



**SEDGWICK COUNTY, KANSAS
DIVISION OF FINANCE
PURCHASING DEPARTMENT**

525 N. Main, Suite 823 ~ Wichita, KS 67203

Phone: 316 660-7255 Fax: 316 383-7055

www.sedgwickcounty.org/finance/purchasing.asp

**REQUEST FOR PROPOSAL
#15-0005
TENDER / PUMPER TRUCK**

January 22, 2015

Sedgwick County, Kansas (hereinafter referred to as "County") is seeking to obtain proposals from vendors to provide one (1) TENDER / PUMPER TRUCK, for Sedgwick County Fire District #1. It is anticipated that an official purchase order will be issued after Board of County Commission approval of the recommended proposal. It should be noted, however, that the County cannot guarantee the purchase of the product described herein.

Carefully review this Request for Proposal. It provides specific technical information necessary to aid participating firms in formulating a thorough response. To ensure that vendors have complete information prior to submitting a bid, **a pre-bid meeting has been scheduled for February 4, 2015 beginning at 1:00 p.m. CST in the Finance Conference room located in the Sedgwick County Finance Department, 525 N. Main St., Ste 823, Wichita, Kansas.** Should firms elect to participate, one (1) complete original, one (1) copy and one (1) electronic copy on a CD or USB flash drive (including all supplementary materials) must be completed and returned to:

Gunda Angelica
Sedgwick County Purchasing Department
525 N. Main St., Suite 823
Wichita, KS 67203

SUBMITTALS are due **NO LATER THAN 1:45 p.m. CST, February 17, 2015.** Responses must be sealed and marked on the lower left-hand corner with the firm name and address, proposal number, and proposal due date. Late or incomplete responses will not be accepted and will not receive consideration for final award. The time stamp clock in the Purchasing Department will determine the time of receipt.

Proposal responses will be acknowledged and read into record at bid opening which will occur at 2:00 p.m., CST on the due date. No information other than the respondent's name will be disclosed at bid opening.

Gunda Angelica
Purchasing Agent

1. ABOUT THIS DOCUMENT

This document is a Request for Proposal. It differs from a Request for Bid or Quotation in that the County is seeking a solution, as described on the cover page and in the following background information section, not a bid or quotation meeting firm specifications for the lowest price. As such, the lowest price proposed will not guarantee an award recommendation. As defined in Charter Resolution No. 65, Competitive Sealed Proposals will be evaluated based upon criteria formulated around the most important features of the product(s) and/or service(s), of which quality, testing, references, service, availability or capability, may be overriding factors, and price may not be determinative in the issuance of a contract or award. The proposal evaluation criteria should be viewed as standards that measure how well a vendor's approach meets the desired requirements and needs of the County. Criteria that will be used and considered in evaluation for award are set forth in this document. The County will thoroughly review all proposals received. The County will also utilize its best judgment when determining whether to schedule a pre-proposal conference before proposals are accepted, or meetings with vendors after receipt of all proposals. A Purchase Order/Contract will be awarded to a qualified vendor submitting the best proposal. **Sedgwick County reserves the right to select, and subsequently recommend for award, the proposed service(s) and/or product(s) which best meets its required needs, quality levels and budget constraints.**

The nature of this work is for a public entity and will require the expenditure of public funds and/or use of public facilities, therefore the successful proposer will understand that portions (potentially all) of their proposal may become public record at any time after receipt of proposals. Proposal responses, purchase orders and final contracts are subject to public disclosure after award. All confidential or proprietary information should be clearly denoted in proposal responses and responders should understand this information will be considered prior to release, however no guarantee is made that information will be withheld from public view.

2. GENERAL & BACKGROUND INFORMATION

Sedgwick County, located in south-central Kansas, is one of the most populous of Kansas' 105 counties with a population estimated at more than 503,000 persons. It is the sixteenth largest in area, with 1008 square miles, and reportedly has the second highest per capita wealth among Kansas counties. Organizationally, the County is a Commission/Manager entity, and hosts or provides a full range of municipal services, e.g. – public safety, public works, criminal justice, recreation, entertainment, cultural, human/social, and education. In accordance with the specifications outlined here, it is the intent to receive proposals to provide one (1) TENDER / PUMPER TRUCK, for Sedgwick County Fire District #1.

3. MINIMUM QUALIFICATIONS

The successful proposer must:

- 3.1 Have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 20 years, including experience with the equipment, technical ability, personnel and facilities to properly complete, coordinate and administer the contract, if awarded.
- 3.2 Have proven ability to provide high quality service(s) and/or product(s) within the specifications, mandatory requirements, miscellaneous instructions and conditions as outlined in this and future related documents.
- 3.3 Provide product/services following all applicable federal, state, and local laws, regulations, and ordinances.

4. GENERAL REQUIREMENTS

- 4.1 New current models shall be used.
- 4.2 Provide manufacturer name, model proposed and include specifications.
- 4.3 Provide a lead time for production.

5. SELECTION CRITERIA

The selection process will be based on the responses to this Request for Proposal and any interviews required verifying the ability of proposer to provide services in accord with this document. A committee will evaluate each proposer's response as determined by meeting the following criteria (ranked in no particular order):

- Demonstrate clearly and completely your ability and capacity to meet all Request for Proposal conditions and miscellaneous instructions as outlined herein, and the clarity, completeness and comprehensiveness of the proposal

- Proven ability to provide high-quality products with superior service within the specifications, mandatory requirements, miscellaneous instructions and conditions as outlined in this and future related documents. Such ability will be determined by:
 - Providing four (4) references verifying exemplary service. These references MUST have received service(s) and/or product(s) similar to those proposed under this RFP. Provide the business name, address, contact name, phone number, e-mail address and a brief description of product(s) provided.
 - Meeting or exceeding all provider qualification requirements and/or specifications as outlined herein; and
 - Providing the County with the most advantageous proposal

Those submitting a proposal do so entirely at their own expense. There is no expressed or implied obligation by Sedgwick County to reimburse any individual or firm for any cost incurred in preparing or submitting proposals, providing additional information when requested by Sedgwick County or for participating in any selection interviews.

County reserves the right to reject any proposal, determine any irregularities, and make final determination for award.

No negotiations, decisions, or actions will be initiated by any firm as a result of any verbal discussion with any County employee during the request for proposal process. Sedgwick County reserves the right to select the service(s) and/or provider(s), and subsequently recommend for award, the proposed services that best meets required needs, quality levels, and budget constraints.

6. TENTATIVE TIMELINE

The following dates are provided for information purposes and are subject to change without notice. Contact Gunda Angelica at (316) 660-7262 to confirm any and all dates.

Distribution of Request for Proposal to interested parties	January 22, 2015
Pre-Bid Meeting at 1:00 p.m. CST	February 4, 2015
Clarification, Information and Questions submitted in writing by 5:00 p.m. CST	February 9, 2015
Addendum Issued	February 11, 2015
Sealed proposals due before 1:45 p.m. CST	February 17, 2015
Evaluation Period	February 18-March 3, 2015
Board of Bids and Contracts Recommendation	March 5, 2015
Board of County Commission Award	March 11, 2015

7. QUESTIONS and CLARIFICATIONS

All requests for clarifications of the RFP process and document content should be directed to Gunda Angelica at Gunda.Angelica@sedgwick.gov and Brian Richey at Brian.Richey@sedgwick.gov. Questions must be submitted in writing by 5:00 p.m. CST, February 9, 2015. Answers will be provided in written form as an addendum and will be posted on the County website at www.sedgwickcounty.org/finance/purchasing.asp. **Vendors are responsible for checking the website and acknowledging any addenda in their response.**

8. SPECIFICATION and REQUIREMENTS

Proposals taking total exception to specifications shall not be acceptable. Bidders shall submit a detailed proposal. A letter only, even though written on a company letterhead, shall not be sufficient. Bid proposals shall be submitted in the same sequence as specifications for ease of evaluation, comparison and checking of compliance. Any exception to these requirements shall not be tolerated.

This document has several headings, which are in bold type and underlined. The headings should be considered a question on how the manufacturer will complete the item or how the manufacturer meets or intends to meet the qualifications set forth.

- A. Sedgwick County Fire District #1 will require certain items to be used in the manufacturing of this apparatus. Under certain headings this equipment or method of construction will be noted as a specification. These

specifications point out the preferred qualifications on this apparatus. Any exceptions from the preferred qualifications will require an in-depth explanation of the manufacturer's intent and purpose.

- B. Any other items or options that the manufacturer deems necessary, relevant or advantageous to this apparatus can be submitted with the proposal. These items should be listed with the price of the proposed item on a separate page(s) under the header "Additional Provisions." The County reserves the right to select one (1), some or none of the options identified.

It shall be the intent of this request for proposal(s) to outline the general intent of favorable provisions for the furnishing and delivery of a complete fire apparatus. These detailed specifications cover the preferred minimum requirements as to the type of construction and test to which the apparatus shall conform, together with certain details as to finish, equipment and appliances with which the successful bidder shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the contractor. The manufacturer shall provide loose equipment only when specified by the County. Otherwise, in accordance with the current edition of NFPA 1901 standards, the proposal shall specify whether the fire department or apparatus dealership shall provide required loose equipment.

In order to ensure fair, ethical and legal competition, neither original equipment manufacturer (OEM) or parent company of the OEM shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market (no exception).

Bids shall only be considered 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. Further, bidder shall maintain dedicated service facilities for the repair and service of products. Evidence of such a facility shall be included in bidder proposal.

Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified and shall state the state and location of the factory where the apparatus is to be built. The bidder shall also show that the company is in position to render prompt service and to furnish replacement parts.

Each bid shall be accompanied by a detailed set of Contractor's Specifications 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.

Bidders shall also indicate in the "Yes/No" column if their bid complies on each item (paragraph) specified. Exceptions shall be allowed if they are equal to or superior to that specified and provided they are listed and fully explained on a separate page.

All exceptions shall be stated no matter how seemingly minor. Any exceptions not taken shall be assumed by the purchaser to be included in the proposal, regardless of the cost to the bidder.

	Description	Bidder Complies	
		Yes	No
8.1	<p><u>QUALITY AND WORKMANSHIP</u></p> <p>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 ample safety factors shall be provided to carry the loads specified and to meet both on and off-road requirements and speed conditions as set forth under Performance Tests and Requirements. 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 D1.1-2004 recommendations for structural steel welding. All aluminum welding shall follow American Welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal. Flux core arc welding to use alloy rods, type 7000, American Welding Society standards A5.20-E70T1. Employees classified as welders are tested and certified to meet American Welding Society codes upon hire and every three (3) years thereafter. The manufacturer shall be required to have an American Welding Society certified welding inspector in-plant during working hours to monitor weld quality.</p>		
8.2	<p><u>DELIVERY</u></p> <p>Apparatus, to insure proper break-in of all components while still under warranty, shall be delivered under its own power - rail or truck freight shall not be acceptable. A qualified delivery engineer representing the contractor shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in the proper operation, care and maintenance of the equipment delivered.</p>		
8.3	<p><u>INFORMATION REQUIRED</u></p> <p>The manufacturer shall supply at time of delivery, complete operation and maintenance manuals covering the completed apparatus as delivered. A permanent plate shall be mounted in the driver's compartment which specifies the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.</p>		
8.4	<p><u>SAFETY VIDEO</u></p> <p>Documentation provided at the time of delivery shall also include an apparatus safety video, in DVD format. This video shall address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus. Safety procedures for the following shall be included: vehicle pre-trip inspection, chassis operation, pump operation, and maintenance.</p>		

8.5	<u>PERFORMANCE TESTS AND REQUIREMENTS</u> A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters: A The apparatus, when fully equipped and loaded, shall have not less than 25 percent nor more than 50 percent of the weight on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle.		
B	The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.		
C	The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor Vehicle Safety Standards (FMVSS) 121.		
D	The apparatus, fully loaded, shall be capable of obtaining a speed of 50 mph on a level concrete highway with the engine not exceeding its governed rpm (full load).		
8.6	<u>FAILURE TO MEET TEST</u> In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use by the purchaser during the above-specified period with the permission of the bidder shall not constitute acceptance.		
8.7	<u>LIABILITY</u> The successful bidder shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.		
8.8	<u>GENERAL CONSTRUCTION</u> The apparatus shall be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association.		
8.9	<u>ISO COMPLIANCE</u> The manufacturer shall operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that shall be established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance shall be included with the bid.		
A			
B	The bidder shall state the location of the factory where the apparatus is to be built.		

8.10	<u>NFPA 2009 STANDARDS</u> This apparatus specification includes a commercial chassis that has not been certified to meet the requirements of NFPA 1901 by the chassis manufacturer. The body as built by the manufacturer must comply with the NFPA standards effective January of 2009.		
A			
B	Certification of slip resistance of all stepping, standing and walking surfaces must be supplied with delivery of the apparatus.		
C	A plate that is highly visible to the driver while seated shall be provided. This plate shall show the overall height, length, and gross vehicle weight rating.		
D	The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications.		
E	An official of the company shall designate, in writing, who is qualified to witness and certify test results.		
8.11	<u>NFPA COMPLIANCE</u> Apparatus proposed by the bidder shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in the current edition at time of contract execution. Fire Department's specifications that differ from NFPA specifications shall be indicated in the proposal as "non-NFPA."		
8.12	<u>PUMP TEST</u> The rated water pump shall be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details shall be forwarded to the Fire Department.		
8.13	<u>GENERATOR TEST</u> If the unit has a generator, the generator shall be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results shall be provided to the Fire District at the time of delivery.		
8.14	<u>TRAINING</u> Training from a factory-certified trainer will be provided on each unit for a maximum of 24 hours (three 8-hour shifts). There will also be a factory trainer on aerial devices. This training can take place on the consecutive days you choose. For volunteer departments, this training can be provided on weekend schedules.		
8.15	<u>SERVICE</u> The bidder must have a service center within Kansas and also have mobile service available to the Fire District location. Provide the County with phone numbers, contact persons and an emergency 24/7 service number.		
A			
B	Provide the County with a 24/7 phone number to customer service from the factory level as well.		

8.16	<u>BID BOND</u> All bidders shall provide a bid bond as security for the bid in the form of a 10% bid bond to accompany their bid. This bid bond shall be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond shall be issued by an authorized representative of the Surety Company and shall be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond shall include language, which assures that the bidder/principal shall give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.		
A			
B	Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle shall apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle shall not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision shall prevail.		
8.17	<u>PERFORMANCE BOND NOT REQUESTED</u> A performance bond shall not be included. If requested at a later date, one shall be provided to the Cuunty for an additional cost and the following shall apply: The successful bidder shall furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond shall be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.		
A			
B	Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Bumper to Bumper warranty period included within this proposal. Owner agrees that the penal amount of this bond shall be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type shall not exceed three (3) years from the date of such satisfactory acceptance and delivery, or the actual Bumper to Bumper warranty period, whichever is shorter.		
8.18	<u>APPROVAL DRAWING</u> A drawing of the proposed apparatus shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.		
A			
B	A "revised" approval drawing of the apparatus shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing.		

8.19	<u>ELECTRICAL WIRING DIAGRAMS</u> Two (2) electrical wiring diagrams, prepared for the body as it interfaces with the commercial chassis, shall be provided.		
8.20	<u>CHASSIS</u> The chassis shall be a Freightliner, Model M2, 112MD Conventional Chassis, supplied with the following equipment:		
8.21	<u>WHEELBASE</u> The wheelbase of the vehicle shall be no greater than 217.00".		
8.22	<u>GVW RATING</u> The gross vehicle weight rating shall be a minimum of 64,000 lbs.		
8.23	<u>FRAME</u> The frame rails shall be formed from 120,000 psi yield, heat-treated alloy steel.		
8.24	<u>FRAME LINER</u> A 0.25" inner frame reinforcement shall be provided.		
	The frame section properties shall be:		
B	- Section Modulus: 26.50 cubic inch, per rail		
C	- RBM: 3,200,000 in-lb, per rail		
D	- Yield Strength: 120,000 psi, per rail		
8.25	<u>FRONT AXLE</u> Front axle shall be an I beam type, made of forged steel. It shall be a Detroit brand axle, with a ground rating capacity of 18,000 lb.		
8.26	<u>FRONT SUSPENSION</u> A Capacity at Ground: 18,000 lb		
B	Shock Absorbers: Double Acting		
C	Shock absorbers shall be provided on the front axle.		
8.27	<u>TIRES, FRONT</u> Front tires shall be Michelin 315/80R22.50, radial tires with a tread pattern suitable for the steering axle position. The capacity of the tires shall meet or exceed the rating of the axle and/or suspension.		
8.28	<u>WHEELS, FRONT</u> Wheels for the front axle shall be 22.50" x 9.00" polished aluminum disc, ten (10)-hole pattern.		
8.29	<u>REAR AXLE</u> A The rear axle shall be a Detroit brand tandem axle assembly with a capacity of 44,000 lb.		
B	An inter-axle differential, which divides torque evenly between axles, shall be provided with an indicator light mounted on the cab instrument panel.		
8.30	<u>REAR AXLE RATIO</u> A rear axle ratio shall be furnished to allow the vehicle to reach a top speed of 68 mph.		

8.31	<u>SUSPENSION, REAR</u> Rear suspension to be the Hendrickson RT2-460 steel spring system with an equalizing beam design that distributes the load equally between the two (2) axles. Ground rating of the suspension to be 46,000 lbs. Axles to have 52.00" spacing. Steel beams and bronze center bushings shall be provided.		
8.32	<u>TIRES, REAR</u> Rear tires shall be Michelin 11R22.50 radial tires with a traction tread pattern suitable for the drive axle position. The tires shall meet or exceed the weight rating of the axle and/or suspension.		
8.33	<u>WHEELS, REAR</u> The rear wheels shall be aluminum 22.50" x 8.25" disc with a ten (10)-hole pattern.		
8.34	<u>TIRE PRESSURE MANAGEMENT</u> A There shall be a RealWheels LED AirSecure™ tire alert pressure management system provided, that shall monitor each tire's pressure. A sensor shall be provided on the valve stem of each tire for a total of 10 tires.		
B	The sensor shall calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor shall activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi.		
C	Removing the cap from the sensor shall indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED shall immediately start to flash.		
8.35	<u>CHROME LUG NUT COVERS</u> Chrome lug nut covers shall be supplied on front and rear wheels.		
8.36	<u>MUD FLAPS</u> Mud flaps shall be installed behind the rear wheels of the apparatus.		
8.37	<u>WHEEL CHOCKS</u> There shall be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks with easy-grip handle provided.		
8.38	<u>WHEEL CHOCK BRACKETS</u> There shall be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets shall be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets shall be mounted below the left side rear compartment.		

8.39	<u>ANTI-LOCK BRAKE SYSTEM</u> The vehicle shall be equipped with a Wabco, model 4S/4M, four (4) channel anti-lock braking system (ABS). The ABS shall provide anti-lock braking control on both the front and rear wheels. It shall be a digitally controlled system that utilizes microprocessor technology to control the anti-lock braking system. Each wheel shall be monitored by the system. When any particular wheel begins to lockup, a signal shall be sent to the control unit. This control unit shall then reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system shall eliminate the lockup of any wheel, thus helping to prevent the apparatus from skidding out of control.		
A			
B	The system shall include Automatic Traction Control (ATC).		
C	The system shall include Electronic Stability Control (ESC). When instability is detected, the ESC system shall automatically apply brakes to individual wheels (with no intervention from the driver) and may also reduce engine torque to help keep the vehicle on track.		
8.40	<u>FRONT AND REAR BRAKES</u> The front and rear brakes shall be disc style brakes.		
8.41	<u>AIR COMPRESSOR, BRAKE SYSTEM</u> The air compressor shall be a BW model BA921, with 19.0 cubic feet per minute output.		
8.42	<u>AIR DRYER</u> A Wabco System Saver 1200 air dryer with internal air governor and a heater shall be provided.		
8.43	<u>AIR INLET</u> A single air inlet with male coupling shall be provided. It shall allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet shall be located in the driver side lower step well of cab. 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.		
8.44	<u>ENGINE</u> The chassis shall be powered by a Detroit Diesel electronic engine as described below:		
A	Model: DD13, 12.8L		
B	Number of Cylinders: Six (6) / In line		
C	Bore and Stroke: 5.20" x 6.14"		
D	Displacement: 781 cubic inches (12.8 liter)		
E	Compression ratio: 17.3:1		
F	Rated Brake Horsepower: 450 at 1800 rpm		
G	Torque: 1650 at 1100 rpm		
H	Governed rpm: 2080		
8.45	<u>HIGH IDLE</u> A high idle switch shall be provided on the instrument panel inside the cab. Activating the switch shall cause the vehicle to automatically maintain a preset engine rpm.		
A			

B	The high idle switch shall be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light shall be provided adjacent to the switch. The light shall be labeled "OK To Engage High Idle."		
8.46	<u>ENGINE BRAKE</u> A Jacobs engine compression brake shall be provided. The control shall be located on the instrument panel within easy reach of the driver. Controls shall consist of a three position switch: high-low-off.		
8.47	<u>AIR INTAKE, with EMBER SEPARATOR</u> The air inlet shall be equipped with a stainless steel mesh to separate water and burning embers from the air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element.		
A			
B	This shall comply with NFPA 1901 and 1906 standards.		
8.48	<u>EXHAUST SYSTEM</u> The exhaust system shall include a diesel particulate filter (DPF) and a selective catalytic reduction (SCR) device to meet current EPA standards. The DPF and SCR shall be mounted horizontally outside of the frame rails in the passenger side front step area.		
8.49	<u>EXHAUST MODIFICATIONS</u> The exhaust shall terminate the side of the body with a horizontal tailpipe and diffuser ahead of the passenger side rear wheels.		
A			
B	A heat deflector shield shall be provided where the tail pipe is routed under any side compartmentation.		
8.50	<u>COOLANT LINES</u> Gates Blue Stripe rubber hose shall be used for all engine coolant lines installed by the chassis manufacturer.		
A			
B	Hose clamps shall be of a design commonly called constant torque type to prevent coolant leakage. They shall react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.		
8.51	<u>FUEL TANK</u> A 50 gallon fuel tank shall be provided and mounted at the left-hand cab step. The rectangular tank shall be constructed of aluminum.		
8.52	<u>DIESEL EXHAUST FLUID TANK</u> A 6.00 gallon diesel exhaust fluid (DEF) tank shall be provided and mounted on the driver's side, below the cab.		
A			
B	The tank shall include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.		
8.53	<u>AUXILIARY FUEL COOLING SYSTEM</u> 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.		

8.54	<u>TRANSMISSION</u>		
A	An Allison, model 4000 EVS, electronic torque converting automatic transmission shall be provided.		
B	Two (2) PTO openings shall be located on left side and top of converter housing (positioned at 8 o'clock and 1 o'clock).		
C	A transmission temperature gauge or warning light shall be installed on cab instrument panel.		
8.55	<u>TRANSMISSION SHIFT CONTROL</u>		
A	A push button shift module shall be mounted to right of driver. Shift position indicator shall be indirectly lit for after dark operation.		
B	The transmission shall be a five (5)-speed. The transmission ratios shall be 1st - 3.51 to 1.00, 2nd - 1.91 to 1.00, 3rd - 1.43 to 1.00, 4th - 1.00 to 1.00, 5th - 0.74 to 1.00, R - 4.80 to 1.00.		
8.56	<u>TRANSMISSION COOLER</u>		
	An external transmission oil cooler shall be provided.		
8.57	<u>DRIVELINE</u>		
	Drivelines shall be a heavy duty metal tube equipped with universal joints properly sized for the application. A splined slip joint shall be provided in each driveshaft.		
8.58	<u>STEERING</u>		
	The steering system shall be hydraulically driven. The steering column shall have an adjustable tilt and telescope feature.		
8.59	<u>BUMPER</u>		
A	A one (1) piece, 10.00" high, stainless steel bumper shall be attached to the front of the frame.		
B	A 9.00" channel shall be mounted directly behind the bumper for additional strength.		
C	The bumper shall be extended 16.00" from the front face of the cab.		
8.60	<u>GRAVEL PAN</u>		
	A gravel pan, constructed of bright aluminum treadplate, shall be furnished between the bumper and cab face. The gravel pan shall be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.		
8.61	<u>TOW HOOKS</u>		
	Two (2) chromed steel tow hooks shall be installed under the bumper and attached to the front frame members. The tow hooks shall be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks shall not be used for lifting of the apparatus.		
8.62	<u>HOSE TRAY</u>		
A	A hose tray, constructed of aluminum, shall be placed in the center of the bumper extension.		
B	The tray shall have a capacity of 100' of 1.75" double jacket cotton-polyester hose.		
C	Black rubber grating shall be provided at the bottom of the tray. Drain holes shall also be provided.		

8.63	<u>COVER, HOSE TRAY</u>		
A	A bright aluminum treadplate cover shall be provided over the one (1) hose tray.		
B	The cover shall be "notched" allowing the hose to be preconnected to hose connection.		
C	The cover shall be attached with a stainless steel hinge.		
D	A D-ring latch shall secure the cover in the closed position and a pneumatic stay arm shall hold the cover in the open position.		
E	The area of the hose tray to be covered shall be the front bumper center hose tray.		
8.64	<u>CAB</u>		
A	A 2-door flat-roof cab shall be provided. The cab and doors shall be of an aluminum construction.		
B	Exterior Styling		
	1. Aerodynamic hood and windshield		
	2. Tinted glass in all windows		
	3. Fiberglass hood with mounted plastic grille		
	4. Single 63"x14" rear window		
C	Interior		
	1. Rubber cab mounts		
	2. Black vinyl mats		
	3. Forward roof-mounted console		
	4. Two (2) dash-mounted cup holders, right-hand and left-hand		
	5. Gray vinyl upholstery		
	6. Dual sun visors		
	7. Fresh air heater and defroster		
8.65	8. Gray vinyl upholstery		
	<u>CAB GRILLE, INTERIOR CONVENIENCE and EXTERIOR APPEARANCE PACKAGE</u>		
A	The cab exterior shall have a high-impact plastic chromed grille and matching headlight bezels. The grille shall tilt with the hood.		
B	Additionally, the headlight bezels and the engine air intake housing shall have a chrome finish.		
C	The cab interior shall include wood grain dash panels, molded door panels with vinyl inserts and brushed aluminum door kick plates.		
8.66	<u>MIRRORS</u>		
	West coast style heated, remote operated mirrors constructed from a molded composite material with a bright finish shall be provided. A heated 8.00" convex mirror shall be included below the primary mirrors. An auxiliary down view mirror shall be included on the passenger side.		
8.67	<u>CAB ACCESS STEPS</u>		
A	The cab access steps shall be provided by the apparatus manufacturer. The steps shall be a two (2) step design fabricated from bright aluminum treadplate.		

B	The step assembly shall enclose the area under the cab, including the DEF tank. The fuel and DEF tank fill caps shall be exposed for refueling if located under the cab. Access shall be provided to inspect the chassis batteries when located under the cab.		
8.68	<u>STEP LIGHTS</u>		
A	There shall be four (4) white LED step lights provided. There shall be one (1) light installed at each cab door, one (1) light per doorstep.		
B	In order to ensure exceptional illumination, each light shall provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.		
C	The lights shall be activated when the adjacent door is opened.		
8.69	<u>DAYTIME RUNNING LIGHTS</u>		
	The chassis shall be provided with daytime running lights.		
8.70	<u>AIR CONDITIONING</u>		
	An air conditioner shall be provided that is integral with heater and defroster system.		
8.71	<u>ENGINE COMPARTMENT LIGHTS</u>		
	Two (2) engine compartment lights shall be installed under the engine hood, of which the switches are an integral part.		
8.72	<u>STORAGE CONSOLE</u>		
	There shall be a console located between the front seats with room for map storage, the siren head and a radio. There shall be four (4) sections for map storage to the rear of the console. Each map storage section shall be approximately 4.00" wide x 13.00" long x 12.25" deep. The console shall be constructed of smooth aluminum and painted black.		
8.73	<u>SEATING CAPACITY</u>		
	The seating capacity in the cab shall be two (2).		
8.74	<u>SEATING</u>		
	Seating inside the cab shall consist of an air-ride driver seat and a fixed companion seat.		
8.75	<u>SEAT BELT WEB LENGTH</u>		
	The chassis seat belt web length as supplied by the commercial chassis manufacturer shall be compliant to NFPA 14.1.3.2 and 14.1.3.3.		
8.76	<u>SEAT BELTS</u>		
	All seating positions in the cab and crew cab shall have highly visible (orange) seat belts.		
8.77	<u>SEAT BELT MONITORING SYSTEM</u>		
	A seat belt monitoring system (SBMS) shall be provided. The SBMS shall be capable of monitoring up to six (6) seat positions indicating the status of each seat position with a green or red LED indicator as follows:		
A	Seat Occupied & Buckled = Green		
B	Seat Occupied & Unbuckled = Red		
C	No Occupant & Buckled = Red		
D	No Occupant & Unbuckled = Not Illuminated		

E	The SBMS shall include an audible alarm that shall be activated when a red illumination condition exists and the parking brake is released, or a red illumination condition exists and the transmission is not in park.		
8.78	<u>HELMET STORAGE, PROVIDED BY FIRE DEPARTMENT</u>		
A	NFPA 1901, 2009 edition, section 14.1.8.4.1 requires a location for helmet storage be provided.		
B	There is no helmet storage on the apparatus as manufactured. The fire department shall provide a location for storage of helmets.		
8.79	<u>HAND HELD LIGHT</u>		
A	There shall be two (2) 12v Streamlight, Fire Vulcan, Model #44451, lights mounted. Locate with approval drawings.		
B	Each light housing shall be orange in color and be provided with a C4 LED and two (2) "ultra bright blue tail light LEDs" The tail light LEDs shall have a dual mode of blinking or steady.		
C	Vehicle mount with 12VDC direct wire charging rack.		
D	Quick release buckle strap shall be included.		
8.80	<u>CAB INSTRUMENTS</u>		
A	Engine temperature gauge and warning buzzer		
B	Engine oil pressure gauge and warning buzzer		
C	Speedometer with odometer		
D	Engine tachometer		
E	Engine hourmeter		
F	Fuel level gauge		
G	DEF level gauge and warning lamp with 2010+ engines		
H	Voltmeter: low voltage red warning light and audible alarm		
I	Air brake pressure gauge		
J	Air restriction indicator		
K	Circuit breakers: for overload protection of electric circuits		
L	Ignition switch: keyless type		
8.81	<u>EMERGENCY SWITCH PANEL</u>		
	An emergency switch panel shall be provided in the cab. The switch panel shall be located overhead and on the cab instrument panel.		
8.82	<u>"DO NOT MOVE APPARATUS" INDICATOR</u>		
A	A flashing red indicator light (located in the driving compartment) shall be illuminated automatically per the current edition of NFPA. The light shall be labeled "Do Not Move Apparatus If Light Is On".		
B	The same circuit that activates the Do Not Move Apparatus indicator shall not activate any alarm when the parking brake is released.		
8.83	<u>OPEN DOOR INDICATOR LIGHT</u>		
	A red "open door" indicator light shall be provided inside the cab, in clear view of the driver, to warn of an open compartment door.		

8.84	<u>WIPER CONTROL</u> Wiper control shall include an intermittent feature and windshield washer controls.		
8.85	<u>VEHICLE DATA RECORDER</u> A vehicle data recorder (VDR) shall be provided. The VDR shall be capable of reading and storing vehicle information. The VDR shall be capable of operating in a voltage range from 8VDC to 16VDC. The VDR shall not interfere with, suspend, or delay any communications that may exist on the CAN data link during the power up, initialization, runtime, or power down sequence. The VDR shall continue operation upon termination of power or at voltages below 8VDC for a minimum of 10ms.		
A			
B	The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A CD provided with the apparatus shall include the programming to download the information from the VDR. A USB cable can be used to connect the VDR to a laptop to retrieve required information.		
C	The vehicle data recorder shall be capable of recording the following data via hardwired and/or CAN inputs:		
	1. Vehicle speed - mph		
	2. Acceleration - mph/sec		
	3. Deceleration - mph/sec		
	4. Engine speed - rpm		
	5. Engine throttle position - % of full throttle		
	6. ABS event - On/Off		
	7. Seat occupied status - Yes/No by position (1-6 seating capacity)		
	8. Seat belt buckled status - Yes/No by position (1-6 seating capacity)		
	9. Master optical warning device switch - On/Off		
	10. Time – 24-hour time		
	11. Date - Year/Month/Day		
8.86	<u>VEHICLE CAMERA SYSTEM</u> There shall be a color vehicle camera system provided with the following:		
A	One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse		
B	One (1) camera located near the passenger side dump chute area, pointing outward, manual display only		
C	One (1) camera located near the driver side dump chute area, pointing outward, manual display only		
D	The camera images shall be displayed on a 7.00" LCD display located on the overhead console by the driver's seating position. The display shall include manual camera activation capability and audio from the rear camera only.		
E	The following components shall be included:		
	<input type="checkbox"/> One (1) MO700136DC display		
	<input type="checkbox"/> One (1) SV-CW134639CAI rear camera		
	<input type="checkbox"/> Two (2) CS134404CI side cameras		
	<input type="checkbox"/> All necessary cables		

8.87	<u>ELECTRICAL</u>		
A	All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. All wiring shall be high temperature crosslink type. Wiring shall be run in loom or conduit where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers shall be provided which conform to SAE Standards. Wiring shall be color, function and number coded. Function and number codes shall be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors shall be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment shall be installed utilizing the following guidelines:		
	1. All holes made in the roof shall be caulked with silicon. Rope caulk is not acceptable. Large fender washers, liberally caulked, shall be used when fastening equipment to the underside of the cab roof.		
	2. Any electrical component that is installed in an exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it. Exposed area shall be defined as any location outside of the cab or body.		
	3. Electrical components designed to be removed for maintenance shall not be fastened with nuts and bolts. Metal screws shall be used in mounting these devices. Also a coil of wire shall be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.		
	4. Corrosion preventative compound shall be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections shall require this compound in the plug to prevent corrosion and for easy separation (of the plug).		
	5. All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.		
	6. All electrical terminals in exposed areas shall have silicon (1890) applied completely over the metal portion of the terminal. All emergency light switches shall be mounted on a separate panel installed in the cab. A master warning light switch and individual switches to be provided to allow pre-selection of emergency lights. The light switches shall be "rocker" type with an internal indicator light to show when switch is energized. All switches shall be properly identified and mounted in a removable panel for ease in servicing. Identification of the switches shall be done by either printing or etching on the switch panel. The switches and identification shall be illuminated.		
B	All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, shall be furnished. Rear identification lights shall be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads shall be protected from damage by installing a false bulkhead inside the rear compartments.		
C	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.		
D	The results of the tests shall be recorded and provided to the purchaser at time of delivery.		

8.88	<u>BATTERY SYSTEM</u>		
A	A single starting battery system shall be provided consisting of three (3)-12 volt, 1125 CCA, maintenance-free, group 31 batteries.		
B	The batteries system shall have a total of 3375 cold cranking amps (CCA).		
c	Jump Start Connections: Positive and negative posts for jump starting shall be provided by the chassis manufacturer. They shall be frame mounted and located under the hood.		
8.89	<u>BATTERY SYSTEM MODIFICATION</u> Due to specific apparatus configuration requirements, the batteries shall be relocated to the cargo area by the apparatus manufacturer. An enclosure with an access panel shall protect the batteries.		
8.90	<u>MASTER BATTERY SWITCH</u>		
A	A master battery switch, to activate the battery system, shall be provided inside the cab within easy reach of the driver.		
B	The master battery disconnect switch shall be wired between the starter solenoid and the remainder of the electrical loads on the apparatus.		
C	A green "battery on" indicator light, visible from the driver's position, shall be provided.		
8.91	<u>BATTERY CHARGER/ AIR COMPRESSOR</u>		
A	There shall be a Kussmaul Pump Plus 1000 Model 091-9-1000, 18 amp single output battery charger/air compressor system with internal battery saver. There shall be a display bar graph indicating the state of charge included.		
B	The battery saver circuit shall be capable of supplying up to three (3) amps for external loads such as hand light or auxiliary radio batteries.		
C	The 12-volt air compressor shall be installed to maintain the air system pressure when the vehicle is not in use.		
D	The battery charger shall be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.		
E	Battery charger/compressor shall be located in the front left body compartment.		
F	The battery charger indicator shall be located in the driver's step area.		
8.92	<u>KUSSMAUL AUTO EJECT FOR SHORELINE</u>		
A	There shall be one (1) Kussmaul Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet provided to operate the dedicated 120 volt AC circuits on the apparatus.		
B	The shoreline inlet shall include a red weatherproof flip up cover.		
C	There shall be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting.		
D	The shoreline shall be connected to Kussmaul system.		
E	There shall be a mating connector body supplied with the loose equipment.		
F	There shall be a label installed near the inlet that state the following:		
	1. Line Voltage		
	<input type="checkbox"/> Current Rating (amps)		
	<input type="checkbox"/> Phase		
	<input type="checkbox"/> Frequency		

G	The shoreline receptacle shall be located on the driver side rear bulkhead of body.		
8.93	<u>ALTERNATOR</u> The alternator shall be a Delco with a capacity of 12-volt 300 amp.		
8.94	<u>ELECTRONIC LOAD MANAGEMENT</u> A Kussmaul Load Manager 2 shall be provided on the apparatus. The device is an electronic load management (ELM) system that monitors the vehicles 12-volt electrical system, and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.		
A			
B	The ELM shall monitor the vehicle's voltage while at the scene (parking brake applied). It shall sequentially shut down individual electrical loads when the system voltage drops below a preset value. Two (2) separate electrical loads shall be controlled by the load manager. The ELM shall sequentially re-energize electrical loads as the system voltage recovers.		
8.95	<u>EXTERIOR LIGHTING</u> Exterior lighting shall meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements in effect at time of proposal.		
A			
B	Front headlights shall be halogen type and comply to all FMVSS requirements.		
C	Five (5) LED clearance and marker lights shall be installed across the leading edge of the cab.		
8.96	<u>REAR CLEARANCE/MARKER/ID LIGHTING</u> There shall be a three (3) LED light bar used as identification lights located at the rear of the apparatus per the following:		
A			
	<input type="checkbox"/> As close as practical to the vertical centerline		
	<input type="checkbox"/> Centers spaced not less than 6.00" or more than 12.00" apart		
	<input type="checkbox"/> Red in color		
	<input type="checkbox"/> All at the same height		
B	There shall be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:		
	<input type="checkbox"/> To indicate the overall width of the vehicle		
	<input type="checkbox"/> One (1) each side of the vertical centerline		
	<input type="checkbox"/> As near the top as practical		
	<input type="checkbox"/> Red in color		
	<input type="checkbox"/> To be visible from the rear		
	<input type="checkbox"/> All at the same height		
C	There shall be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following:		
	<input type="checkbox"/> To indicate the overall length of the vehicle		
	<input type="checkbox"/> One (1) each side of the vertical centerline		
	<input type="checkbox"/> As near the top as practical		
	<input type="checkbox"/> Red in color		
	<input type="checkbox"/> To be visible from the side		
	<input type="checkbox"/> All at the same height		

D	There shall be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.		
E	There shall be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.		
F	Per FMVSS 108 and CMVSS 108 requirements.		
8.97	<u>REAR FMVSS LIGHTING</u>		
A	The rear stop/tail and directional LED lighting shall consist of the following: <input type="checkbox"/> Two (2) Whelen®, Model M6BTT, red LED stop/tail lights		
	<input type="checkbox"/> Two (2) Whelen, Model M6T, amber LED arrow turn lights		
B	The lights shall be provided with color lenses.		
C	The lights shall be mounted in a polished combination housing.		
D	There shall be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing.		
8.98	<u>LICENSE PLATE BRACKET</u>		
A	There shall be one (1) license plate bracket mounted on the rear of the body.		
B	A white LED light shall illuminate the license plate. A polished stainless steel light shield shall be provided over the light that shall direct illumination downward, preventing white light to the rear.		
8.99	<u>LIGHTING BEZEL</u>		
	There shall be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.		
8.100	<u>BACK-UP ALARM</u>		
	A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse shall be provided. The device shall sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.		
8.101	<u>INTERMEDIATE LIGHT</u>		
A	There shall be one (1) pair, of Truck-Lite, Model 60115Y, amber, LED, turn signal, marker lights furnished, one (1) each side, horizontally in the rear fender panel.		
B	A stainless steel trim shall be included with this installation.		
8.102	<u>PERIMETER SCENE LIGHTS, CAB</u>		
A	There shall be a Whelen, Model: 20C0CDCR, 4.00" white 12 volt DC LED light with grommet mount provided for each cab door. Lighting shall be designed to provide illumination on areas under the driver and officer riding area exits, which shall be activated automatically when the exit doors are opened and by the same means as the body perimeter lights.		
B	The lighting shall be capable of providing illumination at a minimum level of two (2) foot-candles on ground areas within 30.00" of the edge of the apparatus in areas which personnel climb in or out of the apparatus or descend from the apparatus to the ground level.		

8.103	<u>BODY PERIMETER SCENE LIGHTS</u>		
A	There shall be a total of four (4) Whelen, Model 20C0CDCD, 4.00" clear LED lights and a mounting grommet provided on the apparatus in the following positions: 1. Two (2) lights under the rear step.		
	2. Two (2) lights shall be provided under the pump panel running boards.		
B	The perimeter scene lights shall be activated by a switch in the cab.		
C	The lighting shall be capable of providing illumination at a minimum level of two (2) fc 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.		
8.104	<u>STEP LIGHTS</u>		
A	Four (4) white LED step lights shall be provided. One (1) step light shall be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard.		
B	In order to ensure exceptional illumination, each light shall provide a minimum of 25 fc covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light.		
C	These step lights shall be actuated with the pump panel light switch.		
D	All other steps on the apparatus shall be illuminated per the current edition of NFPA 1901.		
8.105	<u>SCENE LIGHTS</u>		
A	There shall be two (2) Whelen, Model M9LZC LED scene light(s) with chrome flange(s) installed on the side of the apparatus, located high on body sides, one forward and one rear.		
B	A control for the light(s) selected above shall be the following:		
	1. A switch at the driver's side switch panel		
	2. A switch at the pump operator's panel		
C	These lights may be load managed when the parking brake is set.		
8.106	<u>DECK LIGHTS</u>		
A	There shall be one (1) Whelen®, PFBP12C, LED flood light and one (1) Whelen, Model PSBP12C, LED spot light with swivel mount and chrome cover provided at the rear of the hose bed, one (1) each side.		
B	The lights shall include a switch for on/off activation.		

8.107	<u>WATER TANK, 2500 GALLON POLYPROPYLENE</u> The tank shall be built by United Plastic Fabricating, Inc. The booster tank shall have a capacity of 2,500 gallons and be constructed of polypropylene plastic. Tank to be "T" shaped to provide for deep side compartments and to serve as a large sump to limit the amount of undraftable water. The joints and seams shall be nitrogen welded inside and out. Tank to be baffled in accordance with NFPA Bulletin 1901 requirements. A The baffles shall have vent openings at both the top and bottom to permit movement of air and water between compartments. The longitudinal partitions shall be constructed of 0.38" polypropylene plastic and shall extend from the bottom of the tank through the top cover to allow positive welding. The transverse partitions shall extend from 4.00" off the tank bottom to the underside of the top cover. All partitions shall interlock and shall be welded to the tank bottom and sides.		
B	The tank top shall be constructed of 0.50" polypropylene. It shall be recessed 0.38" from the top of the tank and shall be welded to the tank sides and the longitudinal partitions. Top shall be sufficiently supported to keep it rigid during fast filling conditions. Construction shall include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels shall be drilled and tapped (0.50" diameter, 13.00" deep) to accommodate lifting eyes.		
C	A sump that is 8.00" x 8.00" x 6.00" deep shall be provided at the bottom of the water tank. The sump shall include a drain plug and the tank outlet.		
D	The tank shall be installed in a fabricated cradle assembly constructed on 3.00" x 3.00" x 0.25" angle iron.		
E	Rubber cushions, 0.50" thick x 3.00" wide, shall be placed on all horizontal surfaces that the tank rests on.		
F	Fill tower shall be constructed of 0.50" polypropylene and shall be a minimum of 10.00" wide x 16.00" long. The fill tower shall be located in the center of the tank on the driver's side.		
G	Fill tower shall be furnished with a 0.25" thick polypropylene screen and a hinged cover.		
H	An overflow pipe, constructed of 6.00" schedule 40 polypropylene, shall be installed approximately halfway down the fill tower and extend through the water tank and dump to the rear of the rear axle.		
8.108	<u>WATER TANK RESTRAINT</u> A heavy-duty water tank restraint shall be provided.		
8.109	<u>FOLD-A-TANK RACKS</u> A quantity of one (1) Zico Quic-Lift PTS-HA hydraulic rack shall be provided on passenger's side for storage of a 3,500 gallon steel framed Fol-Da-Tank (with closed dimensions of 171" x 7" x 30") portable folding tank. The Quic-Lift lowering system shall be powered by two (2) self-contained hydraulic actuators.		
B	The controls shall be located in such a manner to allow the operator full view of the area in which the fold-a-tank shall be lowered.		

C	The actuator control shall have a master switch and also be interlocked to prevent operation should a compartment door, in the travel area of the rack, be in the open position.		
D	A painted smooth aluminum cover shall be installed on the lowering device to protect and conceal the fold-a-tank when in the stored position. This cover shall be installed with a Zico mounting kit to allow for flexing.		
8.110	<u>RACK INTERLOCK AND NOT STOWED INDICATOR LIGHT</u>		
A	An interlock shall be provided to prevent operation of the rack unless the apparatus parking brake has been activated.		
B	A steady red indicator light shall be located on the cab instrument panel and illuminated when the rack is not in the stowed position. The light shall be labeled "Rack". In addition, the "Do Not Move Apparatus" light located in the cab shall be activated when the rack is not in the stowed position.		
8.111	<u>LIGHTS, FLASHING, RACK</u>		
	Flashing amber LED lights facing the front and rear shall be provided on the rack and activated whenever the rack is in the down position.		
8.112	<u>REAR TANK FILL</u>		
A	There shall be one (1) gated external tank fill installed and properly labeled at the rear of the water tank, located passenger's side of the tank.		
B	Piping, for the fill, shall be routed through the rear wall of the tank and include a flow deflector to break up the stream of water entering the water tank.		
C	A 4.00" full flow ball valve with 4.00" piping and a 4.00" (M)NST chrome adapter shall be located at the inlet.		
D	A 4.00" (F)NST x 5.00" Storz hard coat aluminum 30 degree elbow adapter and 5.00" blind cap shall be provided for the tank fill.		
8.113	<u>REAR TANK DUMP</u>		
	One (1) 10.00" Newton Quick Kwik-Dump valve shall be installed at the rear through the rear body panel in the area over the tailboard. The valve shall be actuated pneumatically from one of three switches. The three (3) switches shall be located: one (1) inside the cab, one (1) at the rear of the apparatus on the driver side, and one (1) at the rear of the apparatus on the passenger side.		
8.114	<u>SIDE TANK DUMP VALVES</u>		
A	Two (2) 10.00" Crane™ centerline valves shall be installed one (1) each side between the tandem axles. The valve shall have 316 stainless steel shaft, bronze disc, and Buna-N seat. The valve shall be actuated pneumatically from one (1) switch inside the cab and one (1) switch at the rear of the apparatus.		
B	A telescopic extension chute shall be included with each dump valve.		
C	These chutes shall have an air control and ID light located in the cab and at the rear of the body.		

8.115	<u>DUMP CHUTE, S/S DOORS</u>		
A	A dump chute door system constructed of aluminum shall be installed over each side dump chute opening. The door system shall be designed with a hinge at the top of the door to open when the chute extends and a magnetic switch to assist in holding the door closed when the chute is not extended. Opening and closing of the door shall occur automatically when the chute extends/retracts.		
B	The exterior of the doors shall be covered with polished stainless steel.		
8.116	<u>MASTER SWITCH FOR DUMP VALVE</u>		
	One (1) master on/off switch shall be provided for the water tank dump valves. The switch shall be located on the cab instrument panel.		
8.117	<u>HOSE BED</u>		
A	The hose bed shall be fabricated of 0.125"-5052 aluminum with a nominal 38,000 psi tensile strength.		
B	The sides shall not form any portion of the fender compartments.		
C	Hose bed width shall be a minimum of 70.00" inside.		
D	Upper and rear edges of side panels shall have a double break for rigidity. A split tube finish shall not be acceptable.		
E	The upper inside area of the beavertails shall be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.		
F	Flooring of the hose bed shall be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats shall be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.		
G	Hose bed shall accommodate 1,500 feet of 2.50" hose and 400 feet of 1.50" hose.		
8.118	<u>HOSE BED DIVIDER</u>		
A	One (1) adjustable hose bed divider shall be furnished for separating hose.		
B	Each divider shall be constructed of a 0.25" brushed aluminum sheet. Flat surfaces shall be sanded for uniform appearance, or constructed of brushed aluminum.		
C	Divider shall be fully adjustable by sliding in tracks, located at the front and rear of the hose bed.		
D	Divider shall be held in place by tightening bolts at each end.		
E	Acorn nuts shall be installed on all bolts in the hose bed which have exposed threads.		
8.119	<u>HOSE BED HOSE RESTRAINT</u>		
	The hose in the hose bed shall be restrained by a black nylon Velcro® strap at the top of the hose bed. At the rear of the hose bed, 2.00" black nylon webbing with a 1.50" x 4.00" box pattern shall attach at the top rear outside corners with 2.00" cam buckle fasteners. The webbing shall have straps connected with 2.00" cam buckle fasteners located at the rear body sheet below the hose bed.		
8.120	<u>RUNNING BOARDS</u>		
A	Running boards shall be fabricated of 0.125" bright aluminum treadplate.		
B	Each running board shall be supported by a welded 2.00" square tubing and channel assembly, which shall be bolted to the pump compartment substructure.		
C	Running boards shall be 12.75" deep and spaced 0.50" away from the pump panel.		

D	A splash guard shall be provided above the running board treadplate.		
8.121	<u>TAILBOARD</u>		
A	The tailboard shall also be constructed of 0.125" bright aluminum treadplate supported by a structural steel assembly.		
B	The tailboard area shall be 20.00" deep.		
C	The exterior side shall be flanged down and in for increased rigidity of tailboard structure.		
8.122	<u>REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL</u>		
A	The rear facing surfaces of the center rear wall shall be smooth aluminum.		
B	The bulkheads, the surface to the rear of the side body compartments, shall be smooth and the same material as the body.		
C	Any inboard facing surfaces below the height of the hose bed shall be aluminum diamondplate.		
8.123	<u>TOW EYES</u>		
	Two (2) rear painted tow eyes shall be located at the rear of the apparatus and shall be mounted directly to the chassis frame rails. The inner and outer edges of the tow eyes shall have a radius.		
8.124	<u>COMPARTMENTATION</u>		
A	Body and compartments shall be fabricated of 0.125" 5052 aluminum.		
B	Side compartments shall be an integral assembly with the rear fenders.		
C	Circular fender liners shall be provided for prevention of rust pockets and ease of maintenance.		
D	Compartment flooring shall be 0.125" and of the sweep out design, with the floor higher than the compartment door lip.		
E	The compartment door opening shall be framed by flanging the edges in 1.75" and bending out again 0.75" to form an angle.		
F	Drip protection shall be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate, or polished stainless steel.		
G	The top of the compartment shall be covered with bright aluminum treadplate rolled over the edges on the front, rear, and outward side. These covers shall have the corners welded.		
H	Side compartment covers shall be separate from the compartment tops.		
I	Front facing compartment walls shall be covered with bright aluminum treadplate.		
J	All screws and bolts which protrude into a compartment shall have acorn nuts on the ends to prevent injury.		
8.125	<u>UNDERBODY SUPPORT SYSTEM</u>		
A	Due to the severe loading requirements of this pumper, a method of body and compartment support suitable for the intended load shall be provided.		
B	The backbone of the support system shall be the chassis frame rails, which is the strongest component of the chassis and designed for sustaining maximum loads.		
C	Support system shall include 0.375" thick steel vertical angle supports bolted to the chassis frame rails with 0.50" diameter bolts.		

D	Attached to the bottom of the steel vertical angles shall be horizontal angles gusseted and welded to the vertical members, extending to the outside edge of the body.		
E	A design with body compartments hanging on the chassis, unsupported, shall not be acceptable.		
8.126	<u>AGGRESSIVE WALKING SURFACE</u> All exterior surfaces designated as stepping, standing, and walking areas shall comply with the required average slip resistance of the current NFPA standards.		
8.127	<u>COMPARTMENT VENTILATION</u> All compartments shall be ventilated. A louvered vent shall be furnished in a wall of the lower compartments to provide the proper airflow inside the compartment and to prevent water from dripping into the compartment. These louvers shall be formed into the metal and not added to the compartment as a separate plate.		
8.128	<u>DRIVER'S SIDE COMPARTMENTS</u> The driver's side compartments shall consist of:		
A	A full height, roll-up door compartment ahead of the rear wheels. The interior dimensions of this compartment shall be 44.50" wide x 59.00" high x 24.00" deep in the lower 25.75" of the compartment and 10.88" 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 38.75" wide x 59.00" high.		
B	Closing of the door shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.		
C	One (1) roll-up door compartment shall be provided forward above the rear wheels. The compartment shall be approximately 54.38" wide x 33.13" high x 10.88" deep inside with a door opening of 48.75" wide x 29.62" high. The depth of the compartment shall be calculated with the compartment door closed.		
D	One (1) roll-up door compartment shall be provided rearward above the rear wheels. The compartment shall be approximately 57.00" wide x 33.13" high x 10.88" deep inside with a door opening of 48.75" wide x 29.62" high. The depth of the compartment shall be calculated with the compartment door closed.		
E	A full height, roll-up door compartment behind the rear wheels shall be provided. The interior dimensions of this compartment shall be 51.75" wide x 59.00" high x 24.00" deep in the lower 25.75" of the compartment and 10.88" 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 47.50" wide x 59.00" high.		
F	Closing of the doors shall not require releasing, unlocking, or unlatching any mechanism and shall easily be accomplished with one hand.		
G	Mounting provisions shall be provided between the tandem axles for an 8.00" round dump valve. Access panels shall be provided in both fender wells to install or service the dump valve when required.		

8.129	<u>PASSENGER'S SIDE COMPARTMENTS</u> The passenger's side compartments shall consist of:		
A	A roll-up door compartment shall be ahead of the rear wheels, 44.50" wide x 29.75" high x 24.00" deep inside with a door opening of 37.75" wide x 18.87" high.		
B	A roll-up door compartment shall be behind the rear wheels, 54.50" wide x 29.75" high x 24.00" deep inside, with a door opening of 47.75" wide x 18.87" high.		
8.130	<u>ROLL-UP DOOR, SIDE COMPARTMENTS</u> There shall be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, satin aluminum and manufactured by R-O-M Corporation.		
A			
B	Every slat shall have interlocking end shoes to prevent slat from moving side-to-side and binding the door.		
C	Slats shall have interlocking joints with a folding locking flange to provide security and prevent penetration by sharp objects.		
D	Slats shall be double-wall extrusion 1.366" high by 0.315" thick.		
E	Between each slat shall be a co-extruded PVC inner seal to prevent metal-to-metal contact and to repel moisture. This inner seal is not visible to detract from appearance of door.		
F	Mounting and adjusting the curtain shall be done with a clip system that connects the curtain slats to the operator drum allowing for easy tension adjustment without tools.		
G	A stainless steel lift bar to be provided for opening the door and located at the bottom of each door with latches on the outer extrusion of the door frame. A ledge to be supplied over lift bar for additional area to aid in closing the door. The 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.		
H	Doors shall be constructed from an aluminum box section. The exterior surface of each slat shall be flat. The interior surfaces shall be concave to provide strength and prevent loose equipment from jamming the door from inside.		
I	Each roll-up door shall have a 4.00" diameter counterbalance operator drum to assist in lifting the door. A garage style roll door shall not be acceptable.		
J	The header for the roll-up door assembly shall not exceed 4.00".		
K	A heavy-duty magnetic switch shall be used for control of open compartment door warning lights.		
8.131	<u>REAR COMPARTMENT</u> A tool compartment shall be provided at the rear of the apparatus. The compartment shall be 26.00" wide x 8.00" high x 7.00" deep.		
A			
B	A drop-down door constructed of bright aluminum treadplate with a pawl latch shall be provided.		

8.132	<u>COMPARTMENT LIGHTING</u>		
A	There shall be seven (7) compartments with two (2) white 12 volt DC LED compartment light strips. The dual light strips shall be centered vertically along each side of the door framing. There shall be two (2) light strips per compartment. The dual light strips shall be in ALL BODY COMPARTMENTS.		
B	Opening the compartment door shall automatically turn the compartment lighting on.		
8.133	<u>MOUNTING TRACKS</u>		
	There shall be six (6) sets of tracks for mounting shelves in all body compartments . These tracks shall be installed vertically to support the adjustable shelves, and shall be full height of the compartment. The tracks shall be unpainted with a natural finish.		
8.134	<u>FIXED SHELVES</u>		
A	There shall be six (6) shelves with a capacity of 500 lbs provided. The shelf construction shall consist of 0.188" aluminum with 2.00" sides. Each shelf shall be painted to match the compartment interior. Each shelf shall be fixed in its location in the compartment		
B	The shelves shall be held in place by 0.12" thick stamped plated brackets and bolts or angles bolted to the compartment as the engineer or shop floor see fit.		
C	The location shall be one (1) in each body compartment.		
8.135	<u>SLIDE-OUT FLOOR MOUNTED TRAY</u>		
A	There shall be four (4) floor mounted slide-out trays with 2.00" sides provided [location to be decided later]. Each tray shall be rated for up to 200 lbs in the extended position. The trays shall be constructed of a minimum 0.13" aluminum with welded corners. The finish shall be painted to match compartment interior.		
B	Slides shall be equipped with ball bearings for ease of operation and years of dependable service. The slides shall be located on the sides of the tray so that the tray can be located as close to the compartment floor as possible.		
C	Automatic locks shall be provided for both the "in" and "out" positions. The trip mechanism for the locks shall be located at the front of the tray for ease of use with a gloved hand.		
8.136	<u>RUB RAIL</u>		
A	Bottom edge of the side compartments shall be trimmed with a bright aluminum extruded rub rail.		
B	Trim shall be 2.12" high with 1.38" flanges turned outward for rigidity.		
C	The rub rails shall not be an integral part of the body construction, which allows replacement in the event of damage.		
8.137	<u>BODY FENDER CROWNS</u>		
	Black rubber fender crowns shall be provided around the rear wheel openings.		
8.138	<u>HARD SUCTION HOSE</u>		
	Two (2) lengths of 6.00" lightweight Task Force Tips, AM8HNX10 hard suction hose shall be provided. The hose shall be 10' in length and equipped with long handle female coupling on one (1) end and a 6.00" NH male thread on the other end.		

8.139	<u>HOSE TROUGH</u>		
A	One (1) trough for hard suction hose storage shall be installed on the top of the portable tank rack. The trough shall be constructed of painted smooth aluminum and use a velcro strap at each end to contain the hose.		
B	The second hard suction trough, painted, shall be carried above the left compartment. This trough shall be V-shaped and contain chrome plated, quarter turn, spring loaded clamps. This trough shall be constructed of steel.		
8.140	<u>HANDRAILS</u>		
A	The handrails shall be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface.		
B	Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces.		
C	Drain holes shall be provided in the bottom of all vertically mounted handrails.		
D	Handrails shall be provided to meet NFPA 1901 section 15.8 requirements. The handrails shall be installed as noted on the sales drawing.		
8.141	<u>HANDRAILS</u>		
A	One (1) vertical handrail, not less than 29.00" long, shall be located on each rear beavertail.		
B	One (1) full width horizontal handrail shall be provided below the hose bed at the rear of the apparatus.		
8.142	<u>AIR BOTTLE STORAGE</u>		
A	A total of four (4) air bottle compartments shall be provided, two (2) each side of the body. The air bottle compartment shall be in the form of a PVC round tube to accommodate different size air bottles. The inside diameter of the tube shall be approximately 7.63" in diameter x 26.00" deep. Drain holes shall be provided at the bottom of the tubes to prevent water collection.		
B	A Cast Products door with latch shall be provided to contain the air bottle.		
8.143	<u>EXTENSION LADDER</u>		
	There shall be a 24', two-section, aluminum, Duo-Safety, Series 900-A extension ladder provided.		
8.144	<u>ROOF LADDER</u>		
	There shall be a 14' aluminum, Duo-Safety, Series 775-A roof ladder provided.		
8.145	<u>LADDER STORAGE</u>		
A	The ladders shall be stored in a tunnel through the water tank and accessed at the rear.		
B	The ladders shall be stored horizontally stacked.		
C	The ladders shall be secured from moving forward during travel.		
D	The rear of the ladder storage area shall have a hinged smooth aluminum door with latches for access to the ladders.		
8.146	<u>FOLDING LADDER</u>		
	One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder shall be installed in a U-shaped trough inside the ladder storage compartment.		

8.147	<u>10' PIKE POLE</u> One (1) pike pole Fire Hooks Unlimited, Model RH-10, 10' long roof hook with a steel handle shall be provided and located Pike pole compartment.		
8.148	<u>6' PIKE POLE</u> There shall be one (1) Fire Hooks Unlimited NY roof hook RH-6, 6' Pike pole with steel handles and pry end provided Pike pole compartment.		
8.149	<u>PIKE POLE COMPARTMENT</u> One (1) Pike pole compartment shall be provided, recessed below the water tank tee at the rear of body, on the driver's side. The Pike pole compartment shall be equipped with two (2) PVC tubes to hold two (2) Pike poles and have a smooth aluminum drop down door.		
8.150	<u>STEPS</u> A folding step shall be provided on the front of each fender compartment. The step shall be bright finished, non-skid with a luminescent coating that is rechargeable from any light source and can hold a charge for up to 24 hours. Each step shall incorporate an LED light to illuminate the stepping surface. The step can be used as a hand hold with two openings wide enough for a gloved hand.		
8.151	<u>SWIMMING POOL STYLE LADDER</u> A swimming pool style ladder shall be supplied for access to the hosebed (to be chosen with drawings) in place of the standard steps. The ladder shall be constructed of aggressive grip vertical aluminum extrusion, with rubber-covered solid aluminum rungs.		
8.152	<u>MIDSHIP FIRE PUMP</u> Midship fire pump shall be a Hale QFLO, 1250 gpm single (1) stage midship mounted centrifugal type.		
A			
B	Pump shall be the class "A" type.		
C	Pump shall deliver the percentage of rated discharges at the pressures indicated below:		
	1. 100% of rated capacity at 150 psi net pump pressure.		
	2. 100% of rated capacity at 165 psi net pump pressure.		
	3. 70% of rated capacity at 200 psi net pump pressure.		
	4. 50% of rated capacity at 250 psi net pump pressure.		
D	Entire pump and both suction and discharge passages shall be hydrostatically tested to a pressure of 500 psi.		
E	Pump shall be fully tested at the pump manufacturer's factory to the performance requirements as outlined by the current NFPA 1901 standards and shall be free from objectionable pulsation and vibration.		
F	The pump body and related parts shall be of fine grain alloy cast iron with a minimum tensile strength of 30,000 psi (2041.2 bar). All moving parts in contact with water shall be of high quality bronze or stainless steel. Pumps utilizing castings made of lower tensile strength cast iron shall not be acceptable.		
G	Pump body shall be split on a single plane for easy removal of entire impeller assembly, including wear rings and bearings from beneath the pump, without disturbing pump piping or the mounting of the pump in the chassis.		

H	Pump impeller shall be hard, fine grain bronze of the mixed flow design, accurately machined, hand-ground, and individually balanced. The vanes of the impeller intake eyes shall be hand-ground and polished to a sharp edge. They shall be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.		
I	Pump shaft shall be electric furnace heat-treated, corrosion resistant stainless. Pump shaft shall be sealed with double oil seal to keep road dirt and water out of drive unit.		
J	Pump shaft shall be rigidly supported by three (3) bearings for minimum deflection. The bearings shall be heavy duty, deep groove ball bearings in the gearbox and they shall be splash lubricated.		
8.153	<u>MECHANICAL SEAL ON PUMP</u>		
A	Only one (1) mechanical seal shall be required on the suction (inboard) side of the pump. The mechanical seal shall be 2.00" in diameter and shall be spring loaded, maintenance-free, and self-adjusting.		
B	The mechanical seal construction shall be a carbon sealing ring, stainless steel coil spring, Viton rubber boot, and a tungsten carbide seat with a Teflon backup seal.		
8.154	<u>PUMP TRANSMISSION</u>		
A	The drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory. The pump drive unit shall be of sufficient size to withstand up to 16,000 foot/pound of torque from the engine in both road and pump operating conditions. The drive unit shall be designed with ample lubrication reserve to maintain the proper operating temperature.		
B	The gearbox drive shafts shall be of heat treated chrome nickel steel and at least 2.75" in diameter, on both the input and output drive shafts. They shall be designed to withstand the full torque of the engine in both road and pump operating conditions. All gears, both drive and pump, shall be of the highest quality, electric furnace, chrome nickel steel. Bores shall be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust.		
C	The pump ratio shall be selected by the apparatus manufacturer to provide the maximum performance with the engine and transmission selected. Three (3) green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift from Road to Pump position. Two (2) lights shall be located in the truck driving compartment and one (1) light on pump operator's panel, adjacent to the throttle control.		
8.155	<u>AIR PUMP SHIFT</u>		
A	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.		
B	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 been engaged and the chassis transmission is in pump gear. This indicator light shall be labeled "OK to pump".		

C	Another green indicator light shall be installed adjacent to the hand throttle on the pump panel and indicate either the pump is engaged and the road transmission is in pump gear, or the road transmission is in neutral and the pump is not engaged. This light shall be labeled "Warning: Do not open throttle unless light is on".		
D	The pump shift control in the cab shall be illuminated to meet NFPA requirements.		
8.156	<u>TRANSMISSION LOCK-UP</u> The direct gear transmission lock-up for the fire pump operation shall engage automatically when the pump shift control in the cab is activated.		
8.157	<u>AUXILIARY COOLING SYSTEM</u> A supplementary heat exchange cooling system shall be provided to allow the use of water from the discharge side of the pump for cooling the engine water. Heat exchanger shall be cylindrical type and shall be a separate unit. It shall be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger shall be plumbed to the master drain valve.		
8.158	<u>INTAKE RELIEF VALVE</u> An Elkhart relief valve shall be installed on the suction side of the pump preset at 125 psig.		
A			
B	Relief valve shall have a working range of 75 psig to 250 psig.		
C	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.		
D	Control shall be located behind an access door at a side pump panel.		
8.159	<u>PRESSURE GOVERNOR</u> This apparatus shall be equipped with a Class 1 "Total Pressure Governor" engine/pump governor/throttle system that is connected directly to the Electronic Control Module (ECM) mounted on the engine. The "Total Pressure Governor" is to operate as a pressure sensor (regulating) governor (PSG).		
A			
B	A special preset feature shall permit a predetermined pressure of rpm to be set. The preset pressure or rpm will be displayed on the message display of the "Total Pressure Governor". The preset shall be easily adjustable by the operator		
C	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.		
D	The pressure sensor governor system shall have two (2) modes of operation: pressure mode or rpm mode.		
E	When in the pressure mode, the PSG system shall automatically maintain the discharge pressure set by the operator regardless of flow (within engine/pump operating capabilities).		
F	In the rpm mode, the PSG system shall automatically maintain a set engine speed, regardless of engine load (within engine operation capabilities).		
G	A pump cavitation protection feature shall be provided which shall return the engine to idle should the pump cavitate.		
H	The pressure controller shall incorporate monitoring for engine coolant temperature, oil pressure, and battery voltage.		

8.160	<u>HALE ESP PRIMING PUMP</u>		
A	Priming pump shall be a positive displacement vane type, electrically driven, and conforming to standards outlined in NFPA pamphlet #1901.		
B	One (1) priming control shall both open the priming valve and start the priming motor.		
C	Primer shall be environmentally safe, self-lubricating style.		
8.161	<u>PUMP MANUALS</u> Two (2) pump manuals from the pump manufacturer shall be furnished in compact disc format with the apparatus. Manuals shall cover pump operation, maintenance, and parts.		
8.162	<u>PLUMBING</u>		
A	All inlet and outlet plumbing, 3.00" and smaller, shall be plumbed with either stainless steel pipe or synthetic rubber hose reinforced with high-tensile polyester braid. Small diameter secondary plumbing such as drain lines shall be stainless steel, brass or hose.		
B	Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping shall be equipped with victaulic or rubber couplings.		
C	Plumbing manifold bodies shall be ductile cast iron or stainless steel.		
D	All lines shall drain through 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.		
E	All water carrying gauge lines shall be of flexible polypropylene tubing.		
8.163	<u>MAIN PUMP INLETS</u> A 6.00" pump manifold inlet shall be provided on each side of the vehicle. The suction inlets shall include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.		
8.164	<u>MAIN PUMP INLET CAP</u>		
A	The main pump inlets shall have National Standard Threads with a long handle chrome cap.		
B	The cap shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected.		
8.165	<u>INTAKE VALVE</u> TFT model AX1-ST-NX 5" jumbo ball intake valve. Two (2) shall be provided. One (1) 5.00" Storz cap with chain shall be provided for each valve.		
8.166	<u>VALVES</u>		
A	All ball valves shall be Akron® Brass in-line valves. The Akron valves shall be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.		
B	Valves shall have a ten (10) year warranty.		
8.167	<u>LEFT SIDE INLET</u> On the left side pump panel shall be one (1) - 2.50" auxiliary suction, terminating in 2.50" National Standard Hose Thread. The auxiliary suction shall be provided with a strainer, chrome swivel and plug.		
8.168	<u>RIGHT SIDE INLET</u>		

A	On the right side pump panel shall be one (1) - 2.50" auxiliary suction, terminating in 2.50" National Standard Hose Thread. The auxiliary suction shall be provided with a strainer, chrome swivel and plug.		
B	The location of the valve for the two (2) inlets shall be recessed behind the pump panel.		
8.169	<u>INLET CONTROL</u> Control for the side auxiliary inlets shall be located at the inlet valve.		
8.170	<u>INLET BLEEDER VALVE</u> A 0.75" bleeder valve shall be provided for each side gated inlet. The valves shall be located behind the panel with a swing style handle control extended to the outside of the panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provide excellent leverage. The water discharged by the bleeders shall be routed below the chassis frame rails.		
8.171	<u>TANK TO PUMP</u> The booster tank shall be connected to the intake side of the pump with heavy duty piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line shall 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.		
A			
B	A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.		
8.172	<u>TANK REFILL</u> A 2.00" combination tank refill and pump re-circulation line shall be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.		
8.173	<u>LEFT SIDE DISCHARGE OUTLETS</u> There shall be two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.		
8.174	<u>RIGHT SIDE DISCHARGE OUTLETS</u> There shall be one (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.		
A			
B	There shall be a 4.00" discharge outlet with a 3.00" valve with a 3.00" ball, installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet shall be actuated with a handwheel control with position indicator at the pump operator's control panel.		

8.175	<u>FRONT DISCHARGE OUTLET</u>		
A	There shall be one (1) 1.50" discharge outlet piped to the front of the apparatus and located on the top of the right side of the front bumper.		
B	Plumbing shall consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe shall be used in the plumbing where appropriate. The piping shall terminate with a 1.50" NST with 90 degree stainless steel swivel.		
C	There shall be Class 1 automatic drains provided at all low points of the piping.		
8.176	<u>REAR DISCHARGE OUTLET</u>		
	There shall be one (1) discharge outlet piped to the rear of the hose bed, driver's side, installed so proper clearance is provided for spanner wrenches or adapters. 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.		
8.177	<u>DISCHARGE CAPS</u>		
A	Chrome plated, rocker lug, caps with chains shall be furnished for all side discharge outlets.		
B	The caps shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).		
8.178	<u>OUTLET BLEEDER VALVE</u>		
A	A 0.75" 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.		
B	The valves shall be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles shall be chrome plated and provide a visual indication of valve position. The swing handle shall provide an ergonomic position for operating the valve without twisting the wrist and provide excellent leverage. Bleeders shall be located at the bottom of the pump panel. They shall be properly labeled identifying the discharge they are plumbed into. The water discharged by the bleeders shall be routed below the chassis frame rails.		
8.179	<u>LEFT SIDE OUTLET ELBOWS</u>		
A	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.		
B	The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).		
8.180	<u>RIGHT SIDE OUTLET ELBOWS</u>		
A	The 2.50" discharge outlets located on the right side pump panel shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.		
B	The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).		

8.181	<u>ADDITIONAL RIGHT SIDE OUTLET ELBOWS</u> The 4.00" discharge outlets, located on the right ride pump panel, shall be furnished with a 4.00" (F) National Standard hose thread x 4.00" (M) National Standard hose thread, chrome plated, 45 degree elbow with cap.		
8.182	<u>REAR OUTLET ELBOWS</u> The 2.50" discharge outlets located at the rear of the apparatus shall be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.		
A			
B	The elbow shall incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).		
8.183	<u>LARGE DIAMETER OUTLET ELBOWS</u> The 4.00" outlets shall be furnished with one (1) 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.		
8.184	<u>DISCHARGE OUTLET CONTROLS</u> The discharge outlets shall incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism shall indicate the position of the valve.		
A			
B	If a handwheel control valve is used, the control shall be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.		
8.185	<u>DELUGE RISER</u> A 3.00" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping shall be installed securely so no movement develops when the line is charged. The riser shall be gated and controlled at the pump operator's panel.		
8.186	<u>TELESCOPIC PIPING</u> The deluge riser piping shall include an 18.00" Task Force Model XG18 Extend-A-Gun extension.		
A			
B	This extension shall be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation.		
C	A position sensor shall be provided on the telescopic piping that shall activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.		
8.187	<u>MONITOR</u> A Task Force Crossfire XFC-52 monitor package shall be furnished and properly installed on the deluge riser. The monitor shall include an M-R nozzle, 10" stream straightener and quad stacked tips. The portable base unit with folding legs and a safety valve shall have two (2) 2.50" female NST inlets. The monitor shall be painted as provided by monitor manufacturer.		
8.188	<u>NOZZLE</u> A Task Force Tips Master Stream Series M-R nozzle shall be provided.		
A			
B	Included shall be a Task Force Tips XF-SS5 stream straightener and MST-4NJ quad stacked tips.		

C	Tip sizes shall be 1.38", 1.50", 1.75" and 2.0".		
D	The deluge riser Extend-a-Gun shall have provisions for direct mounting a Task Force CrossFire monitor.		
8.189	<u>1.50" CROSSLAY HOSE BED</u>		
A	One (1) crosslay with 1.50" outlet shall be provided. The bed to be capable of carrying 200' of 1.75" double jacketed hose and shall be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.		
B	Outlet to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.		
C	The crosslay control shall be at the pump operator's panel.		
D	The center crosslay dividers shall be fabricated of 0.25" aluminum and shall provide adjustment from side to side. The divider shall be unpainted with a DA finish.		
E	Vertical scuffplates, constructed of stainless steel, shall be provided at the front and rear ends of the bed on each side of vehicle.		
F	Crosslay bed flooring shall consist of removable perforated brushed aluminum.		
8.190	<u>2.50" CROSSLAY HOSE BED</u>		
A	One (1) crosslay with 2.50" outlets shall be provided. This bed to be capable of carrying 200' of 2.50" double jacketed hose and shall be plumbed with 2.50" i.d. pipe and gated with a 2.50" quarter turn ball valve.		
B	Outlet to be equipped with a 2.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.		
C	The crosslay control shall be at the pump operator's panel.		
D	The center crosslay dividers shall be fabricated of 0.25" aluminum and shall provide adjustment from side to side. The divider shall be unpainted with a brushed finish. The remainder of the crosslay bed shall be painted job color.		
E	Stainless steel vertical scuffplates shall be provided at hose bed ends (each side of vehicle). Bottom of hose bed ends (each side) shall also be equipped with a stainless steel scuffplate.		
F	Crosslay bed flooring shall consist of removable perforated brushed aluminum.		
8.191	<u>CROSSLAY/DEADLAY HOSE RESTRAINT</u>		
	Elastic netting shall be provided across the top and ends of two (2) crosslay/deadlay openings to secure the hose during travel. The netting shall be permanently attached at the top center of the crosslay/deadlay bed and removable on each end.		
8.192	<u>FOAM SYSTEM</u>		
	A foam system shall not be required on this apparatus.		
8.193	<u>PUMP COMPARTMENT</u>		
A	The pump compartment shall be separate from the hose body and compartments so that each may flex independently of the other. It shall be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.		
B	The pump compartment shall be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist.		

C	Pump compartment, pump, plumbing and gauge panels shall be removable from the chassis in a single assembly.		
8.194	<u>PUMP MOUNTING</u> Pump shall be mounted to a substructure which shall be mounted to the chassis frame rail using rubber isolators. The mounting shall allow chassis frame rails to flex independently without damage to the fire pump.		
8.195	<u>LEFT SIDE PUMP CONTROL PANELS</u>		
A	All pump controls and gauges shall be located at the left (driver's) side of the apparatus and properly identified.		
B	Layout of the pump control panel shall be ergonomically efficient and systematically organized.		
C	The pump operator's control panel shall be removable in two (2) main sections for ease of maintenance:		
	1. The upper section shall contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, and electrical switches. Sub panels shall be removable from the face of the pump panel for ease of maintenance. Below the sub panels shall be located all valve controls and line pressure gauges.		
	2. The lower section of the panel shall contain all inlets, outlets, and drains.		
D	All push/pull valve controls shall have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods shall be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls shall be capable of locking in any position. The control rods shall pull straight out of the panel and shall be equipped with universal joints to eliminate binding.		
8.196	<u>IDENTIFICATION TAGS</u>		
A	The identification tag for each valve control shall be recessed in the face of the tee handle.		
B	All discharge outlets shall have color coded identification tags, with each discharge having its own unique color. Color coding shall include the labeling of the outlet and the drain for each corresponding discharge.		
C	All line pressure gauges shall be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting shall be removable from the face of the pump panel for ease of maintenance. The casting shall be color coded to correspond with the discharge identification tag.		
D	All remaining identification tags shall be mounted on the pump panel in chrome plated bezels.		
E	The pump panel on the right (passenger's) side shall be removable with lift and turn type fasteners.		
F	Trim rings shall be installed around all inlets and outlets.		
G	The trim rings for the side discharge outlets shall be color coded and labeled to correspond with the discharge identification tag.		

8.197	<u>PUMP PANEL CONFIGURATION</u> The pump panel configuration shall be arranged and installed in an organized manner that shall provide user-friendly operation.		
8.198	<u>PUMP AND GAUGE PANEL</u> The pump and gauge panels shall be constructed of aluminum with a painted FormCoat black finish. A polished aluminum trim molding shall be provided around each panel.		
A			
B	The passenger's side pump panel shall be removable and fastened with swell type fasteners.		
8.199	<u>PUMP COMPARTMENT LIGHT</u> A pump compartment light shall be provided inside the right side pump enclosure and accessible through a door on the pump panel.		
A			
B	A 0.125" weep hole shall be provided in each light lens, preventing moisture retention.		
C	Engine monitoring graduated LED indicators shall be incorporated with the pressure controller.		
D	Also provided at the pump panel shall be the following:		
	1. Master Pump Drain Control		
8.200	<u>VACUUM AND PRESSURE GAUGES</u> The pump vacuum and pressure gauges shall be liquid filled and manufactured by Class 1, Inc.		
A			
B	The gauges shall be a minimum of 4.00" in diameter and shall have white faces with black lettering, with a pressure range of 30.00"-0-600#.		
C	Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.		
D	The pump pressure and vacuum gauges shall be installed adjacent to each other at the pump operator's control panel.		
E	Test port connections shall be provided at the pump operator's panel. One shall be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They shall have 0.25" standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They shall be marked with a label.		
F	This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.		
8.201	<u>PRESSURE GAUGES</u> The individual "line" pressure gauges for the discharges shall be interlube filled and manufactured by Class 1, Inc.		
A			
B	They shall be a minimum of 2.00" in diameter and shall have white faces with black lettering.		
C	Gauge construction shall include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.		
D	Gauges shall have a pressure range of 30"-0-400#.		
E	The individual pressure gauge shall be installed as close to the outlet control as practical.		

F	This gauge shall include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.		
8.202	<u>WATER LEVEL GAUGE</u> There shall be an electronic water level gauge provided on the operator's panel that registers water level by means of five (5) colored LED lights. The lights shall be durable, ultra-bright five (5) LED design viewable through 180 degrees. The water level indicators shall be as follows: <input type="checkbox"/> 100 percent = Green		
A	<input type="checkbox"/> 75 percent = Yellow		
	<input type="checkbox"/> 50 percent = Yellow		
	<input type="checkbox"/> 25 percent = Yellow		
	<input type="checkbox"/> Refill = Red		
B	The light shall flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights shall flash sequentially when the water tank is empty.		
C	The level measurement shall be based on the sensing of head pressure of the fluid in the tank.		
D	The display shall be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loosen electronic components. The encapsulated design shall provide complete protection from water and environmental elements. An industrial pressure transducer shall be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level.		
8.203	<u>LIGHT SHIELD</u>		
A	There shall be a polished, 16-gauge stainless steel light shield installed over the pump operators panel.		
B	There shall be 12 volt DC white LED lights installed under the stainless steel light shield to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights shall be activated by the pump panel light switch. Additional lights shall be included every 18.00" depending on the size of the pump house.		
C	One (1) pump panel light shall come on when the pump is in OK to pump mode.		
D	There shall be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel.		
E	There shall be a green pump engaged indicator light activated on at the operator's panel when the pump is shifted into gear from inside the cab.		
8.204	<u>ELECTRONIC SIREN</u>		
A	A Whelen, Model 295HFSC9, 200 watt, dual tone electronic siren with noise canceling microphone shall be provided.		
B	This siren to be active when the battery switch is on and the emergency master switch is on.		
C	Siren head shall be located near the overhead switches.		

D	Siren shall be actuated by two (2) foot switches, one (1) located on the passenger's side and one (1) on the driver's side.		
8.205	<u>SPEAKER</u> There shall be two (2) speakers provided. Each speaker shall be a Whelen, Model SA122FMP, cast aluminum, 100-watt, flange mount with polished aluminum finish. Each speaker shall be connected to the siren amplifier.		
A			
B	There shall be one (1) speaker recessed in the passenger's side and one (1) speaker recessed in the driver's side of the front bumper.		
8.206	<u>AUXILIARY MECHANICAL SIREN</u> A Federal Q2B® siren shall be furnished. A siren brake button shall be installed on the switch panel.		
A			
B	The control solenoid shall be powered up after the emergency master switch is activated.		
C	The mechanical siren shall be mounted on the bumper deck plate. It shall be mounted on the left side. The siren mounting shall include a reinforcement plate.		
D	The mechanical siren shall be actuated by two (2) foot switches, one (1) located on the passenger's side and one (1) on the driver's side.		
8.207	<u>CAB ROOF LIGHTBAR</u> There shall be a 72.00" Whelen Freedom Rota-Beam LED lightbar mounted on the cab roof.		
A			
B	The lightbar shall include the following: 1. One (1) red flashing in a rotating pattern LED module in the driver's side rear corner position.		
	2. One (1) red flashing in a rotating pattern LED module in the driver's side front corner position.		
	3. One (1) blue flashing in a rotating pattern LED module in the driver's side first front position.		
	4. One (1) red flashing in a rotating pattern LED module in the driver's side second front position.		
	5. One (1) PFP1 white LED scene light module in the front center position.		
	6. One (1) red flashing in a rotating pattern LED module in the passenger's side second front position.		
	7. One (1) blue flashing in a rotating pattern LED module in the passenger's side first front position.		
	8. One (1) red flashing in a rotating pattern LED module in the passenger's side front corner position.		
	9. One (1) red flashing in a rotating pattern LED module in the passenger's side rear corner position.		
C	All the lenses shall be clear.		
D	There shall be two (2) switches in the cab on the switch panel to control this lightbar.		
	1. One (1) switch for the warning lights.		
	2. One (1) switch for the scene light.		

E	The two (2) center LED modules and the scene light module may be load managed when the parking brake is applied.		
8.208	<u>FRONT WARNING LIGHT</u>		
A	There shall be two (2) Whelen, Model M6*C LED flashing lights provided at the front of the truck.		
B	The driver's side front warning light to be red.		
C	The passenger's side front warning light to be blue.		
D	The color of the lenses shall be clear.		
E	The lights shall be mounted with a flange.		
F	The lights shall be activated by a switch on the cab instrument panel.		
8.209	<u>SIDE ZONE LOWER LIGHTING</u>		
A	Six (6) Whelen®, Model M6RC, LED flashing warning lights with bezels shall be located in the following positions:		
	1. Two (2) lights, one (1) each side on the bumper extension.		
	2. The side front lights to be red.		
	3. Two (2) lights, step area.		
	4. The side middle lights to be red.		
	5. Two (2) lights, around rear axle openings.		
	6. The side rear lights to be red.		
B	All six (6) lights shall include a clear lens.		
C	There shall be a switch located in the cab on the switch panel to control the lights.		
8.210	<u>REAR ZONE LOWER LIGHTING</u>		
A	Two (2) Whelen®, Model M6*C, LED flashing warning lights shall be located at the rear of the apparatus.		
B	The driver's side rear light to be blue.		
C	The passenger's side rear light to be red.		
D	Both lights shall include a lens that is clear.		
E	There shall be a switch located in the cab on the switch panel to control the lights.		
8.211	<u>REAR OF HOSE BED WARNING LIGHTS</u>		
A	There shall be two (2) Whelen Rota-Beam, Model R3165F, 4.00" high x 7.19" wide beacons with red LED's and clear domes provided.		
	1. One (1) shall be installed on the driver's side rear of the apparatus.		
	2. One (1) shall be installed on the passenger's side rear of the apparatus.		
B	There shall be a switch located in the cab on the switch panel to control the beacons.		
C	The rear warning lights shall be mounted on stainless steel brackets with all wiring totally enclosed. These brackets shall also support the rear deck lights and clearance/marker lights.		
8.212	<u>LOOSE EQUIPMENT</u>		
	The following equipment shall be furnished with the completed unit:		
	<input type="checkbox"/> One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit		

8.213	<u>PORTABLE TANK</u>		
A	A 3,000 gallon Fol-Da-Tank brand portable tank shall be provided. The tank shall be constructed of 22 oz red Hypalon and shall have an aluminum frame.		
B	The collapsed dimensions shall be 13' 3.00" x 9.00" wide x 30.00" deep.		
C	The expanded size shall be 13' 3.00" long x 13' 3.00" wide x 29.00" deep.		
8.214	<u>NFPA REQUIRED LOOSE EQUIPMENT, PROVIDED BY FIRE DEPARTMENT</u>		
A	The following loose equipment as outlined in NFPA 1901, 2009 edition, section 7.7.2.1, 7.7.2.2, and 7.7.3.1 shall be provided by the fire department. All loose equipment shall be installed on the apparatus before placed in emergency service, unless the fire department waives NFPA section 4.21.		
B	200 ft (60 m) of 2.50" (65 mm) or larger fire hose.		
C	400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose (if equipped with a fire pump).		
D	Two (2) handline nozzles, 95 gpm (360 L/min) minimum (if equipped with a fire pump).		
E	One (1) SCBA complying with NFPA 1981, <i>Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services</i> , for each assigned seating position, but not fewer than two (2), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer.		
F	One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in specially designed storage space(s).		
G	One (1) first aid kit.		
H	Two (2) combination spanner wrenches mounted in brackets fastened to the apparatus.		
I	One (1) hydrant wrench mounted in a bracket fastened to the apparatus.		
J	One (1) double female adapter, sized to fit 2.50" (65 mm) or larger fire hose, mounted in a bracket fastened to the apparatus.		
K	One (1) double male adapter, sized to fit 2.50" (65 mm) or larger fire hose, mounted in a bracket fastened to the apparatus.		
L	One (1) rubber mallet, for use on suction hose connections, mounted in a bracket fastened to the apparatus (if equipped with a fire pump).		
M	One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, <i>Standard for High Visibility Public Safety Vests</i> , and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front.		
N	Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band.		
O	Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities.		
P	One (1) automatic external defibrillator (AED).		

Q	If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side shall be carried. Any intake connection larger than 3.00" (75 mm) shall include a pressure relief device that meets the requirements of 16.6.6 (if equipped with pump).		
R	If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake shall be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake.		
S	If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters shall be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.		
8.215	<u>SOFT SUCTION HOSE, PROVIDED BY FIRE DEPARTMENT</u>		
A	NFPA 1901, 2009 edition, section 7.6 requires a minimum of 20 ft of suction hose or 15 ft of supply hose.		
B	Hose is not on the apparatus as manufactured. The fire department shall provide suction or supply hose.		
C	One (1)-6.00" Kochek model LL60 strainer, with jet siphon, internal screen and 6.00" NST coupling shall be provided.		
D	One (1) axe with a fiberglass handle, flathead and blade shield		
8.216	<u>DRY CHEMICAL EXTINGUISHER</u>		
	There shall be one (1) extinguisher, 20 lb, dry chemical extinguisher with a 80-B:C rating provided.		
8.217	<u>WATER EXTINGUISHER</u>		
	One (1) extinguisher, 2.50 gallon pressurized water, shall be provided.		
8.218	<u>FLATHEAD AXE, PROVIDED BY FIRE DEPARTMENT</u>		
A	NFPA 1901, 2009 edition, Section 7.7.3.1 requires one (1) flathead axe mounted in a bracket fastened to the apparatus.		
B	The axe is not on the apparatus as manufactured. The fire department shall provide and mount the axe.		
8.219	<u>PAINT</u>		
A	The exterior custom body painting finishing process as follows:		
	1. Manual Surface Preparation - All exposed metal surfaces on the custom body shall be thoroughly cleaned and prepared for painting. Surfaces that shall not be painted include all chrome plated, stainless steel, anodized aluminum and bright aluminum treadplate. Each imperfection on the exterior metal surface shall be removed or filled and then sanded smooth for a smooth appearance. All seams shall be sealed before painting.		
	2. Chemical Cleaning and Treatment - The metal surfaces shall be properly cleaned using an acid etching system. Surfaces are chemically cleaned to remove all dirt, oil, grease and metal oxides to ensure the subsequent coatings bond well. An ultra pure water final rinse shall be applied to all metal surfaces, excluding undercarriage components, at the conclusion of the metal treatment process.		

	3. Sealer Primer Coat - A two (2) component sealer primer coat shall be applied.		
	4. Topcoat Paint - Urethane base coat shall be applied to opacity for correct color matching.		
	5. Clearcoat - Two (2) coats of an automotive grade two (2) component urethane shall be applied. Lap style doors shall be clear coated to match the body. Roll-up doors shall not be clear coated and the standard roll-up door warranty shall apply.		
	6. All removable items such as brackets, compartment doors, door hinges, trim, etc. shall be removed and painted separately to insure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly.		
	7. The chassis shall be painted by the chassis manufacturer, and shall remain the commercial grade finish as provided. To ensure a good color match between the body and chassis, the apparatus manufacturer and chassis manufacturer shall have a mutually preapproved paint color program. The apparatus shall be painted candy apple red.		
	8. 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). A nylon washer shall be installed under each acorn nut or metal screw that is fastened directly to a painted body surface.		
	<u>PAINT - ENVIRONMENTAL IMPACT</u>		
B	Contractor shall meet or exceed all current State (his) regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water and soil. Controls shall include the following conditions:		
	1. Topcoats and primers must be chrome and lead free.		
	2. Metal treatment chemicals must be chrome free. The wastewater generated in the metal treatment process must be treated to remove any other heavy metals.		
	3. Particulate emissions from painting operations must be collected by a dry filter or water wash process.		
	4. Solvents used in clean-up operations must be collected, sent off-site for distillation and returned for reuse.		
	5. Additionally, the finished apparatus shall not be manufactured with or contain products that have ozone depleting substances. Contractor shall, upon demand, present evidence that his manufacturing facility meets the above conditions and that it is in compliance with his state EPA rules and regulations.		
8.220	<u>COMMERCIAL CHASSIS PAINT</u> The chassis shall be painted by the chassis manufacturer. It shall remain the color and commercial quality finish as provided. The primary color shall be candy apple red.		
8.221	<u>TWO-TONE CAB</u> The cab shall be painted two-tone by the apparatus manufacturer. The top portion of the cab from the bottom of the windshield up shall be painted to match #10 white.		
8.222	<u>PAINT CHASSIS FRAME ASSEMBLY</u> The chassis frame assembly shall be painted black by the chassis manufacturer. It shall remain the commercial grade finish as provided.		

8.223	<u>COMPARTMENT LINING</u>		
A	There shall be six (6) interior body compartment floors, walls, and ceilings that shall be lined with Durabak, a spray on textured polyurethane material. The interior lining shall be dark grey in color.		
B	All compartments shall be coated.		
8.224	<u>REFLECTIVE STRIPES</u>		
A	Three (3) reflective stripes shall be provided across the front of the vehicle and along the sides of the body. The reflective band shall consist of a 1.00" white stripe at the top with a 1.00" gap then a 6.00" white stripe with a 1.00" gap and a 1.00" white stripe on the bottom.		
B	The reflective vinyl band shall be provided across the front bumper.		
8.225	<u>CHEVRON STRIPING, REAR</u>		
A	There shall be alternating chevron striping located on the rear-facing vertical surface of the apparatus.		
B	The colors shall be red and fluorescent yellow green diamond grade.		
C	Each stripe shall be 6.00" in width.		
D	This shall meet the requirements of NFPA 1901, 2009 edition, which states that 50% of the rear surface shall be covered with chevron striping.		
8.226	<u>REFLECTIVE STRIPE, CAB DOORS</u>		
A	A white reflective stripe shall be provided on the interior of each cab door.		
B	This stripe shall be a minimum of 96.00 square inches and shall meet the NFPA 1901 requirement.		
8.227	<u>LETTERING</u>		
A	The lettering shall be totally encapsulated between two (2) layers of clear vinyl.		
B	Forty-one (41) to sixty (60) printed effect gold leaf lettering, 3.00" high, with outline and shade shall be provided.		
8.228	<u>MALTESE CROSS INSTALLATION</u>		
	There shall be one (1) pair of Maltese crosses, comprised of printed effect gold leaf material, provided and installed on the cab doors.		
8.229	<u>CD MANUAL, BODY PARTS ONLY</u>		
A	A custom parts manuals for the factory installed parts only shall be provided in CD format with the completed unit.		
B	The manual shall contain the following:		
	1. Job number		
	2. Part numbers with full descriptions		
	3. Table of contents		
	4. Parts section sorted in functional groups reflecting a major system, component, or assembly		
	5. Parts section sorted in Alphabetical order		
	6. Instructions on how to locate parts		
C	The manual shall be specifically written for the body model being purchased. It shall not be a generic manual for a multitude of different bodies.		
8.230	<u>SERVICE PARTS INTERNET SITE</u>		

	The service parts information included in this manual should also be available on the factory website. The website should offer additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website should also feature electronic search tools to assist in locating parts quickly.		
8.231	<u>MANUALS, SERVICE</u>		
A	Two (2) service manual supplements containing parts and service information on factory installed components shall be provided with the completed unit.		
B	The manuals shall be specifically written for the unit being purchased. They shall not be generic manuals for a multitude of different units.		
8.232	<u>MANUAL, CHASSIS OPERATION</u>		
	One (1) chassis operation (manufacturer's standard) shall be provided with the completed unit.		
8.234	<u>ONE (1) YEAR MATERIAL AND WORKMANSHIP</u>		
A	Each new piece of apparatus shall be provided with a minimum one (1) year basic apparatus material and workmanship limited warranty. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.		
B	A copy of the warranty certificate shall be submitted with the bid package (no exception).		
8.235	<u>CHASSIS WARRANTY</u>		
	The chassis manufacturer shall provide a three (3) year or 100,000 mile warranty.		
8.236	<u>PAINT WARRANTY</u>		
	The commercial chassis manufacturer's paint warranty shall apply to the paint on the chassis only.		
8.237	<u>CAMERA SYSTEM WARRANTY</u>		
	A fifty-four (54) month warranty shall be provided for the camera system.		
8.238	<u>COMPARTMENT LIGHT WARRANTY</u>		
A	A ten (10) year material and workmanship limited warranty shall be provided for the Pierce 12 volt DC LED strip lights. The warranty shall cover the LED strip lights to be free from defects in material and workmanship that would arise under normal use.		
B	A copy of the warranty certificate shall be submitted with the bid package (no exception).		

8.239	<u>TRANSMISSION WARRANTY</u> The transmission shall have a five (5) year/unlimited mileage warranty covering 100 percent parts and labor. The warranty to be provided by Allison Transmission and not apparatus builder.		
8.240	<u>WATER TANK WARRANTY</u> The UPF poly water tank shall be provided with a lifetime material and workmanship limited warranty.		
A			
B	A copy of the warranty certificate shall be submitted with the bid package (no exception).		
8.241	<u>FIVE (5) YEAR STRUCTURAL INTEGRITY</u> Each new piece of apparatus shall be provided with a five (5) year material and workmanship limited warranty on the apparatus body. The warranty shall cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service.		
A			
B	A copy of the warranty certificate shall be submitted with the bid package (no exception).		
8.242	<u>ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY</u> A Gortite roll-up door limited warranty shall be provided. The mechanical components of the roll-up door shall be warranted against defects in material and workmanship for the lifetime of the vehicle. A six (6) year limited warranty shall be provided on painted and satin roll up doors.		
A			
B	A copy of the warranty certificate shall be submitted with the bid package (no exception).		
8.243	<u>PUMP WARRANTY</u> The Hale five (5) year limited warranty on parts and two (2) year limited warranty on labor shall be provided for the pump.		
A			
B	A copy of the warranty certificate shall be submitted with the bid package (no exception).		
8.244	<u>TEN (10) YEAR PUMP PLUMBING WARRANTY</u> The stainless steel plumbing components and ancillary brass fittings used in the construction of the water plumbing system shall be warranted for a period of ten (10) years or 100,000 miles . This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of delivery.		
A			
B	A copy of the warranty certificate shall be submitted with the bid package (no exception).		
8.245	<u>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</u> Each new piece of apparatus shall be provided with a ten (10) year pro-rated paint and corrosion limited warranty on the apparatus body. The warranty shall cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service.		
A			

B	A copy of the warranty certificate shall be submitted with the bid package (no exception).		
8.246	<u>THREE (3) YEAR MATERIAL AND WORKMANSHIP</u> The gold leaf lamination shall be provided with a three (3) year material and workmanship limited warranty. The warranty shall cover the gold leaf lamination as being free from defects in material and workmanship that would arise under normal use and service.		
B	A copy of the warranty certificate shall be submitted with the bid package (no exception).		
8.247	<u>VEHICLE STABILITY CERTIFICATION</u> The fire apparatus manufacturer shall provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification shall be provided at the time of bid.		
8.248	<u>CAB INTEGRITY</u> The cab must have been tested to and passed the following standards:		
A	ECE Regulation No.29		
B	SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.		
8.249	<u>AMP DRAW REPORT</u> The bidder shall provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.		
B	The manufacturer of the apparatus shall provide the following:		
	1. Documentation of the electrical system performance tests.		
	2. A written load analysis, which shall include the following:		
	<input type="checkbox"/> The nameplate rating of the alternator.		
	<input type="checkbox"/> The alternator rating under the conditions specified per:		
	<input type="checkbox"/> Applicable NFPA 1901 or 1906 (Current Edition).		
	<input type="checkbox"/> The minimum continuous load of each component that is specified per:		
	<input type="checkbox"/> Applicable NFPA 1901 or 1906 (Current Edition).		
	<input type="checkbox"/> Additional loads that, when added to the minimum continuous load, determine the total connected load.		
	<input type="checkbox"/> Each individual intermittent load.		
C	All of the above listed items shall be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).		

9. INSURANCE REQUIREMENTS

Liability insurance coverage indicated below must be considered as primary and not as excess insurance. Contractor shall furnish a certificate evidencing such coverage, with County listed as an additional insured, except for professional liability, workers' compensation and employer's liability. Certificate shall be provided with bid/proposal submittals. Certificate shall remain in force during the duration of the project/services and will not be canceled, reduced, modified, limited, or restricted until thirty (30) days after County receives written notice of such change. All insurance must be with an insurance company with a minimum BEST rating of A-VIII and licensed to do business in the State of Kansas. It is the responsibility of Contractor to require that any and all approved subcontractors meet the minimum insurance requirements. Contractor shall obtain the above referenced certificate(s) of insurance, and in accordance with this Agreement, provide copies of such certificates to County.

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:

Each Occurrence	\$1,000,000.00
Products/Completed Operations Aggregate	\$1,000,000.00
Personal and Advertising Injury	\$1,000,000.00
General Aggregate	\$5,000,000.00

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 for bodily injury and property damage subject to the terms and conditions of the policy. The policy shall include Owner as an additional insured when required by written contract.

Commercial Automobile Liability Insurance

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

Each Accident Combined Single Limit:	\$1,000,000.00
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Coverage shall be written on a Commercial Automobile liability form.

Umbrella/Excess 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 umbrella liability insurance which provides "following form coverage to the underlying coverages."

Aggregate:	\$25,000,000.00
Each Occurrence:	\$25,000,000.00

The umbrella policy shall be written on an occurrence basis and at a minimum provide excess to the Bidder's General Liability, Automobile Liability and Employer's Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met. Coverage shall be provided by a carrier(s) rated A- or better by A.M. Bests. All policies shall provide a thirty (30) day notice of cancellation to the named insured. The Certificate of Insurance shall provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, notice shall be delivered in accordance with the policy provisions. Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with its bid. The certificate shall show the purchaser as certificate holder.

10. INDEMNIFICATION

To the fullest extent of the law, the provider, its subcontractor, agents, servants, officers or employees shall indemnify and hold harmless Sedgwick County, including, but not limited to, its elected and appointed officials, officers, employees and agents, from any and all claims brought by any person or entity whatsoever, arising from any act, error, or omission of the provider during the providers performance of the agreement or any other agreements of the provider entered into by reason thereof. The provider shall indemnify and defend Sedgwick County, including, but not limited to, its elected and appointed officials, officers, employees and agents, with respect to any claim arising, or alleged to have arisen from negligence, and/or willful, wanton or reckless acts or omissions of the provider, its subcontractor, agents, servants, officers, or employees and any and all losses or liabilities resulting from any such claims, including, but not limited to, damage awards, costs and reasonable attorney's fees. This indemnification shall not be affected by any other portions of the agreement relating to insurance requirements. The provider agrees that it will procure and keep in force at all times at its own expense insurance in accordance with these specifications.

11. TERMINATION

The County reserves the right to cancel the contract and discontinue services with a ninety (90) day written notice as a result of the failure of the contracted provider to provide acceptable services as delineated in the response to this document or if determined that services can be better provided by in-house or other sources. In the event of termination of this agreement as a result of a breach by contractor hereunder, the County will not be liable for any fees and may, at its sole option, award an agreement for the same services to another qualified firm with the best proposal, or call for new proposals and award an agreement for the same services to another qualified firm to provide services.

12. REQUEST FOR PROPOSAL CONDITIONS

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

1. Pricing offered in the proposal document will be provided to other local governments and governments whom Sedgwick County regularly enters into agreements.
2. Alternate proposals (two or more proposals submitted) will be considered for an award. Sedgwick County reserves the right to make the final determination of actual equivalency or suitability of such proposals with respect to requirements outlined herein.
3. Sedgwick County will retain the right to reject any part of or any and/or all proposals received, or to accept any item or items in the proposal, if determined to be non-responsive in any form, or if determined to be in the best interest of Sedgwick County. It will further be understood that each responder's sureties and insurers are subject to the approval of the County.
4. Sedgwick County may award a purchase contract, based on initial offers received, without discussion of such offers. **A vendor's initial offer should therefore be based on the most favorable terms available from a price and technical standpoint.** The County may, however, have discussion with those vendors that it deems in its discretion to fall within a competitive range. It may also request best and final offers from such proposers, and make an award and/or conduct negotiations thereafter.
5. Sedgwick County reserves the right to negotiate separately with any proposer after the opening of this Request for Proposal when such action is considered in its best interest. Subsequent negotiations may be conducted, but such negotiations will not constitute acceptance, rejection, or a counteroffer on the part of the County.
6. Proposals may not be withdrawn for a period of 120 days following the opening of this *Request for Proposal*. Prices MUST also be free of duties, federal, state, and local taxes unless otherwise imposed by a governmental body, and applicable to the material on the proposal.
7. Proposers MUST return the entire document with any supplementary materials to Sedgwick County, Kansas, Purchasing Department, 525 North Main, 8th Floor, Suite 823, Wichita, KS 67203, on or before 1:45 p.m. on the proposal due date. The time clock stamp in the Purchasing Department will determine the time of receipt. Bids and Proposals will be opened and acknowledged at 2:00 p.m. the same day and location unless other specified.
8. Envelopes/container containing Responses must be sealed and marked on the lower left-hand corner with the firm name and address, proposal number, proposal due date, and proposal opening time.
9. Sedgwick County interprets the term "lowest responsible and best bidder/proposer" as requiring Sedgwick County to: (a) choose between the kinds of materials, goods, wares, or services subject to the proposal, and (b) determine which proposal 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, and maintenance costs of items upon which proposals are received. Sedgwick County can determine any differences or variations in the quality or character of the material, goods, wares, or services performed or provided by the respective responders.
10. All requested information must be supplied. If proposers cannot respond to any part of this request proposers should state the reason they cannot respond. Proposers may provide supplemental information, if necessary, to assist Sedgwick County in analyzing their proposal.
11. A purchase order and/or contractual agreement constitutes Sedgwick County's offer to the service provider upon the terms and conditions stated herein, and shall become binding for all terms set forth herein, when it is accepted by the service provider by acknowledgment or performance, and subject to the terms and conditions of the County to be memorialized by written agreement.
12. After the award, if the successful contractor/supplier refuses or fails to make deliveries of the materials/services within the times specified in the *Request for Proposal*, purchase order or contractual agreement, Sedgwick County may, by written notice, terminate the contract OR purchase order. The successful respondent 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 K.S.A. 58-201, et seq., and any other lien, right, or claim of any nature or kind whatsoever.
13. The proposer responding to this proposal 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 Proposal, Addenda, Contract, Bonds, Insurance, Plans, Specifications, Mandatory Requirements and Conditions.

14. If a response to this Request for Proposal is accepted, the proposer 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 Proposer.
15. Prior to a vendor being awarded a contract, Domestic (Kansas) corporations shall 1) furnish evidence of good standing in the form of a Certificate signed by the Kansas Secretary of State. Foreign (non-Kansas) corporations shall furnish evidence of authority to transact business in Kansas, in the form of a Certificate signed by the Kansas Secretary of State; and 2) a copy of the Corporation Resolution evidencing the authority to sign the Contract Documents, executed by the Corporation's Secretary or Assistant Secretary.
16. Sedgwick County will not award to any vendor that is currently listed in the exclusion records of the SAM (System for Award Management) website maintained by the General Services Administration (GSA) or to any vendor presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency.
17. The proposer hereby certifies that he or she has carefully examined all of the documents for the project, has carefully and thoroughly reviewed this Request for Proposal, understands the nature and scope of the work to be done; and that this proposal is based upon the terms, specifications, requirements, and conditions of the Request for Proposal and documents. The Proposer further agrees that the performance time specified is a reasonable time, having carefully considered the nature and scope of the project as aforesaid.
18. It will be understood that any proposal and any/all referencing information submitted in response to this Request for Proposal will become the property of Sedgwick County, and will not be returned. Sedgwick County will use discretion with regards to disclosure of proprietary information contained in any response, but cannot guarantee that information will not be made public. As a governmental entity, Sedgwick County is subject to making records available for disclosure after Board of County Commission approval of the recommendation. Any confidential or proprietary information should be clearly marked.
19. Sedgwick County reserves 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.
20. 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. Any dispute arising out of the contract documents or their interpretation will be litigated only within the courts of the State of Kansas.
21. County reserves the right to enter into agreements subject to the provisions of the Cash Basis Law (K.S.A. 10-1112 and 10-1113), the Budget Law (K.S.A. 79-2935). Agreements shall be construed and interpreted so as to ensure that the County shall at all times stay in conformity with such laws, and as a condition of agreements the County reserves the right to unilaterally sever, modify, or terminate agreements at any time if, in the opinion of its legal counsel, the Agreement may be deemed to violate the terms of such law.
22. No prepayment of any kind will be made prior to implementation. Payment of the seller's invoices is subject to adjustment for any shortage, or for the rejection of any item or items.
23. Unless specified elsewhere in the document, all prices quoted must be F.O.B. Destination, Freight Prepaid and Allowed, which will include all delivery, handling, and any other charges related to delivery including surcharges.
24. The successful proposer may have access to private or confidential data maintained by the County to the extent necessary to carry out its responsibilities of the contract. Contractor shall be responsible for compliance with the privacy provision of the Health Insurance Portability and Accountability Act (HIPAA) and shall comply with all other HIPAA provisions and regulations applicable. If the successful proposer is a business associate as that term is defined under HIPAA, the contract shall include the County's standard business associate addendum. A copy of that standard addendum is available on request.
25. The successful proposer agrees all data, records and information, which the proposer, including its agents and employees, obtains access to for the purposes of this proposal, remains at all times exclusively the property of Sedgwick County. Proposer agrees it will take all reasonable steps and the same protective precautions to protect Sedgwick County's proprietary information from disclosure to third parties as with successful proposer's own proprietary and confidential information. **Proposer agrees that all data, regardless of form, that is generated as a result of this Request for Proposal is the property of Sedgwick County.**
26. The Proposer agrees to comply with K.S.A. 44-1030, and hereby agrees that:
 - a. He or she will observe the provision of the Kansas Commission on Human Rights 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 or she will include the phrase, 'Equal Opportunity Employer,' or a similar phrase to be approved by the Kansas Commission on Human Rights;
 - c. If he or she fails to comply with the manner in which he reports to the Kansas Commission on Human Rights, 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, Kansas;
 - d. If he or she is found guilty of a violation of the Kansas Act Against Human Rights under a decision, or order of the Kansas Commission on Human Rights which has become final, he or she 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, Kansas; and,
 - e. He or she 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 subcontractor or vendor.
27. The successful proposer agrees all project participants, consultants, engineers, contractors and subcontractors, must comply with all applicable Federal, State and County laws pertaining to contracts entered into by governmental agencies. All participants must comply with the Americans with Disabilities Act (ADA), including the 2008 ADA Amendments Act, and 2010 ADA Standards for Accessible Design.
 28. The successful proposer agrees all contractors/subcontractors performing new construction, maintenance, alterations, or additions to Sedgwick County buildings or facilities must comply with building guidelines/codes, and the 2010 ADA Standards for Accessible Design. Any violation of the provisions of the ADA or 504, or specification deficiencies, should be reported to the county's ADA coordinator. Failure to notify the county's ADA coordinator for remedy may be considered a breach of contract and may be grounds for cancellation, termination for suspension, in whole or in any part of the contract. All construction plans will have the county's ADA coordinator approval prior to beginning any work.
 29. Sedgwick County is desirous of allowing as many Kansas vendors as possible the opportunity to participate including minority men and women-owned businesses, and small businesses in the roles of providing goods and services to Sedgwick County. If your company does not fall into any of these categories, your efforts to contract with vendors who do fall into these categories are appreciated. Construction projects utilizing subcontractors requires a subcontracting worksheet. Contact purchasing department for details.
 30. By submission of a response, the Proposer 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 Proposer'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. Proposers 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 proposal.
 31. No gifts or gratuities of any kind shall be offered to any County employee at any time.
 32. The Proposer certifies that this proposal is submitted without collusion, fraud, or misrepresentation as to other Proposers, so that all proposals for the project will result from free, open, and competitive proposing among all vendors.
 33. Prior to the opening of proposals, proposers may correct, modify, or withdraw their proposals. A proposer who wishes to withdraw a proposal must make the request in writing to the Purchasing Director. Any correction or modification to a proposal must be submitted in writing and in a sealed envelope clearly identifying the envelope as being a correction or modification to the proposer's proposal.

13. GENERAL CONTRACT PROVISIONS

The following appendix is language the County requires for all contracts that are entered into (if duplication exists, previous sections prevail). http://www.sedgwickcounty.org/purchasing/pdf_files/General_Contract_Provisions.pdf.

14. PROPOSAL CONTENT

The proposal response should be organized in the following format and information sequence:

1. State full name and address of your organization and provide a brief description of your firm, including qualifications, experience, depth of staff, quality control, and the demonstration of your ability to deliver a quality product.
2. Provide a list of four (4) past or current client references; include organization, address, date of services, scope of services/product, contact person, telephone number, and an email address.
3. Clearly address in sequential order each of the minimum qualifications listed in Section 3.
4. Clearly address in sequential order each of the specifications and requirements listed in Section 8. Including bid Bond, copy of insurance and warranty information. *Proposers must clearly delineate and describe in detail any exceptions to the requirements and specifications.*
5. Sign and return the completed Proposal Response Form that is provided on pages 56.

PROPOSAL RESPONSE FORM
#15-0005
TENDER / PUMPER TRUCK

The undersigned, on behalf of the Proposer, certifies that: (1) this offer is made without previous understanding, agreement or connection with any person, firm, or corporation submitting a proposal on the same project; (2) is in all respects fair and without collusion or fraud; (3) the person whose signature appears below is legally empowered to bind the firm in whose name the proposal is entered; (4) they have read the complete Request for Proposal and understands all provisions; (5) if accepted by the County, this proposal is guaranteed as written and amended and will be implemented as stated; and (6) mistakes in writing of the submitted proposal will be their responsibility.

NAME _____

DBA/SAME _____

CONTACT _____

ADDRESS _____ CITY/STATE _____ ZIP _____

PHONE _____ FAX _____ HOURS _____

TAX PAYER I.D. NUMBER _____ STATE INCORPORATED _____

COMPANY WEBSITE ADDRESS _____ E-MAIL _____

NUMBER OF LOCATIONS _____ NUMBER OF PERSONS EMPLOYED _____

TYPE OF ORGANIZATION: Public Corporation _____ Private Corporation _____ Sole Proprietorship _____

Partnership _____ Small Business _____ Manufacturer _____ Distributor _____ Retail Dealer _____

General Nature of Business _____ FEIN/SS # _____ W-9 included _____

Not a Minority Owned Business _____ Minority Owned Business: _____ Certification# _____

African American _____ Asian _____ Hispanic _____ Native American _____ Other _____ Woman Owned Business _____

ACKNOWLEDGE RECEIPT OF ADDENDA: All addenda are posted to our website and it is the vendor's responsibility to check and confirm all addenda related to this document by going to www.sedgwickcounty.org/finance/purchasing.asp.

NO. _____, DATED _____; NO. _____, DATED _____; NO. _____, DATED _____

Qty.	Description	Unit Price	Extended Price
1 ea.	Tender / Pumper Truck complete as requested	\$	\$
Grand Total			\$
Delivery Date:			

In submitting a response to this document, vendor acknowledges acceptance of all sections of the entire document and has clearly delineated and detailed any exceptions.

Signature _____ Title _____

Print Name _____ Dated _____