel bezel. 5. Gauges shall be a minimum 63mm(2.5" nom.) in			

diameter and shall be a compound style gauge with a vacuum/pressure range of 30”-0-400 psi. 6. Gauges shall have white faces with black lettering shall include an orange tip pointer for easy readability. **7.** The individual pressure gauges shall be installed as close to the outlet control as practical.			
Water Level Gauge: 1. An electric water level gauge manufactured by Innovative Controls, Inc., shall be provided on the operator’s panel. 2. The gauge shall register water level by means of five (5) brightly colored incandescent lights. They shall be as follows: a. Full=Green b. ¾ = Yellow c. ½ = Yellow d. ¼ = Yellow e. Refill= Red 3. To further alert the pump operator, the Refill light shall start flashing when the water level drops below the ¼ mark. 4. The level measurement shall be based on the sensing of the electrical conductivity of the of the water in the tank/ 5. The display shall be constructed of a solid plastic material, to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design shall provide complete protection from water and environmental elements. 6. The gauge light bulbs shall be rated for 15,000 hours. The bulbs shall be easily replaced by unscrewing the colored lens cover. 7. The cover plate panel bezel shall be of A chrome plated die cast design. The overlay graphics shall be on the inside surface of the composite overlay to provide protection from wear. The composite overlay shall be scratch resistant and immune to cleaning solvents and UV light weathering. 8. The water level probe shall be constructed of chemical resistant, PVC plastic with a 3.00” diameter anodized flange. The internal wire connectors and electronics shall be fully encapsulated to protect against water, dirt, and vibration. The probe system shall not contain moving parts or mechanical switching.			
Specifications	**Yes**	**No**	**Comments**
Foam Level Light: 1. A low-level tank indicator shall be installed on the pump operator’s panel. **2.** One (1) light shall be provided to indicate when the foam concentrate level drops to 1/4 tank.			
Light Shields: 1. Illumination shall be provided at each pump control panel for controls, switches, essential instructions, gauges, and instruments necessary for operation of the apparatus and the equipment provided on it. 2. External illumination shall be a minimum of five (5) foot- candles on the face of the device. 3. Internal illumination shall be a minimum of four (4) foot lamberts. 4. Lights shall be installed under a stainless steel shield.			

5. One (1) pump panel light shall come on at the pump operator's panel with the pump is shifted into gear from inside the cab. This shall afford the operator some illumination when firs approaching the control panel. The remaining lights shall be actuated from a switch located on the pump panel.			
Electrical: 1. All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. 2. All wiring shall be high temperature cross-link type. 3. Wiring shall be run in loom or conduit where exposed and have grommets where wire passes through sheet metal. 4. Automatic reset circuit breakers shall be provided which conform to SAE Standards. 5. Wiring shall be color, function and number coded. 6. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" intervals. **7.** Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture, and automotive fluids**.** **8. Electrical wiring and equipment shall be installed utilizing the following guidelines:** a. All holes made in the roof shall be caulked with silicon. Rope caulk is NOT acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof b. Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body. c. Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. A coil of wire shall be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work. d. Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. e. All non-waterproof connections shall require this corrosion preventative compound in the plug to prevent corrosion and for easy separation (of the plug). f. All lights that have their sockets in a weather-exposed area shall have corrosion preventative compound added to the socket terminal area. g. All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal. h. All emergency light switches shall be mounted on a separate panel installed in the cab.			

i. A master warning light switch and individual switches to be provided to allow pre-selection of emergency lights. The light switches shall be "rocker" type with an internal indicator light to show when switch is energized. j. All switches shall be properly identified and mounted in a removable panel for ease in servicing. k. Identification of the switches shall be done by either printing or etching on the switch panel. The switches and identification shall be illuminated. l. All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished. m. Rear identification lights shall be recessed mounted for protection. **n.** Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments**.**			
Step Lights: 1. Four (4) Weldon, Model 9186-23882-30, step lights shall be provided. 2. One (1) step light shall be provided on each side, on the front compartment face. 3. Two (2) step lights at rear, shall illuminate the tailboard. **4.** These step lights shall be actuated with the pump panel light switch**.**			
Rear FMVSS Lighting: 1. A pair of Weldon, Model 3884, three (3) lamp modules shall be provided. Each module shall include a stop-tail light, directional light and backup light mounted in a polished aluminum housing. 2. The lights shall be mounted on the face of the rear body compartments. 3. Four (4) red reflectors shall be provided. **4.** A Weldon, Model 23882-2600-00 license plate bracket shall be mounted on the driver's side above the warning lights. A Weldon, Model 9186-23882-30, step lamp shall illuminate the license plate**.**			
Specifications	**Yes**	**No**	**Comments**
"Do Not Move Apparatus" Indicator: 1. A flashing red indicator light (located in the driving compartment) shall be illuminated automatically per NFPA (per current edition). **2.** The lights shall be labeled "Do Not Move Apparatus IF Light Is On"			
Compartment Lighting: 1. 6.00" diameter truck-Lite, Model 79384, light/s shall be provided in each enclosed compartment. Each light shall have a number 1076 one filament, two wire bulb. 2. Opening the compartment door shall automatically turn compartment lighting on.			
Pump Compartment Light:			

1. A pump compartment light shall be provided inside the right side pump enclosure and accessible trough a door on the pump panel. **2.** A .125" weep hole shall be provided in each light lens, preventing moisture retention.			
Perimeter Scene Lights, Cab 1. There shall be a Truck-Lite, Model 40003, 4.00" grommet mount weatherproof light provided for each cab door. Lighting shall be designed to provide illumination on areas under the driver, officer, and crew cab riding area exits, which shall be activated automatically when the exit doors are opened, by the door jam switch and by the same means as the body perimeter lights. **2.** The lighting shall be capable of providing illumination at a minimum level of one (1) foot candle on ground areas within30.00" of the edge of the apparatus in areas which personnel climb in and out of the apparatus or descend from the apparatus to the ground level.			
Perimeter Scene lights, Body 1. There shall be a total of four (4) Truck-Lite, Model 40003, 4.00" grommet mount weatherproof lights provided on the apparatus. Two (2) lights shall be provided under the rear step area and two (2) lights shall be proved under the pump panel running boards. 2. The lights shall be spaced one (1) each side of apparatus and have a clear lens. 3. A rocker switch in the cab shall activate the perimeter scene lights. **4.** The lighting shall be capable of providing illumination at a minimum level of one (1) foot candle on ground areas within 30.00" of the edge of the apparatus in areas designed for personnel to climb onto the apparatus or descend from the apparatus to the ground level.			
12-Volt Lighting: 1. The apparatus shall be equipped with two (2) lights, Federal Model Fl3SF Night-Fighter. 2. Three (3) dual filament spot/flood shall be mounted on a pull-up telescopic pole. A three position flood-off-spot switch shall be provided on each light head. 3. This unit shall easily swivel 360 degrees horizontal, 60 degrees down and 90 degrees upwards. Each light head shall be encased in a stainless steel housing. 4. These lights shall be installed one each side behind pump panel. **Deck Lights:** 1. Two (2) 6.00" Unity AG deck lights with swivel mount shall be provided at the rear of the hose bed, one (1) each side. **2.** One (1) light shall be furnished with a 160,000-candle power halogen spot bulb and the other shall be furnished with a 6,000-candle power halogen flood bulb.			
Air Horn System: 1. Two (2) Grover air horns shall be provided and located one (1) each side of the engine. 2. The horn system shall be piped to the air brake system wet tank utilizing.38" tubing.			

3. A pressure protection valve shall be installed in-line to prevent the loss of air, in the air brake system. **4.** A lanyard rope pull control shall be provided within reach of the driver.			
Electronic Siren: 1. A"Code 3", Model 3692, electronic siren with noise canceling microphone shall be provided. 2. Siren head shall be located in the dash. 3. Siren shall be actuated by a foot switch on the officer's side and by the horn button in the steering wheel. **4.** The driver shall have the option to control the siren or the chassis horns from the horn button by means of a selector switch located on the instrument panel.			
Speaker: 1. There shall be one (1) speaker recessed in the front bumper. Each speaker shall be a Code-3, Model PB100C, 100-watt, bumper-mount, with chrome finish. **2.** Each speaker shall be connected to the siren amplifier.			
Warning Light (Cab Roof): 1. A Code 3, XL Model 556A3, light-bar shall be mounted on the cab roof 2. The length of the light-bar shall be 56.00". 3. The light-bar shall consist of the following: a. Four (4) 50 watt standard rotators b. One (1) 50 watt fast rotator c. Two (2) two-step cascade mirrors d. Two (2) diamond mirrors 4. To meet the NFPA requirement the three (3) inboard rotators shall be load managed when the parking brake is set. 5. The light-bar shall be furnished with two Outside red lenses, one (1) inside blue lens.			
Specifications	**Yes**	**No**	**Comments**
Side Zone Lower Lighting: 1. Code3, Model 4135BZ, halogen lights shall be located at the following positions: a. Two (2) lights, one each side on the engine hood b. Two (2) lights, rear over wheels 2. The above four (4) lights shall be required to meet the lower level optical warning and optical power requirement of NFPA. 3. A lighted switch on the cab instrument panel shall control the lights. **4.** A flashing circuit shall be provided for controlling the flash pattern of the halogen lights.			
Rear Zone Lower Lighting: 1. Two (2) Code3, Model 81-35, red halogen lights shall be located at the rear of the apparatus. 2. They shall be required to meet the lower level optical warning and optical power requirements of NFPA. 3. A lighted switch on the cab instrument panel shall control the lights. 4. There shall be a flasher provided for controlling the flash pattern of the halogen lights.			
Warning Lights (Rear of Hose Bed) 1. Two (2) Code 3, Model 550, rotating beacons			

shall be provided at the rear of the truck, located one (1) on each side. 2. Each beacon shall contain a 50- watt fast rotator. 3. The color shall be red. **4.** The rear warning lights shall be mounted on stainless steel brackets with all wiring totally enclosed. These brackets shall also support the clearance/marker lights.			
Electrical System General Design for Alternating Current: The following guidelines shall apply to the 120.240 VAC system installation: **General** 1. Any fixed line voltage power source producing alternating current (ac) line voltage shall produce electric power at 60 cycles (+/- 5). 2. Except where superseded by the requirements of NFPA 1901, all components, equipment and installation procedures shall conform to NFPA 70, National Electrical Code (NEC). **3.** Line voltage electrical system equipment and materials included on the apparatus shall be listed and installed accordance with the manufacturer's instructions. All products shall be used only in the manner for which they have been listed. **Grounding** 1. Grounding shall be in accordance with Section 250-6 "Portable an Vehicle Mounted Generators" of the NEC. Ungrounded systems shall not be used. Only stranded or braided copper conductors shall be used for grounding and bonding. 2. An equipment grounding means shall be provided in accordance with Section 250-91(Grounding Conductor Material) of the NEC. 3. The grounded current carrying conductor (neutral) shall be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. 4. The neutral conductor shall be colored white or gray in accordance with Section 200-6(Means of Identifying Grounding Conductors) of the NEC. 5. In addition to the bonding required for the low voltage return current, each body and driving or crew compartment enclosure shall be bonded to the vehicle frame by a copper conductor. This conductor shall have minimum amperage rating of 115 % of the nameplate current rating of the power source specification label as defined in Section 310-15(amp capacities) of the NEC. A single conductor properly sized to meet the low voltage a line voltage requirements shall be permitted to be used. **6.** All power source system mechanical and electrical components shall be sized to support the continuous duty nameplate rating of the power source. **Operation** 1. Instructions that provide the operator with the essential power source operating instructions, including the power-up and power-down sequence, shall be permanently attached to the apparatus at any point where such operations can take place. 2. Provisions shall be made for quickly and easily placing the power source into operation. The control shall be marked to indicate when it is			

correctly positioned for power source operation. 3. Any control device used in the drive train shall be equipped with a means to prevent the unintentional movement of the control device from its set position. 4. A power source specification label shall be permanently attached to the apparatus near the operator's control station. The label shall provide the operator with the information detailed. 5. Direct drive (PTO) and portable generator installations shall comply with Article 445(Generators of the NEC). **Over current Protection** 1. the conductors used in the power supply assembly between the output terminals of the power source and the main over current protection device shall not exceed 144.00" in length. 2. For fixed power supplies, all conductors in the power supply assembly shall be type THHW, THW, or use stranded conductors enclosed in non-metallic liquid tight flexible conduit rated for a minimum of 194 degree Fahrenheit. 3. For portable power supplies, conductors located between the power source and the line side of the main over current protection device shall be type SO or type SEO with suffix WA flexible cord rated for 600-volts at 194 degrees Fahrenheit. **Wiring Methods** 1. Fixed wiring systems shall be limited to the following: a. Metallic or non-metallic liquid tight flexible conduit rated at not less than 194 degrees Fahrenheit or b. Type SO or Type SEO cord with a WA suffix, rated 600 volts at not less than 194 degrees Fahrenheit. 2. Electrical cord or conduit shall NOT be attached to chassis suspension components, water or fuel lines, air or airbrake lines, fire pump piping, hydraulic line, exhaust system components, or low voltage wiring. 3. The wiring shall be run as follows: a. Separated by a minimum of 12.00", or properly shielded from exhaust piping. b. Separated from fuel lines by a minimum of 6.00" distance. 4. Electrical cord or conduit shall be supported within 6.00" of any junction box and at a minimum of every 24.00" of continuous run. 5. Supports shall be made of non-metallic materials or corrosion protected metal. All supports shall be of a design that does not cut or abrade the conduit or cable and shall be mechanically fastened to the vehicle. **Wiring Identification** 1. All line voltage conductors located in the main panel board shall be individually and permanently identified. 2. The identification shall reference the wiring schematic or indicate the final termination point. 3. When pre-wiring for future power sources or devices, the un-terminated ends shall be labeled showing function and wire size. **Wet Locations:** 1. All wet location receptacle outlets and inlet devices, including those on hardwired remote power distribution boxes, shall be of the grounding type provided with a wet location cover			

and installed in accordance with Section 210-7(Receptacles and Cord Connections of the NEC). 2. All receptacles located in a wet location shall be not less than 30.00" from the ground. 3. The face of any wet location receptacle shall be installed in a plane from vertical to not more than 45 degrees off vertical. 4. No receptacle shall be install in a face up position. **Dry Locations:** 1. All receptacles located in a dry location shall be of the grounding type. 2. Receptacles shall be not less than 30.00" above the interior floor height. 3. All receptacles shall be marked with the type of line voltage (120-volts or 240-volt) and the current rating in amps. 4. If the receptacles are direct current, or other than single phase, they shall be so marked. **Listing:** 1. All receptacles and electrical inlet devices shall be listed to UL 498, Standard for Safety Attachment Plugs and Receptacles, or other appropriate performance standards. 2. Receptacles used for direct current voltages shall be rated for the appropriate service. **Electrical System Testing:** 1. The wiring and associated equipment shall be tested by the apparatus manufacturer or the installer of the line voltage system. 2. The wiring a permanently connected devices and equipment shall be subjected to a dielectric voltage with stand test of 900-volts for one (1) minute. The test shall be conducted between live parts and neutral conductor, and between live parts on the vehicle frame with any switches in the circuit(s) closed. This test shall be conducted after all bodywork has been completed. 3. Electrical polarity verification shall be made of all permanently wired equipment and receptacles to determine that connections have been properly made. **Operational Test per NFPA 1901 Chapter 19-14.4** 1. The apparatus manufacturer shall perform the following operation test and shall certify that the power source and any devices that are attached to the line voltage electrical system is properly connected and in working order. 2. The prime mover shall be started from a cold start condition and the line voltage electrical system loaded to 100% of the nameplate rating. 3. The power source shall be operated at 100% of its nameplate voltage for a minimum of two (2) hours unless the system meets category certification as defined in NFPA 1901, chapter 19-14.5. **4.** Where the line voltage power is derived from the vehicle's low voltage system, the minimum continuous electrical load as defined in NFPA 1901, Chapter 9, shall be applied to the low voltage electrical system during the operational test.			
Generator: 1. A portable mounted Honda, Model EM3500SXKI, gas powered portable generator with a continuous rating of 3,000 watts shall be			

provided. 2. It will be a 23.80" length x 19.50" width x 19.10" height. The unit will weigh 160 pounds. 3. The generator shall have it own 4.5-gallon fuel tank. 4. The muffler shall be part of the generator. 5. Cooling system shall be a natural airflow over the generator. 6. Cooling requirements shall be designed to operate in outside air only 7. Shutdown will occur when there is a low oil level. 8. The continuous duty rating will be 3,000 watts. 9. Volts will be 120/240, 60 HZ. 10. Single phase 11. Amperage will be 25.0 amp's at 120VAC and 12.5 amps at 240 VAC 12. Generator shall be furnished with a carrying cage and quick release mounting for portable use. 13. The generator shall be mounted in the in rear, driver's side compartment on a sliding tray. The slides used for the tray, shall be ball bearing type with a capacity rating matched to the weight of the generator. Locking mechanisms shall be provided for holding he generator in the extended and stored position. **14.** The starting provision shall be located on the generator itself.			
Circuit Breaker Panel: 1. A circuit breaker panel shall be installed in the TBD, at installation time. 2. A directory for each breaker shall be provided adjacent to the circuit breaker panel. **3.** Identification of circuits shall be done in a durable manner that provides years of service.			
Specifications	**Yes**	**No**	**Comments**
20 Amp Receptacle: 1. Wired to the power supply shall be two (2) receptacles that are a 120 volt, 20 amp three (3) wire twist-lock NEMA L5-20 type with weather resisting cover located towards rear of unit.			
Paint: The exterior custom body painting finishing process as follows: Manual Surface Preparation a. All exposed metal surfaces on the custom body shall be thoroughly cleaned and prepared for painting. 1. Surfaces that shall not be painted include all chrome plated, stainless steel, anodized aluminum and bright aluminum tread-plate. 2. Each imperfection on the exterior metal surface shall be removed or filled and then sanded smooth for a smooth appearance. 3. All seams shall be sealed before painting. **Chemical Cleaning and Treatment** 1. The metal surfaces shall be properly cleaned using an acid etching system to ensure the subsequent coatings bond well. 2. An ultra pure water final rinse shall be applied to all metal surfaces, excluding the undercarriage components, at the conclusion of metal treatment process. **Sealer Primer Coat** 1. A two (2)-component sealer primer coat shall be			

applied. **Topcoat Paint** 1. Two (2) coats of an automotive grade, two (2)-component acrylic urethane paint shall also be applied. 1. All removable items, such as brackets, compartment doors, door hinges, trim, etc. shall be removed and painted separately. 2. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly. 3. The chassis shall be painted by the chassis manufacturer and shall remain the commercial grade finish as provided. 4. To ensure a good color match between the body and chassis, both manufacturers shall have a mutually a pre-approved paint color program. 5. The apparatus shall be painted: Candy Apple Red. 6. Prior to reassembly and reinstallation of lights, handrails, door hardware and any miscellaneous body items, an isolation tape or gasket material must be used to prevent damage to the finish painted surfaces. NO EXCEPTIONS. **7.** A nylon washer shall be installed under each acorn nut or metal screw that is fastened directly to a painted body surface.			
Paint Chassis Frame Assembly: 1. The chassis frame assembly shall be painted black. **2.** Components that included with the chassis frame assembly that shall be painted black in color are frame rails, cross members, axles, suspension, steering gear and fuel tank			
Specifications	**Yes**	**No**	**Comments**
Paint, Compartment Interior: 1. Interior of compartments shall be painted with gray spatter type paint.			
Reflective Band: 1. A 10.00” white reflective band shall be provided across the front of the vehicle and along the sides of the body. 2. A 4.00” band shall be provided at the rear of the apparatus. 3. The reflective band provided on the cab face shall be below the front grille on the front bumper.			
Foam: Please state brand and manufacturer of foam			
Delivery Date:			
Demo Unit: 1. Have unit that meets or exceed specifications is available? **2.** Unit has less than 6,000 miles at time of delivery.			

Loose Equipment: The following items are to be provided at the time of delivery: One (1) 4.5” female NST 5” Storz adapter, female swivel LH One (1) 4” female NST x 5” Storz adapter, female swivel LH One (1) 2.5” female NST x 5” Storz adapter, female RL One (1) 2.5” male NST x 5” Storz adapter One (1) 6” female NST x 5” Storz adapter, female to be rigid RL One (1) Akron, Black Max, Piston intake relief valve, 6” FNST x 5” Storz Two (2) 2.5” x (2) 1.5” NST gated wye One (1) 2.5” x (2) 2.5” NST gated wye One (1) 2.5” x (2) 2.5” gated Siamese One (1) 6” FNST x 5” MNST adapter Two (2) Elkhart SM20FG Nozzles One (1) Elkhart SFSG 1” nozzle One (1) Akron piercing nozzle 3’ One (1) 2.5 playpipe nozzle with tips an shutoff Five (5) 100’ sections of Key supply hose, Storz couplings with couplings stamped beginning with 0201. Twenty (20) 50’ sections Yellow Key 3.00” hose coupled 2.5” NST, coupling to be stamped starting with 0201. Fourteen (14) 50’ sections of 1.75” Yellow Key hose coupled 1.5” NST, coupling to be stamped starting with 0201 One (1) 20’ section of 5” hose coupled 5” Storz Two (2) Hebert hose clamps, one (1) for 3” and one (1) for 6”. Both with mounting brackets. One (1) Nupla 8’ D-handle pike pole with mounting brackets. One (1) pick head axe with mounting bracket One (1) flat head axe with mounting bracket One (1) 51” pry bar with mounting bracket Two (2) ladder belts One (1) 36” Haligan tool, standard claw One (1) Ventmaster chain saw, depth gauge an bullet chain One (1) Super-Vac model 718GH4PPV Two (2) CMC Model 430203 rescue #2 rope bags One (1) 150’ red lifeline rope 5/8” One (1) 150’ red lifeline rope, 7/16” One (1) 2.5 gallon extinguisher with bracket One (1) TNT Tool One (1) 1.5” shut off for piercing nozzle One (1) 1” shut-off nozzle Two (2) Firepower, Model FP30, 100’ extension cords One (1) Firepower, Model FP50, 3 outlet rollover block One (1) Firepower, Model FP70, male pigtail One (1) Firepower, Model FP80, female pigtail One (1) 5-station Sigronics headset system to include four (4) headsets, one (1) PP station and four (4) in cab stations. Three (3) Streamlight 20-watt light boxes, orange with charging bases. Four (4) SCBA brackets with CRS straps for the SCBA seats in the cab. One (1) Elkhart Stinger monitor with ground base, tubes, tips, and master stream SM100 nozzle. One (10Elkhart 18” extension pipe, “the pipe” for the above Elkhart Stinger monitor. Quick connect and release system. One (1) bag of chrome, stainless steel, or cadmium-plated screws, nut, bolts and washers, used in the construction shall be furnished.			

Warranties: Copy of all warranties will be included in the bid response. 1. Engine 2. Water Tank 3. Body 4. Roll up door(s) 5. Waterous Pump 6. Pressure gauges 7. Generator **8.** Paint and Corrosion			
Testing: **Body Structural** analysis shall be fully tested using proven engineering and test techniques. The body shall be tested while loaded to its greatest in-service weight. The criteria used during the testing procedures shall include: a. Raising opposite corners of eh vehicle tries 9.00" to simulate the twisting a truck may experience when driving over a curb. b. Making a 90 degree turn, while driving at 20mph to simulate aggressive driving conditions c. Drive the vehicle at 35mph on a "washboard" road. d. Driving the vehicle at 55 mph on a smooth road. e. Accelerating the vehicle fully, until reaching the approximate speed of 45mph on rough pavement. **Electrical:** a. An operational test shall be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order b. The results of the tests shall be recorded and provided at the time of delivery			
Specifications	**Yes**	**No**	**Comments**
Manufacturing and Location: 1. Furnish documentation in regards to: a. 24/7 emergency service b. Service facility within 500 miles c. Available of parts d. Site of construction Availability of commercial chassis prepared for the Fire Service by the chassis manufacturer			
Drawings: 1. Bid shall be accompanied by a set of Cad drawings consisting of a detailed description of			

the apparatus and equipment proposed and to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model and make of all component parts and equipment. 2. Two (2) electrical wiring diagrams, prepared for the model of chassis and body shall be provided.			
Manuals: 1. One (1) chassis operation (manufacturers standard) shall be provided with the completed unit. 2. Two (2) pump manuals from the pump manufacturer shall be furnished with the apparatus. Manuals shall cover pump operation, maintenance, and parts.			
Welding: 1. Manufacturer will have an American Welding Society certified welding inspector in plant during working hours to monitor welding quality. **Steel Welding (Structural):** **1.** Shall follow American Welding Society D1.1-96 recommendations**.** **Aluminum Welding (Structural):** 1. Shall follow American Welding Society and ANSI D1.2-96 recommendations **Flux core arc welding:** 1. Shall use alloy rods, type 7000, American Welding Society Standards A5.20-E70t1.			
Amp Draw Report: 1. Vendor shall provide at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system per NFPA 1901,1999 Edition as follows: a. Documentation of the electrical system performance test b. A written load analysis, which shall include the following: (1) The nameplate rating of the alternator (2) The alternator rating under the conditions specified per: NFPA 1901, 1999 Edition, section 11-3.2, (3) the minimum continuous load of each component that is specified per NFPA 1901, 1999 Edition, section 11-3.2. (4) additional loads that, when added to the minimum continuous load, determine total connected load (5) each individual intermittent load			

REQUEST FOR BID CONDITIONS

In submitting a response to this Request for Bid, vendors hereby understand the following:

1. Sedgwick County reserves the right to reject any or all Bids and responses to these and/or related documents, to accept any item or items in the bids, to waive any irregularity in the bids, and further if determined to be non-responsive in any form, or if determined to be in the best interest of Sedgwick County.

2. Alternate Bids (two or more Bids submitted) will be considered for an award. Sedgwick County reserves the right to make the final determination of actual equivalency or suitability of such Bids with respect to requirements outlined herein. The bids submitted, and any further information acquired through interviews, will become and

are to be considered a part of the final completed contract. If there is any variance or conflict, the Bid specifications will control.

3. **Bidders MUST return two (2) signed, completed copies of the attached Response Form to Sedgwick County Purchasing Department, 604 North Main, Suite F, Wichita, KS 67203-3703, on or before the date and time specified. Bids must be sealed in an envelope, and marked with the firm name and address, Bid number, Bid opening date, and Bid opening time. The time of receipt will be determined by the time clock stamp in the Purchasing Department.**

4. All project participants, consultants, engineers, and contractors, must comply with all applicable Federal, State and County laws pertaining to contracts entered into by governmental agencies, including non-discriminating employment.

5. Quotations submitted may not be withdrawn for a period of 60 days immediately following the opening of this *Request for* Bid. Prices MUST be free of federal, state, and local taxes unless otherwise imposed by a governmental body, and applicable to the material on the Bid.

6. Sedgwick County interprets the term "lowest responsible bidder/Bidder" as requiring Sedgwick County to: (a) choose between the kinds of materials, goods, wares, or services subject to the Bid, and (b) determine which Bid is most suitable for its intended use or purpose. Sedgwick County can consider, among other factors, such things as labor cost, service and parts availability, availability of materials and supplies, and maintenance costs of items upon which Bids are received.

7. All requested information must be supplied. If you cannot respond to any part of this request, state the reason you cannot respond. You may provide supplemental information to assist Sedgwick County in analyzing your Bid.

8. If the supplier refuses or fails to make deliveries of the materials within the times specified on the face of the *Request for Quotation* or purchase order, Sedgwick County may, by written notice, terminate the contract OR purchase order.

9. The supplier will certify and warrant that goods, personal property, chattels, and equipment sold and delivered are free and clear of any and all liens, or claims of liens, for materials or services arising under, and by virtue of the provisions of General Statutes of Kansas, Sections 58-201, et seq., and any other lien, right, or claim of any nature or kind whatsoever.

10. The successful bidder will hold and save Sedgwick County, and its officers, agents, servants/employees harmless from liability of any patented, or unpatented invention, process, article, or appliance manufactured, or used in the performance of the contract, including its use by Sedgwick County.

11. All items furnished, if applicable, must be the best of their respective kinds, and will be free from defects in material and workmanship. Items will be subject to County inspection and approval at any time within 30 days after delivery. If a substitution is made, it will be the decision of Sedgwick County representative to determine if it is of equal quality. Items furnished must be manufactured in compliance with all existing legal or governmental directives.

12. All items must be properly packed, if applicable, to insure delivery in good condition, and in accordance with instructions listed on the face of the *Request for Quotation* or purchase order, if any.

13. Contracts entered into on the basis of submitted Bids are revokable if contrary to law.

14. The Bidder agrees to comply with K.S.A. 44-1030 which becomes a part of this contract, and reads as follows: "The Bidder hereby agrees that? :

    a. He will observe the provision of the Kansas Act Against Discrimination and will not discriminate against any person in the performance of work under the present contract because of race, religion, color, sex, national origin, ancestry, or physical disability;
    b. In all solicitations or advertisements for employees, he will include the phrase, 'Equal Opportunity Employer,' or a similar phrase to be approved by the Kansas Commission on Human Rights;
    c. If he fails to comply with the manner in which he reports to the Kansas Act Against Discrimination, he will be deemed to have breached the present contract, and it may be canceled, terminated, or suspended, in whole or in part, by Sedgwick County;
    d. If he is found guilty of a violation of the Kansas Act Against Discrimination under a decision, or order of the Kansas Commission on Human Rights which has become final, he will be deemed to have breached the present contract, and it may be canceled, terminated, or suspended, in whole or in part, by Sedgwick County; and,
    e. He will include the provisions of subsections (a) through (d) inclusively of this paragraph in every subcontract or purchase order so that such provision will be binding upon such subcontractors or vendor.

15. The vendor responding to this bid solicitation proposes to furnish all materials, labor, supplies, equipment and incidentals necessary to provide the equipment/materials/services described herein in accordance with the Notification of Solicitation (if applicable), Request for Information (if applicable), Request for Quotation/Bid, Addenda, Contract, Bonds, Insurance, Plans, Specifications, Mandatory Requirements and Conditions.

16. It will be understood that the Bidder's sureties and insurers are subject to the approval of the County.

17. If a response to this Request for Bid, the Bidder agrees to execute and deliver to the County a contract in accordance with the Contract Documents (if applicable) within ten days of notice of the award to the Bidder. The Bidder agrees that the surety/deposit given concurrently herewith will become the property of the County in the event the Bidder fails to execute and deliver such contract within the specified time. In the further event of such failure, the Bidder will be liable for the County's actual damages that exceed the amount of the surety.

18. It will be understood that time is of the essence in the Bidder's performance. The Bidder agrees that the County's damages would be difficult or impossible to predict in the event of a default in the performance hereof; and it is therefore agreed that if the Bidder defaults in the performance of the Contract Documents, the Bidder will be liable for payment of the sums stipulated in the Contract Documents as liquidated damages, and not as a penalty.

19. The Bidder hereby certifies that he or she has carefully examined all of the Documents for the project, has carefully and thoroughly reviewed this Request for Bid/Quotation, has inspected the location of the project (if applicable), and understands the nature and scope of the work to be done; and that this Bid is based upon the terms, specifications, requirements, and conditions of the Request for Bid/ Documents. The Bidder further agrees that the performance time specified is a reasonable time, having carefully considered the nature and scope of the project as aforesaid.

20. It will be understood that any bid and any/all referencing information submitted in response to this Request for Bid/Quotation will become the property of Sedgwick County, and will not be returned. As a governmental entity, Sedgwick County is subject to making records available for disclosure after Board of County Commission approval of the recommendation.

21. Sedgwick County will not be responsible for any expenses incurred by any vendor in the development of a response to this Request for Bid/Quotation, including any onsite (or otherwise) interviews and/or presentations, and/or supplemental information provided, submitted, or given to Sedgwick County and/or its representatives. Further, Sedgwick County will reserve the right to cancel the work described herein prior to issuance and acceptance of any contractual agreement/purchase order by the recommended vendor even if the Board of County Commissioners has formally accepted a recommendation.

22. By submission of a response, the Bidder agrees that at the time of submittal, he or she: (1) has no interest (including financial benefit, commission, finder's fee, or any other remuneration) and will not acquire any interest, either direct or indirect, that would conflict in any manner or degree with the performance of Bidder's services, or (2) benefit from an award resulting in a 'Conflict of Interest'. A 'Conflict of Interest' will include holding or retaining membership, or employment, on a board, elected office, department, division or bureau, or committee sanctioned by and/or governed by the Sedgwick County Board of County Commissioners. Bidders will identify any interests, and the individuals involved, on separate paper with the response and will understand that the County, at the discretion of the Purchasing Director in consultation with the County Counselor, may reject their bid/quotation. The Bidder certifies that this bid is submitted without collusion, fraud or misrepresentation as to other Bidders, so that all bids for the project will result from free, open and competitive proposing among all vendors.

23. Unless specified otherwise, all items quoted are to be as a minimum but not necessarily limited to: new, current model year, and untitled prior to shipping and/or installation.

24. Sedgwick County will issue a purchase order/contract for the acquisition of products/services specified as a result of an award made in reference to this document. Contract documents will be subject to any regulations governed by the laws of the State of Kansas and any local resolutions specifically applicable to the purchase.

25. Any dispute arising out of the contract documents or their interpretation will be litigating only within the courts of the State of Kansas. No prepayment of any kind will be made prior to shipment. Payment will be made upon verification of delivery, compliance with specifications, assurance that the product/service performs as specified and warranted, and receipt of correct invoicing.

26. The Bidder must provide Sedgwick County with a toll-free telephone number, OR accept collect calls. FAX numbers should also be provided if available. Information regarding the procurement process may be obtained from Iris Baker, Purchasing Department, 604 North Main, Suite F, Wichita, KS 67203-3703, (316) 383-7494.

27. Sedgwick County will accept responses transmitted via a facsimile unless stated to the contrary within this document. Bids must be received prior to the time and dates listed to be considered responsive. Sedgwick County will not accept late responses and will return them to the sender. Further, Sedgwick County will NOT: (1) guarantee security of the document received; (2) be held responsible for Bids which are NOT legible (and may choose to reject such responses); and, (3) guarantee that the receiving facsimile machine will accept transmission or that phone lines are functioning and available for transmission. Submitting a Bid response via facsimile does NOT relieve the Bidder of: (1) responsibilities stated in the document (such as attendance at a mandatory pre-Bid conference); (2) providing non-paper informational items which must be returned with the response (diskettes, large drawings, photographs, models, etc.); and, (3) providing original copies of Bid sureties (bonds, certificates of insurance, etc.)