Fouts Bros Fire Equipment

MEDIUM DUTY RESCUE UNIT

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Fouts Bros Fire Equipment

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SCOPE AND GENERAL REQUIREMENTS

It is the intent of the manufacturer to provide a new fire apparatus that will withstand the continuous use encountered in the emergency fire fighting service. The apparatus shall be of the latest type, symmetrically proportioned and constructed with due consideration of the load to be sustained.

All parts not specifically mentioned herein, but which are necessary in order to furnish a complete fire apparatus, shall be furnished and shall conform to the best practices known to the fire apparatus industry.

The unit is to be of current year manufacture, and is to be new and unused. The bid price shall not include any local, State, or Federal taxes. The Bidder shall not be liable for any State or Federally mandated tax or program after the sale of this apparatus.

These specifications shall be construed as minimum. Should the manufacturer's current published data or specifications exceed these, they shall be considered minimum and be furnished.

PRIME BIDDER, MANUFACTURER

The manufacturer shall be prime bidder and shall identify the location of their facility.

BIDDERS BACKGROUND

Bids are requested from responsible manufacturers who are engaged in the manufacture of fire apparatus. To insure reliable and complete acceptance of the apparatus, bidder shall have been in operation for a minimum of thirty (30) years in the manufacturing of fire apparatus.

The manufacturer of the apparatus must be fully owned and managed by a Parent Company, Corporation, or Individual(s) that is 100% held by United States of America based Company, Corporation, or United States citizen(s).

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Proposals from any manufacturer that is fully or partially owned and/or operated by a foreign company, Corporation or Individual(s) under any type of ownership, partnership, or any similar type of agreement will be immediately rejected.

If the manufacturer of the apparatus, or if any owner, shareholder, or immediate relative of an owner or shareholder that has previously been involved in or held ownership in any company that has filed bankruptcy or any other type of reorganization plan, it must be clearly stated in the bid proposal. The statement must include details and dates of all occurrences.

FAMA COMPLIANCE

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

FAIR, ETHICAL AND LEGAL COMPETITION

In order to ensure fair, ethical, and legal competition the apparatus manufacturer shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

PROPRIETARY PARTS

It is the intention of the purchaser for all bidders to furnish the apparatus with major parts commonly used by the heavy-duty truck manufacturers and open market vendors whereas replacement parts are more readily available and at reduced cost. The use of proprietary parts may not be acceptable to the purchaser.

MANUFACTURER'S DISCRETION

Materials, parts, or procedures used are subject to change at manufacturer's discretion at any time to provide equal or better products.

PRODUCT QUALITY AND WORKMANSHIP

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The components provided and workmanship performed shall be of the highest quality available for this application. Special consideration shall be given to the following areas:

A). Accessibility to various components that require periodic maintenance or lubrication checks.

B). Ease of vehicle and pump operation.

C). Features beneficial to the intended operation of the apparatus.

Construction of the complete apparatus shall be designed to carry the loads intended to meet the road and terrain conditions and speed requirements desired when specified by the purchaser.

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

INSURANCE REQUIREMENTS

Each bidder must submit with their bid proposal a Certificate of Insurance listing the proposed manufacturer's product liability insurance coverage. Liability insurance shall be a minimum amount of ten (10) million dollars. Submitted certificate shall name the apparatus manufacturer, insurance company, policy number, and effective dates of the insurance policy. Bids submitted without the required certificate will be considered non responsive and automatically rejected. No exceptions are allowed to the minimum insurance coverage requirement.

The manufacturer shall maintain full insurance coverage on the purchaser's cab and chassis from time of first possession by the manufacturer until the apparatus is delivered and accepted by the purchaser (No Exceptions). Purchaser reserves the right to require proof of insurance from the manufacturer's insurance carrier prior to entering into a contract for the apparatus.

PAYMENT TERMS

Full payment for the apparatus shall be made at time of delivery of the completed vehicle. Due to insurance liability, the apparatus will not be left at the purchaser's

location without full acceptance and payment or prior agreement between the Purchaser and Bidder.

Final delivery price shall not include any Local, State or Federal taxes. The manufacturer shall not be liable for any State or Federal mandated tax or program after sale or delivery of the apparatus.

VEHICLE ACCEPTANCE AND DELIVERY

The customer shall pickup the vehicle at the manufacturing facility and shall supply evidence of sufficient insurance coverage to transport the vehicle.

FUEL TANK FILLED AT DELIVERY

The fuel tank and DEF tank (if applicable) shall be filled upon final delivery at the factory.

OVERALL HEIGHT

An overall height restriction has not been specified for this apparatus.

OVERALL LENGTH

No overall length restriction has been specified for this apparatus.

OVERALL WIDTH

No overall width restriction has been specified for this apparatus.

OVERALL WHEELBASE

No overall wheelbase restriction has been specified for this apparatus.

ANGLE OF APPROACH

No angle of approach restriction has been specified for this apparatus.

ANGLE OF DEPARTURE

No angle of departure restriction has been specified for this apparatus.

NFPA 1900 COMPLIANCE

The National Fire Protection Association standard #1900 (most recent edition) is hereby adopted and made a part of these specifications, the same as if they were written out in full detail, insofar as they apply with the exception of any sections dealing with “Equipment Recommended for Various Types of Apparatus”. Bidders are to provide only the equipment requested herein and the Department will supply the rest before the apparatus is put into service. The unit shall comply with all federal, state, ICC, and DOT motor vehicle regulations, standards, and laws relating to commercial vehicles as well as to fire apparatus on the date of the bid.

The apparatus being furnished under these specifications shall conform to the requirements specific to pumper fire apparatus NFPA Booklet 1901 version current at time of contract

ROAD TEST CERTIFICATION

A road test shall be conducted with the finished apparatus fully loaded. During this time, the apparatus shall not show loss of power and/or overheating. The transmission drive shaft or shafts and rear axle shall run free from abnormal vibration or noise throughout the operating range of the apparatus. The apparatus, when loaded, shall have not less than 25% or more than 45% of the weight on the front axle and not less than 55% or more than 75% on the rear axle.

A). The apparatus must 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.

B). The apparatus must be capable of accelerating from a steady speed of 15 mph to a true speed of 35 mph within 30 seconds. This shall be accomplished without moving the gear selector.

C). The fully loaded apparatus shall be capable of obtaining a speed of 50 to 55 mph on a level concrete highway.

D). The manufacturer shall furnish copies of the engine installation approvals signed by the appropriate engine company upon delivery of the chassis to the Fire Department.

E). The manufacturer shall furnish copies of the transmission approval signed by the transmission manufacturer upon delivery of the chassis to the Fire Department.

F). The manufacturer shall furnish copies of the front and rear axle approvals upon delivery of the apparatus to the Fire Department.

ROAD TEST FAILURE

In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the manufacturer within thirty (30) days of the first trials. Such trials shall be final and conclusive and failure to comply with changes, as the purchaser may consider necessary to conform to any clause of the specifications within thirty (30) days after notice is given to the manufacturer of such changes, shall 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 permission of the manufacturer, shall not constitute acceptance.

VEHICLE TOP SPEED

The rear axle shall be geared for a top speed of 68 mph at engine governed RPM.

NFPA TOP SPEED STATEMENT

Per NFPA 1900 section 7.16.2, the maximum top speed of fire apparatus with a GVWR over 33,000 lbs. shall not exceed either 68 MPH or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower.

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Per NFPA 1900 section 7.16.3, if the combined water tank and foam agent tank capacities on the fire apparatus exceed 1250 gallons, or the GVWR of the vehicle is over 50,000 lbs., the maximum top speed of the apparatus shall not exceed either 60 MPH or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower.

SAFETY SIGNS

The following safety signs shall be provided:

SEATED AND BELTED WARNING LABEL - FAMA# 07

A permanent label shall be provided that is visible to all occupants that states that they should be seated and belted while the apparatus is in motion. The label shall also state potential injuries or death that could be caused if the safety belts are not used properly.

CAB INTERIOR EQUIPMENT MOUNTING DANGER LABEL - FAMA# 10

A permanent label shall be provided inside of the cab warning of the dangers of unsecured equipment inside the cab. The label shall state that all equipment shall be properly secured and also warn of potential injury or death that could be caused by failing to do so.

SCBA SEAT CRASH HAZARD LABEL - FAMA# 11

A permanent label shall be provided inside of the cab in view to the occupants of the SCBA seats warning to only sit in a SCBA seat with a pack or insert in place. The label shall warn of injury in the event of a crash if not followed.

DO NOT WEAR HELMET LABEL - FAMA# 15

A permanent label shall be provided inside of the cab in view of all seated positions stating that helmets should not be worn in cab. The label shall also warn of potential injury or death that could be caused by wearing helmet in cab.

VEHICLE BACKING LABEL - FAMA17

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A permanent label shall be provided inside of the cab in view of the driver advising of proper procedures to following when the apparatus is in reverse motion. The label shall also warn of potential injury or death that be caused by failing to follow proper procedures.

CHASSIS DATA LABELS

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

Fluid Data:

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

Chassis Data:

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

Location shall be in the driver's compartment of the chassis cab.

OVERALL HEIGHT, LENGTH, GVW DATA PLAQUE

A "high visibility" plate shall be permanently mounted in the cab, visible to driver when seated.

The plate shall show the overall height of the completed apparatus in feet and inches, the overall length of the completed apparatus in feet and inches.

The plate shall also show the gross vehicle weight rating (GVWR) in tons.

Text shall also be supplied on the plate, indicating that the information shown is current upon completion of the apparatus. If the overall height of the apparatus changes after the apparatus is put into service, then the purchaser must revise the dimensions on the plate.

FAMA SAFETY GUIDE

One (1) copy of the latest edition of FAMA's Fire Apparatus Safety Guide shall be provided with the completed apparatus.

COMMERCIAL CHASSIS SPECIFICATION

CHASSIS PROVIDER

The chassis, as detailed in these specifications, shall be ordered and supplied by the apparatus manufacturer.

KENWORTH CHASSIS

A Kenworth 2-door chassis per the attached specifications shall be furnished:
KENWORTH OPTION: EXHAUST BRAKE

CHASSIS PAINT COLOR

The cab shall be painted a single color.

Color: Fouts Fire Red

Paint Number: 763572EA

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AIR HORNS

Two (2) Hadley chrome plated air horns shall be installed at the front of the vehicle. The air horns shall be mounted in full compliance of NFPA. The supply lines shall be dual 1/4" lines with equal distance from each horn.

Each air horn shall be mounted, one (1) each side, on the side of the hood.

Both air horns shall be controlled by a chassis manufacturer supplied lanyard.

ELECTRIC TRAFFIC HORN AND AIR HORN SELECTOR SWITCH

One (1) selector switch shall be provided on the cab's dash that will allow the chassis steering wheel horn button to activate either the electric horn or air horn system. The electric horn shall sound by default when the selector switch is in either position to meet FMCSA requirements.

CHASSIS MODIFICATIONS

CHASSIS MODIFICATIONS

The following modifications and installations shall be performed on the chassis upon delivery to the apparatus manufacturer:

TIRE PRESSURE MONITORING DEVICE

A Real Wheels LED AIrGuard shall be supplied for each tire. The device shall consist of a valve stem cap to with an LED tire alert to indicate tire pressure conditions. The LED will flash when the tire drops 5-10 psi below the factory setting.

The tire pressure sensors shall be shipped loose.

HUB COVERS (front)

Stainless steel hub covers shall be provided on the front axle.

HUB COVERS (rear)

A pair of stainless steel high hat hub covers shall be provided on rear axle hubs.

COVERS, LUG NUT, CHROME

Chrome lug nut covers shall be supplied on front and rear wheels.

EXHAUST SYSTEM

The chassis exhaust system shall be provided as detailed in the chassis specifications. NO modifications shall be made by the apparatus manufacturer.

HOT EXHAUST DANGERS LABEL - FAMA# 04

A permanent label shall be provided near any hot exhaust surface that warns of potential injury or death that could be caused by contact with the surface. The label shall also state precautions that should be taken while working on or around the surface.

BUMPER

The front bumper shall be provided as detailed in the chassis specifications.

CHASSIS PREPARATION

Prior to installation of the fire pump, apparatus body, or cab steps, all components which extend out beyond the chassis frame rails shall be removed and relocated to the area within the frame rails

REAR MUD FLAPS

A pair of black rubber mud flaps, with the manufacturer's logo, shall be provided and installed behind the rear wheels.

VEHICLE DATA RECORDER

The apparatus shall be equipped with a Class1 “Vehicle Data Recorder and Seat Belt Warning System” (VDR/SBW) that is connected to the power train CAN (Controller Area Network) bus consisting of transmission (TCM), engine control (ECM) and anti lock brake (ABS) modules mounted on the apparatus. The

VDR/SBW will function per NFPA 1900 utilizing the power train's J1939 data and using the Class1 "Seat Belt Input Module" for seat occupied and belt status information.

The VDR data shall be downloadable by USB cable to a computer using either Microsoft or Apple Operating Systems using Class 1/ OEM supplied reporting software.

SEAT BELT WARNING SYSTEM

There shall be a seat belt indicator system supplied in the cab. The indicator system shall indicate seat belt use for each individual seating position when the seat is occupied, the seat belt remains unfastened and the parking brake is released.

A Class1 model 118620 display panel shall be supplied in the dash area. The panel shall have an audible indicator and a red light display to indicate that a seat belt has not been fastened.

VEHICLE DATA RECORDER DOWNLOAD HARNESS

A USB VDR download harness shall be supplied with the system to allow the data to be downloaded to a computer.

CENTER CONSOLE

A center console shall be furnished and shall be located between the driver and officer's seats. The top face of the console shall be designed as the switch panel for all emergency light switches.

BATTERY SYSTEM

The battery system shall be supplied with the chassis.

BATTERY JUMPER STUDS

External battery jumper studs shall be provided as detailed in the chassis specifications.

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KEYLESS IGNITION SWITCH

One (1) non-removable, keyless style ignition switch shall be provided with the chassis.

MASTER BATTERY SWITCH

A master battery switch shall be provided as detailed in the chassis specifications.

BATTERY CONDITIONER

A Kussmaul Chief Series Auto Charge 4012 battery charger with onboard display shall be supplied. The battery conditioner shall provide a 40 amp output for the chassis batteries and a 20 amp output circuit for accessory loads.

BATTERY CHARGER LOCATION

The battery charger shall be located in a pre-determined location by the manufacturer.

120 VOLT SHORELINE CONNECTION - "SUPER" AUTO EJECT

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

AUTO-EJECT MATING PLUG

A 5-20P, 20 amp mating female cord end shall be shipped loose with the apparatus to allow the Fire Department to connect cord end to a Fire Department provided charging cord.

BATTERY CHARGER DISPLAY/ COVER

One (1) Kussmaul model 091-55-266-YW battery charger status center/ auto eject cover shall be supplied with the charger.

The cover shall be yellow in color.

SHORELINE RECEPTACLE LOCATION

The shoreline receptacle shall be located on the left hand side of the apparatus in a pre-determined location by the manufacturer.

AUXILIARY AIR COMPRESSOR

A Kussmaul 12V air compressor shall be supplied. The compressor system shall be designed to maintain the air pressure in the air system while not in use. A pressure switch shall sense air pressure drop and engage the compressor which shall run until the pressure is restored.

AUXILIARY AIR COMPRESSOR LOCATION

The auxiliary air compressor shall be located in a pre-determined location by the manufacturer.

BACK-UP ALARM

One (1) 97 DB back up alarm shall be provided and installed at the rear of the unit. It shall be wired to activate when the transmission is placed in reverse.

BODY DESIGN AND CONSTRUCTION

The body shall be modular in design, allowing it to be removed and remounted on a new chassis. The body shall be fabricated using aluminum extrusions, angle, smooth aluminum sheet and aluminum treadplate.

UNDERSTRUCTURE

The body super structure shall be an all welded configuration utilizing a combination of 3.00” x 1.50” X 0.25" and 4.00" x 2.00" x 0.25" 6061-T6 thick walled structural tubing.

BODY MOUNTING

The body subframe shall be fastened to the chassis frame with a minimum of six (6) spring loaded body mounts. The brackets shall be fabricated of heavy duty 0.50" thick steel. Each mounting assembly shall utilizing two (2) 0.625" diameter x 9.00" long grade 8 bolts and two (2) heavy duty springs.

BODY AND COMPARTMENT FABRICATION - 3/16" ALUMINUM

All compartment panels and body side sheets will be fabricated entirely of 0.1875" 5052-H32 aluminum.

COMPARTMENT CONSTRUCTION

The compartments shall be completely formed of 0.1875" aluminum. The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.

COMPARTMENT FLOORS

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

ACCESS PANELS

Removable access panels will be provided to access fuel tank sender, electrical junction compartment and rear body mounts.

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

COMPARTMENT LOUVERS

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

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COMPARTMENT SHELF TRACKS - ALUMINUM

All side body compartments be furnished with adjustable shelving track installed. The shelving track shall include a minimum of four (4) aluminum Uni-strut style channel tracks, mounted vertically on compartment side walls or vertical partitions.

COMPARTMENT SHELVING - SIDE COMPARTMENTS

Adjustable shelving shall be installed in the side compartments as identified later in this specification. Each shelf shall be made of 0.1875” smooth aluminum with a 2.00” high perimeter on the front and rear with side supports. Shelving will be vertically adjustable with spring nuts in aluminum strut channel.

FENDER PANELS

A single piece wheel well panel made of 0.1875" aluminum sheet shall be installed with no sharp edges to cut or damage cleaning equipment used in the wheel well area. The wheel well design shall provide for maximum wheel jounce and for use of tire chains without contacting the fender panel.

REAR WHEEL WELL LINERS

The rear wheel wells shall be equipped with replaceable circular liners to prevent road debris damage to adjacent side compartments. The liners shall be made from a single circular panel of 0.125" smooth aluminum and shall be the full depth of the side compartments. They shall be bolted in place and shall feature end flange bottom drains.

REAR BODY FENDERETTES

A roll-formed, polished stainless steel fenderette shall be installed around the outboard edge of the rear wheel well openings to protect the body sides from road debris. They shall be bolted to the body and shall be replaceable.

BODY FRONT WALL OVERLAY

The front face of the body will be overlaid with a full height aluminum tread plate protection panel.

BODY SIDE RUB RAILS

Replaceable extruded aluminum channel rub rails, 2.00" high x 0.75" deep x 0.125" wall, shall be provided below the lower side compartments. Each rub rail shall have a black rubber bumper strip and mounting stand-off spacers. All rub rail ends shall be angle cut, back toward the body to eliminate the possibility of snagging crew clothing or equipment.

TOW HOOKS – REAR

Two (2) painted tow eyes will be furnished on the rear of the vehicle. The tow eyes will be made from plate steel and will be bolted directly to the chassis frame rails with grade 8 bolts and will extend below the body.

BODY LENGTH DIMENSION

The body shall be 218.00" long.

BODY HEIGHT DIMENSIONS

The body shall be 106.00" tall with the upper 20.50" reserved for horizotal storage compartments.

The vertical compartment dimensions shall be as follows:

	AHEAD OF REAR AXLE	DIMENSION
A.	Overall Compartment height:	81.00
B.	Compartment height above subframe:	62.00"
C.	Compartment height below subframe:	17.1875"
D.	Vertical Door Opening:	73.50"

	ABOVE REAR AXLE	DIMENSION
A.	Overall Compartment height:	51.625
B.	Vertical Door Opening:	43.50"

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	AHEAD OF REAR AXLE	DIMENSION
A.	Overall Compartment height:	81.00
B.	Vertical Door Opening:	73.50"

	REAR OF BODY	DIMENSION
A.	Overall Compartment height:	81.00
B.	Compartment height above subframe:	62.00"
C.	Compartment height below subframe:	17.1875"
D.	Vertical Door Opening:	73.50"

BODY WIDTH DIMENSIONS

The body shall be 100.00" wide, and 102.00" wide at rub rails. Interior compartment depth dimensions shall be approximately:

	SIDE COMPARTMENTS	DIMENSION
E.	Transverse above subframe:	96.00"
F.	Compartment depth below subframe:	24.625"

	REAR COMPARTMENT	DIMENSION
G.	Above subframe:	45.00
H.	Compartment depth below subframe:	29.50"

ROLL-UP DOORS

All lower compartment doors shall be equipped with AMDOR brand roll-up doors. The slats shall be 1.00” double wall aluminum with continuous ball and socket hinge joints designed to prevent water ingression and weather tight recessed dual durometer seals.

The interior door curtains shall be smooth to prevent equipment hang-ups. The door tracks and side frames shall each be one-piece aluminum. Each side seal shall be recessed, and non-marring with UV stabilizers to prevent warping.

The bottom panel flange shall have cut-outs for ease of access with gloved hands. The door strikers shall provide support beneath the lift bar to prevent door curtain bounce and potential false door ajar indications.

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COMPARTMENT DOOR FINISH

The roll up doors shall have a satin finish.

COMPARTMENT LIGHT(S)

Two (2) full height Luma Bar LED strip light(s) shall be installed inside each of the body compartments.

COMPARTMENT LIGHT ACTIVATION

Each compartment light shall be controlled by a magnetic "On-Off" switch located on each compartment door.

DOOR LOCKS- KEYED, MANUAL

Each roll-up door door shall have a cylindrical lock installed by the roll-up door manufacturer.

The lock key type shall be: J-236

DOOR PULL STRAP

One (1) Flex-HD pull-down strap shall be installed on each roll-up door. The strap shall be fastened to the lower left inside door sill of each compartment.

DRIP PAN W/ DRAIN

Each door shall be supplied with a drip pan for protection. A drain hose will be attached to each drip pan and shall be routed below the body.

SIX (6) UPPER BODY COMPARTMENTS

There shall be six (6) compartments parallel to the sides of the body, three (3) on each side. The left hand side compartments shall be 45.00" long x 24.00" wide x 20.00" deep. The right hand side compartments shall be 54.00" long x 24.00" wide x 20.00" deep. The side compartments shall be open under each door sill to allow for long equipment. Each compartment shall have a lift-up type compartment door hinged on the outboard side. The doors shall be fabricated

from 0.1875" aluminum tread plate, and have two (2) pneumatic type cylinders, one (1) at each end to hold the door in both the opened and closed positions.

COMPARTMENT LIGHT(S)

Each compartment shall have one (1) 18.00" OnScene Solutions Access LED strip light mounted horizontally.

AUTOMATIC COMPARTMENT DOOR LIGHT SWITCH

Each light and NFPA door ajar system shall be automatically activated by an individual switch per compartment.

UPPER BODY WALKWAY

A 46.00" wide, upper body walkway shall be provided at the center of body and recessed into the roof structure. The walkway shall be fabricated from NFPA compliant 0.125" embossed aluminum tread plate.

WALKWAY LIGHTS

There shall be four (4) OnScene Solutions Rough-Service 8.00" LED lights provided to illuminate the walkway. Each light shall be mounted in an anaodized aluminum housing to protect against damage from personnel or equipment.

WALKWAY LIGHT(S) ACTIVATION

The walkway light(s) shall be wired to activate with the parking brake.

WALKWAY EXTENSION STEP

A 54.00" wide x 8.00" deep bolt-on type extension step shall be provided for safe transition from specified ladder to center walkway area. The step shall be fabricated from 0.1875" NFPA compliant treadplate aluminum with side gusset supports mounted to the body.

BUMPER STEP

The rear bumper step shall be 12.00" deep and full width. The outside corners will be a 45 degree chamfer to avoid injuries. A space shall be maintained between the body and the step. The step shall be supported by 3.00" x 1.50" x 0.25" aluminum channel welded directly to the body.

The step will be fabricated from .1875" embossed aluminum treadplate.

ROOF ACCESS LADDER

An access ladder shall provide at the rear of the apparatus. The ladder shall be located on the rear of the body.

The ladder shall be a Zico Quic-Ladder Model # RL12. The ladder shall be 12.00" wide and shall be capable of extending off the body to provide a more comfortable climbing angle. The rungs shall be constructed of cast aluminum rungs and have a flat, non-skid surface to provide traction and safety The handrails shall be constructed of 1.25" heavy-walled aluminum tubing, and shall be covered in a rough grip black powder coat.

Ladder shall be located on right hand side rear of the body.

LEFT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, L1

There shall be one (1) full height compartment ahead of the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 40.25" wide.x 73.50" high.

EXTENDED FLOOR SHELVING

The floor of the transverse area will be extended outward to the the interior edge of the door opening. The floor shall have a 1.50" vertical lip and a 1.50" return to increase strength.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

LEFT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, L2

There shall be one (1) full height compartment ahead of the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 40.25" wide.x 73.50" high.

EXTENDED FLOOR SHELVING

The floor of the transverse area will be extended outward to the the interior edge of the door opening. The floor shall have a 1.50" vertical lip and a 1.50" return to increase strength.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

LEFT SIDE ABOVE WHEEL COMPARTMENT, L3

There shall be one (1) full height compartment above the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 71.00" wide.x 43.50" high.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

LEFT SIDE COMPARTMENT BEHIND REAR WHEELS, L4

There shall be one (1) full height compartment behind of the rear wheels.. The compartment shall have an approximate clear door opening of 41.00" wide.x 73.50" high.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

RIGHT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, R1

There shall be one (1) full height compartment ahead of the rear wheels. There shall be one (1) full height compartment ahead of the rear wheels. The

compartment shall be transverse and have an approximate clear door opening of 40.25" wide.x 73.50" high.

EXTENDED FLOOR SHELVING

The floor of the transverse area will be extended outward to the the interior edge of the door opening. The floor shall have a 1.50" vertical lip and a 1.50" return to increase strength.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

RIGHT SIDE COMPARTMENT IN FRONT OF REAR WHEELS, R2

There shall be one (1) full height compartment ahead of the rear wheels. There shall be one (1) full height compartment ahead of the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 40.25" wide.x 73.50" high.

EXTENDED FLOOR SHELVING

The floor of the transverse area will be extended outward to the the interior edge of the door opening. The floor shall have a 1.50" vertical lip and a 1.50" return to increase strength.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

RIGHT SIDE ABOVE WHEEL COMPARTMENT, R3

There shall be one (1) full height compartment above the rear wheels. The compartment shall be transverse and have an approximate clear door opening of 71.00" wide.x 43.50" high.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

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RIGHT SIDE COMPARTMENT BEHIND REAR WHEELS, R4

There shall be one (1) full height compartment behind of the rear wheels.. The compartment shall have an approximate clear door opening of 41.00" wide.x 73.50" high.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

REAR CENTER COMPARTMENT, CR1

There shall be one (1) full height compartment at the rear of the body. The compartment shall have an approximate clear door opening of 43.00" wide.x 73.50" high.

ADJUSTABLE SHELVING TRACKS

There shall be vertically mounted uni-strut shelf trac for shelving installation.

ROLL-OUT AWNING RIGHT HAND SIDE

A Carefree Mirage, 110 Volt AC powered, lateral arm acrylic patio awning with Direct Response Electronics shall be installed on the right hand side of the body. The Direct Response Electronics includes easy-to-use controls and a Motion Detection System. The awning shall have a system to detect canopy motion, the most important element to prevent wind/weather damage . The awning shall automatically retract when the canopy reaches a certain level of movement, you determine the movement level on the control panel.

Control shall be located in compartment R1.

The awning shall activate the door ajar warning system in the cab when not in the stowed position.

The 110V motor shall be completely sealed and UL approved. The awning pitch shall be adjusted to up to 30.00"

Fouts Bros Fire Equipment

The awning shall be 15.00' wide with a 10' projection, (size refers to box length; actual fabric length will be 8" shorter.)

AWNING FABRIC COLOR

The awning fabric color shall be Crimson red.

AWNING HOUSING COLOR

The awning housing shall be painted job color.

12 VOLT ELECTRICAL SECTION

NFPA 1900 CERTIFIED 12 VOLT ELECTRICAL SYSTEM

The 12-volt apparatus body electrical system shall be provided and shall be in compliance with NFPA 1900 testing and certification procedures as follows:

NFPA MINIMUM ELECTRICAL LOAD DEFINITION

The NFPA 1900 defined minimum electrical load shall consist of the total amperage required to simultaneously operate the following in a stationary mode:

1. Propulsion engine and transmission.

2. The clearance and marker lights.

3. Communication equipment. 5 amp default.

4. Illumination of all walking surfaces, the ground at all egress points, control and instrumentation panels and 50% of total compartment lighting.

5. Minimum warning lights required for "blocking right of way" mode.

6. The current to simultaneously operate and fire pump and all specified electrical devices.

7. Anything defined by the purchaser, in the advertised specifications, to be critical to the mission of the apparatus.

RESERVE CAPACITY TEST

The first electrical test to be performed will be the Reserve Capacity Test. All items listed in NFPA Minimum Load Definition shall be activated with the engine shut off. After 10 minutes of operation, the items 1-7 shall be deactivated. After deactivation, the battery system shall have ample reserve to start the engine.

ALTERNATOR PERFORMANCE TEST AT IDLE

The second electrical test to be performed shall be Alternator Performance Test at Full Load. All electrical loads shall be activated with the engine running up to the governed rpm for two hours. During the test, the system voltage shall not drop below 11.7 volts or have excessive battery discharge for more than 120 seconds. Any loads not defined in the NFPA Minimum Electrical Load may be load managed to pass test.

TEST CONDITIONS

All electrical testing shall be performed with the engine compartment at approximately 200 degrees.

12 VOLT ELECTRICAL SYSTEM

The truck shall have a 12-Volt electrical system.

All wiring will be run in convoluted high temperature plastic loom. Wiring shall be color and function coded and will be of adequate size to handle the assigned load. All solenoids, relays, and terminal blocks will be located in an easily accessible area.

All circuits provided shall have properly rated low voltage over current protective devices.

All wiring shall be stranded copper or copper alloy conductors of a gauge rated to carry 125 percent of the maximum current for the protected circuit. Voltage

drops in all wiring from the power source to the using device shall not exceed 10 percent. The wiring and wiring harness and insulation shall be in conformance to applicable SAE and NFPA standards. The wiring harness shall conform to SAE J-1128 with GXL temperature properties. All exposed wiring shall be protected in a loom with a minimum 289 degree Fahrenheit rating. All wiring looms shall be properly supported and attached to body members. The electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

All under side terminal junctions shall be fully enclosed in sealed plastic weather proof boxes.

Electromagnetic interference suppression shall be provided as required to satisfy the radiation limits specified in SAE J551/1.

CLASS1 ES-KEY SYSTEM

The electrical system shall utilize Class1 Inc. **ES-Key** technology where applicable.

The apparatus shall be equipped with a Class 1 ES-Key Management System for controlling electrical system devices. This management system shall be capable of performing load management functions, system switching, monitoring and reporting, and be fully programmable for a standardized electrical system utilizing the ES-Key Professional software program.

SUPERNODE II

The apparatus shall be equipped with a Class1 ES-Key system with a Supernode II high density input output node. The Supernode II shall have (24) inputs, (24) outputs, a Universal System Manager, a data logger, and programmable special utilities.

The Supernode II shall have an integrated USB port to allow for direct connection to the ES-Key system without additional interface devices.

LOAD MANAGER

The Supernode II shall have an integrated Load Manager. The Load Manager Sequencer shall assure that loads are applied and removed gradually, thus eliminating the possibility of inducing failures in the vehicle's equipment.

LOW VOLTAGE MONITOR

A voltage monitor shall be built into the ES-Key electrical system. It shall activate a warning when the alternator output voltage falls below any desired voltage (usually 11.5 volts).

LOW VOLTAGE ALARM

One (1) Cole Hersee model # 4112-RC light/buzzer shall be located in the cab and wired to the low voltage monitor on the ES-Key System.

ROCKER SWITCH PANEL - EIGHT (8) POSITION

A lighted eight (8) position rocker type switch panel shall be installed to provide the ability to de-activate individual lighting units. The switches shall be Carling Contura V series rocker switches.

A rocker switch with a blank legend installed directly below shall be provided for any position without a switch and legend designated by a specific option. The non-specified switches shall be two-position, black switches with a LED indicator light. Each blank switch legend can be custom ordered by the department once the apparatus is in service. All switch legends shall have backlighting provided.

MASTER WARNING SWITCH

A master switch shall be included in the main rocker switch panel. The switch shall be a rocker type, red in color with a red lens. The switch shall feature control over all devices wired through it. Any warning device switch shall automatically power up when the master switch is activated.

CHASSIS GROUND LIGHTS

Two (2) TecNiq model E10-WS00-1 LED ground lights with outward facing angle brackets shall be installed, one (1) under each chassis door.

FRONT OF BODY GROUND LIGHTS

Four (4) TecNiq model E10-WS00-1 LED ground lights with outward facing angle brackets shall be installed under the front of the body. Two (2) lights shall be located on the driver side and two (2) lights shall be located on the officer side of the apparatus.

REAR OF BODY GROUND LIGHTS

Two (2) TecNiq model E10-WS00-1 LED ground lights with outward facing angle brackets shall be installed under the rear of the body. One (1) light shall be located on the driver side and one (1) light shall be located on the officer side of the apparatus.

REAR STEP GROUND LIGHTS

Two (2) TecNiq model E10-WS00-1 LED ground lights with outward facing angle brackets shall be installed under the rear step of the apparatus, one (1) each side.

GROUND LIGHT SWITCHING

The cab and body ground lights shall activate by engaging the parking brake.

HAZARD LIGHT

One (1) flashing red LED light, located in the driving compartment, the light shall be illuminated automatically whenever any compartment door is ajar.

The hazard light shall be marked with a sign that reads “Do Not Move Apparatus When Light is On”.

The warning light shall be interlocked to the parking brake and shall only alert the driver when the parking brake is released. The light shall also be used to signal that other ancillary equipment such as racks light towers etc. are not in their “ready for transport” position.

REAR DIRECTIONALS

Rear directional lighting shall be supplied as follows:

Four (4) Whelen model M62BTT LED stop/tail/ turn lights shall be installed on the rear of the body, two (2) each side.. Each light shall have a red lens.

Two (2) Whelen model M62BU LED reverse lights shall be installed on the rear of the body.

HOUSINGS FOR DIRECTIONALS

Each light shall be mounted in a Whelen model M6FC Chrome Flange.

Two (2) amber LED side marker and turn lights shall be provided on the apparatus lower side, forward of rear axle, one (1) each side if the apparatus is 30 feet long or longer.

MARKER LIGHTS

LED marker lights shall be installed on the vehicle in conformance to the Department of Transportation requirements. The side and rear of the body will be provided with reflectors. All marker lights shall be incorporated into the headlight circuit of the cab/chassis

Two (2) Truck-Lite# 98034Y amber reflectors shall be provided on the apparatus body lower side, as far forward and low as practical, one (1) each side..

Four (4) Truck-Lite# 98034R red reflectors shall be provided on the apparatus rear, one (1) each side and two (2) on the rear.

LICENSE PLATE BRACKET

There shall be a license plate bracket mounted on the rear of the apparatus. A clear LED light shall be incorporated into the bracket

LADDER STEP LIGHTS

Polished stainless steel, TecNiq Eon 3-LED horizontal surface mounted body step lights shall be provided and installed. The ladder step lights shall be located

to properly illuminate the ladder access steps and shall include a mounting gasket to provide a watertight seal.

STEP LIGHTS ACTIVATION

The step light(s) shall be wired to activate with the parking brake.

SIDE FACING UPPER FRONT BODY SCENE LIGHTS

One (1) pair of Whelen PCPSM1C Pioneer Signle Surface LED scene lights shall be installed. Each of the 12V 76 watt lighthead shall generate 8,000 lumens. The lights shall be located on the left and right sides of the upper front portion of the apparatus body. Each light shall be supplied and installed with a chrome bezel.

SIDE FACING UPPER REAR BODY SCENE LIGHTS

One (1) pair of Whelen PCPSM1C Pioneer Signle Surface LED scene lights shall be installed. Each of the 12V 76 watt lighthead shall generate 8,000 lumens. The lights shall be located on the left and right sides of the upper rear portion of the apparatus body. Each light shall be supplied and installed with a chrome bezel.

REAR FACING UPPER BODY SCENE LIGHTS

One (1) pair of Whelen M92SLC EZ Series LED scene lights shall be installed. The lights shall be located on the rear of the apparatus body, one (1) each side. Each light shall be supplied and installed with a chrome bezel.

SCENE LIGHT SWITCHING

One (1) rocker switch with indicator shall be installed on the switch panel in the cab to control the left side scene light(s). The switch shall be labeled "LEFT SCENE".

SCENE LIGHT SWITCHING

One (1) rocker switch with indicator shall be installed on the switch panel in the cab to control the rear scene light(s). The switch shall be labeled "REAR SCENE".

SCENE LIGHT SWITCHING

One (1) rocker switch with indicator shall be installed on the switch panel in the cab to control the right side scene light(s). The switch shall be labeled "RIGHT SCENE".

DUAL FUNCTION SCENE LIGHT(S)

The rear scene lights shall activate automatically upon placing the transmission into reverse.

REAR VISION SYSTEM

One (1) complete backup camera system shall be provided. There shall be (1) camera located at the rear of the apparatus as close to the centerline as possible. The camera shall be capable of viewing the entire area not visible in the side view mirrors. The camera shall have a 7.00” color display mounted in view of the driver. The system shall include audio transmission from the camera.

The rear vision camera shall be wired to automatically activate when the chassis transmission is placed in reverse.

The monitor for the rear vision system shall be mounted on the dash of the cab in easy view of the driver.

NFPA AUDIBLE AND LIGHTING WARNING PACKAGE

The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1900. The lighting as specified shall meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode.

LIGHTBAR

One (1) WHELEN Freedom F4N2VLED 55.00” LED lightbar shall be supplied and mounted. The lightbar shall have clear lenses and contain the following modules:

Four (4) RED Linear LED modules, two (2) on each corner.
Two (2) RED Linear LED modules, across the front.
Two (2) WHITE Linear LED modules, on the front.

The forward facing white lights shall be automatically disabled for the "Blocking Right of Way" mode.

LIGHT BAR SWITCHING

One (1) momentary rocker switch with indicator shall be installed on the switch panel in the cab to control the light bar. The switch shall be labeled "LIGHT BAR". The switch shall only be active when the master warning switch is engaged.
==== NO Lightbar Mounted Brow Light - PTS ====

LIGHTBAR MOUNTING BRACKET

The lightbar shall be mounted with the Whelen model MK8H 5.00" cast aluminum permanent mount.

SIDE FACING UPPER FRONT BODY WARNING LIGHTS

One (1) pair of Whelen model M9 LED warning lights shall be installed, one (1) each side of the upper front portion of the apparatus body.

The driver side warning light shall be a Whelen Model M9R red LED with red lens.

The officer side warning light shall be a Whelen Model M9R red LED with red lens.

Each light shall be mounted with a Whelen Model M9FC chrome flange.

SIDE FACING UPPER REAR BODY WARNING LIGHTS

One (1) pair of Whelen model M9 LED warning lights shall be installed, one (1) each side of the upper rear portion of the apparatus body.

The driver side warning light shall be a Whelen Model M9R red LED with red lens.

The officer side warning light shall be a Whelen Model M9R red LED with red lens.

Each light shall be mounted with a Whelen Model M9FC chrome flange.

UPPER REAR WARNING LIGHTS

One (1) pair of Whelen model M9 LED warning lights shall be installed, one (1) each side of the upper rear of the apparatus body.

The driver side warning light shall be a Whelen Model M9R red LED with red lens.

The officer side warning light shall be a Whelen Model M9R red LED with red lens.

Each light shall be mounted with a Whelen Model M9FC chrome flange.

UPPER WARNING LIGHT SWITCHING

One (1) rocker switch with indicator shall be installed on the switch panel in the cab to control the upper warning lights. The switch shall be labeled "UPPER WARNING". The switch shall only be active when the master warning switch is engaged.

LOWER FRONT WARNING LIGHTS

One (1) pair of Whelen model M6 Series LED warning lights shall be installed, one (1) each side one the front of the chassis cab.

The driver side warning light shall be a Whelen Model M6R red Super-LED with red lens.

The officer side warning light shall be a Whelen Model M6R red Super-LED with red lens.

Each light shall be mounted with a Whelen Model M6FC chrome flange.

LOWER INTERSECTION WARNING LIGHTS

{Quantity} pair of Whelen model M6 LED warning lights shall be installed, one (1) each side of the chassis cab.

The driver side warning light shall be a Whelen Model M6R red Super-LED with red lens.

The officer side warning light shall be a Whelen Model M6R red Super-LED with red lens.

Each light shall be mounted with a Whelen Model M6FC chrome flange.

LOWER MID-BODY WARNING LIGHTS

One (1) pair of Whelen model M6 Series LED warning lights shall be installed, one (1) each side of the apparatus, mid-body.

The driver side warning light shall be a Whelen Model M6R red Super-LED with red lens.

The officer side warning light shall be a Whelen Model M6R red Super-LED with red lens.

Each light shall be mounted with a Whelen Model M6FC chrome flange.

LOWER REAR WARNING LIGHTS

One (1) pair of Whelen model M9 Series LED warning lights shall be installed, one (1) each side of the lower rear of the apparatus body.

The driver side warning light shall be a Whelen Model M9R red LED with red lens.

The officer side warning light shall be a Whelen Model M9R red LED with red lens.

Each light shall be mounted with a Whelen Model M9FC chrome flange.

LOWER WARNING LIGHT SWITCHING

One (1) rocker switch with indicator shall be installed on the switch panel in the cab to control the lower warning lights. The switch shall be labeled "LOWER WARNING". The switch shall only be active when the master warning switch is engaged.

ELECTRIC SIREN AND CONTROL

One (1) Whelen model #295SLSA1 electronic siren shall be mounted in the cab. This unit shall feature an electronic air horn, wail, yelp, hi-lo and shall have a hard wired PA microphone.

ELECTRONIC SIREN SPEAKER

One (1) Federal Signal model ES100 Dynamax 100 watt speaker shall be flush mounted as far forward and as low as possible on the front of the vehicle. A polished model ESFMT with ”Electric F” grille shall be provided on the outside of the speaker to prevent road debris from entering the speaker.

The speaker shall produce a minimum sound output of 120 dB at 10 feet to meet current NFPA 1900.

The speaker shall be located on the right hand side of the bumper.

SIREN NOISE WARNING LABEL - FAMA# 42

A permanent label shall be provided inside the driver's door warning of potential injury that could be received from the noise of the siren. The label shall also state safety precautions that should be taken when the siren is in use.

FOUR BOTTLE, 6000 PSI CASCADE SYSTEM

The system shall be comprised of four (4) 6000 psi, DOT/UN approved, 510 cu. ft. cylinders.

Each tank is to be equipped with a soft seat valve, complete with appropriate approved safety relief device. A dome-type protective cap is to be supplied with each tank to protect the valve during shipping or transportation.

Any components or fittings necessary for a standard installation, but not mentioned above, will be considered to be included.

A 5-year warranty is to be provided on all cascade components, including the tanks, fittings, gauges and valves.

SPACE SAVER FILL STATION

One (1) Resolve Specialty Space Saver model 100A mobile filling station(s) designed for SCBA and SCUBA cylinders shall be provided. Fill station shall be capable of simultaneously filling (2) cylinders. The unit comes complete with safety interlocks, safety gauges, charge and bleed valves and pressure regulator for automatic SCBA filling. The fill enclosure shall meet NFPA 1900 testing certification, and shall be approx. 42.50” high (53" with door open) x 13.00” wide x 23.00” deep and weigh 405 lbs. The cascade air fill control panel can attach to either side of fill station.

The Resolve Space Saver fill station shall be provided with an American Airworks four (4) bank, manual control cascade air fill control panel.

SCBA BOTTLE STORAGE

One (1) SCBA cylinder storage module shall be supplied. It shall be capable of holding fifteen (15) SCBA cylinders up to 7-5/8" diameter.

The storage module shall be located in compartment R4.

NFPA 1900 120/240 VOLT POWER SOURCE TESTING

Electrical System Testing:

The wiring and permanently connected devices and equipment shall be subjected to a dielectric voltage withstand test of 900 volts for one minute. The test shall be conducted between live parts and the neutral conductor, and

between live parts and the vehicle frame with any switches in the circuit closed position. This test shall be conducted after all body work has been completed.

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

NFPA Operational Test

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

The prime mover shall be started from a cold start condition and the line voltage electrical system loaded to 100 percent of the nameplate rating. The power source shall be operated at 100 percent of its nameplate voltage for a minimum of 2 hours unless the system meets category certification as defined in NFPA 1900.

120/240 VOLT ELECTRICAL EQUIPMENT INSTALLATION

All 120/240 electrical equipment shall be installed by the apparatus manufacturer. This shall include any item related to the system, including, but not limited to the following:

- Generator
- All scenelighting accessories.
- All outlets,and cord reels (where applicable)
- Breaker panel.

HYDRAULIC GENERATOR

One (1) Smart Power Systems, Model HR-10, 10,000 watt hydraulic generator shall be provided. The generator is designed specifically for mounting on top of the vehicle, at the specified location. If required, the generator can be easily separated into its three major components (tray assembly, cooler/fan assembly, and reservoir) for customized mounting locations.

Fouts Bros Fire Equipment

The installation of the generator shall be designed for continuous operation without overheating and undue stress on components. The generator tray assembly shall be delivered with the cooler/fan assembly mounted such that 100% of the hot air is exhausted vertically. No exceptions.

The generator system shall be provided with a digital meter display in compliance with NFPA 1900. The CCC (Command and Control Center) meter panel display shall be an interactive operator control center, equipped with Smart Touch solid state buttons, with displays for voltage, frequency, amperage, total running hours, service reminders, operator warnings, system faults and diagnostics.

The generator and the Command Control Center both shall be 100% American made in the same manufacturing facility. No exceptions.

Package & Features

The unit shall come equipped with a generator tray assembly (which includes the generator, hydraulic motor, cooler, fan, electronics package, 10 micron spin-on fluid filter and reservoir), an axial piston hydraulic pump with pressure compensated control, and CCC digital meter panel display with all required wiring harnesses.

The generator shall have the following features (no exceptions):

- Severe duty generator with EG43 Marine grade winding overcoat
- Class H winding insulation 180°C temperature rating
- Smart Start engagement to reduce mechanical stress
- Precise voltage and frequency control
- Automatic Purge feature based on hydraulic pressure
- Automatic Cold Start Protection to warm hydraulic fluid during cold weather
- Automatic Alert and Shut Down Over Heat Protection
- Automatic Alert and Shut Down Low Fluid Protection
- Automatic Alert and Shut Down Over-Current Protection
- Visual Service Reminders, Prognostics & Diagnostics

The generator electrical enclosure, the oil cooler/fan module, the hydraulic fluid reservoir and other structural components shall have a Zinc protective coating and white powder coat finish. No exceptions.

The generator tray assembly shall be delivered with the cooler/fan assembly mounted such that the hot air is exhausted vertically through the top of the assembly.

An NFPA compliant aluminum grate will be attached over top of the assembly to provide a non-slip walking surface.

The body of the generator tray assembly (including reservoir) shall be 32.00" long x 13.50" wide x 17.00" high, weighing approximately 280 pounds.

Digital Meter Display Gauge

The Command Control Center (CCC) digital meter display shall be in compliance with NFPA 1900. The CCC shall be an interactive operator control center, equipped with Smart Touch® solid state buttons, with super bright red LED displays for:

- Voltage (VAC)
- Frequency (Hz)
- Dual Current Display (Amps)
- System Hydraulic Pressure (PSI)
- Running Time Display (Hours)
- Service Reminders
- Operator Warnings
- System Faults
- Prognostics & Diagnostics

The CCC shall be permanently mounted at an operator’s panel, shall be located in a plane facing the operator, and shall be constructed in weatherproof integral enclosure/bezel.

Chassis Transmission Drive

The hydraulic pump shall be driven by the chassis transmission mounted power take off (PTO)

Generator Operation

Fouts Bros Fire Equipment

The output of the generator shall be controlled by an integral, patented, solid state Electronic Control Unit. The ECU shall be connected directly to the NFPA 1900 required digital instrumentation display.

The generator shall be operable in the stationary mode and/or when driving, utilizing the standard soft start system for engagement at any speed.

The generator shall be engaged by a lighted control switch.

Ratings and Capacity

Rating:	2,000 watts peak 10,000 watts continuous
Volts:	120/240 volts
Phase:	Single, 4 wire
Frequency:	60 Hz
Amperage:	84 amps @ 120 volts or 42 amps @ 240 volts
Engine speed at engagement:	Standard soft start feature allows for any speed engagement
Pump (45cc) speed operation range:	1100 to 3120 RPM
Pump (60cc) speed operation:	850 to 2700 RPM
Generator Speed:	3600 RPM

Testing

The generator shall be tested in accordance with all current NFPA 1900.

All ratings and capacities shall be derived utilizing current NFPA 1900 test parameters.

Warranty

The entire generator system, including the Command and Control Center digital meter display, shall be covered by a standard 6 year/1,000 hour fully transferable

warranty from the generator manufacturer. The warranty shall commence the date the product is shipped.

CIRCUIT BREAKER BOX

An 8-Place Breaker Panel with hinged cover shall be installed on the apparatus. It shall contain circuit breaks rated for the correct wire size and load.
LIGHT TOWER

LIGHT TOWER ORIENTATION

The roof reinforcement shall be installed parallel to the front wall of the body.

LIGHT TOWER LIGHT HEAD ORIENTATION

The roof reinforcement shall be oriented in order for the light head on the light tower to be to the left side while in the stored position.

WILL-BURT NIGHT SCAN CHIEF LIGHT TOWER

A Will-Burt Night Scan Chief NS 3.0-500-4 light tower shall be provided.

Design and Construction

The tower shall be a series of graduated extruded aluminum tubes that nest one inside another. The tower shall have an extended height of approximately 7.5 ft. above the mounting location and a stowed height of approximately 9.375" above the mounting surface. The tower shall be approximately 29.5” wide by 55.6875” in length. The tower shall be designed to sustain the intended top load with a 125 percent safety factor and shall exceed NFPA requirements of a minimum 50 mph wind when in a fully raised and unguyed position. The tower shall be of a compact design with a total weight of approximately 131 lbs. The light tower shall not exceed 150 lbs.

The tower tubular sections shall be constructed of high strength, heat-treated 6061-T6 aluminum tubes and collars. Each tube shall be protected by low friction synthetic collars for smooth operation and long life. Bumpers shall be

designed to reduce shock on extension and retraction. All exterior surfaces shall be anodized for long life and fasteners shall be stainless steel for corrosion resistance.

Nesting System

The tower shall have an “auto-stow” function. A double click of the mast down button will stow, retract, and shut power off to the unit. An integrated saddle assembly with synthetic, non-marring rests shall be provided for the tower and flood light assembly in the nested position.

Floodlight Rotation and Tilt Operation

The tower shall be equipped with a Will Burt Model RCP (remote control positioner) to control the rotation and direction of the light. The remote control positioner unit shall be equipped with two (2) gear motors; one for rotation and one for the floodlight bank. The positioner shall also rotate the floodlight assembly from zero to 355 degrees and tilt the floodlight assembly from 0 to 337 degrees.

Hand-held Wired Remote Control

A safety yellow in color for high visibility, hand held remote control pendant, connected to a quick-disconnect, 25 ft. coiled cord shall be provided to control the tower. All functions of the tower shall be accessible through this remote control including elevating with “auto-up” ability, lowering with “auto-stow” ability, rotation and tilting of the floodlight assembly and floodlight switching. An auxiliary power button shall also be included to control optional equipment such as strobe lights or a camera that is mounted to the mast. A red emergency stop button shall be integrated into the hand held control for added safety or shall be located on the junction box. Each button of the controller shall have a corresponding LED light that provides operational feedback. An LED display that includes alphanumeric feedback shall be located in the center of the controller. This display shall provide operational feedback and error codes if they occur.

Pneumatic Controls

The pneumatic controls to raise and lower the tower shall include an air regulator and solenoid valves. Lights will be operational within approximately 8 seconds from elevation initiation. The tower shall be able to be fully elevated in approximately 50 seconds. In the event of malfunction of the elevating system while the tower is in operation or being deployed, a method of limiting the rate of descent shall be provided to prevent injury to personnel or damage to the equipment.

Two allen keys as well as directions are included under the cover to fold the mast into the saddle if manual stowage of mast is required.

The air supply for pneumatic operation of the tower shall be from an integral compressor with air regulator.

Electrical Installation

The wiring harness for the floodlights, accessories, and remote control positioner shall be internally routed through telescoping aluminum tubing with a highly flexible coil cord.
Installer supplied 12 electrical wiring shall be provided with electrical connections at the tower assembly in conjunction with appropriate electrical power for the floodlights. The installer as required by manufacturer's installation guidelines shall provide appropriate wiring from the circuit breaker panel for connection to the tower. The electric power to the tower and light units shall automatically disconnect whenever the tower is in the nested position.

The tower operation area shall be illuminated automatically by a look up light whenever the tower is in operation. Any upward movement of the tower from the nested position shall energize a red warning light in the cab and a secondary light located at the tower control area. In addition, the installer shall provide parking brake interlocks and other equipment as required by applicable NFPA standards.

Floodlight System

Two 120/240 VAC to 24 VDC power converters will be supplied and will be remotely located in the vehicle and will supply power to six (6) Night Scan X 200 lamps. The 125 watt 10-60 VDC lighthead shall incorporate a combination of 6 spot lenses and 14 flood lenses installed in an IP-69k rated die-cast white

powder coated aluminum housing. The configuration shall consist of a total of 20 white LEDs with a clear optic reflector assembly, and a clear non-optic polycarbonate lens. The Night Scan X 200 shall have 20,000 raw lumens for a total of 120,000 lumens. The lens/reflector assembly shall utilize a liquid injection molded silicon gasket to be resistant to water, moisture, dust, and other environmental conditions. The hard-coated lens shall provide extended life/luster protection against UV and chemical stresses. The light shall be vibration resistant. The Night Scan X 200 shall have a limited lifetime warranty. The fixture shall measure H=5.6”, W=7.6”, D=3.7”.

Warranty

The tower assembly shall carry a two (2) year parts and labor warranty. Exact provisions of such warranty shall be provided with the proposal and at time of delivery of product.

Labeling and NFPA Compliance

Essential operating instructions and warning labels shall be provided in compliance to applicable OSHA, SAE, and NFPA standards. Appropriate labels on the "hazards of electrocution" associated with the operation of a light tower shall be installed in the appropriate areas.

A label shall be provided at the operator’s position by the installer with the following information:

1. Extended height of the tower from the ground.
2. Bulb replacement data.

The tower and installation shall be in full compliance to applicable sections of the current NFPA 1900 Standard.

Testing and Quality Assurance

The tower manufacturer shall be ISO 9001:2008 certified. In addition, quality control and manufacturer testing shall be completed prior to shipment of the tower. The final installer shall test the operation of the tower for a minimum of 2 hours at full load, with testing documentation provided upon delivery.

Manuals

Detailed service, parts, operating, and installation manuals shall be provided by the tower manufacturer. Samples of such manuals shall be provided on request. A CD ROM manual will be provided to the end user.

Hand-held Wireless Remote Control

A safety yellow in color for high visibility, wireless hand held remote control with a range of 100 feet and unique transmitting and receiving addresses to eliminate interference shall be provided to control the tower. All functions of the tower shall be accessible through this remote control including raising with “auto-up” ability, lowering with “auto-stow” ability, rotation and separate buttons for tilting of each floodlight bank and floodlight switching. An auxiliary power button shall also be included to control optional equipment such as strobe lights or a camera that is mounted to the mast. Each button of the controller shall have a corresponding LED light that provides operational feedback. An LED display that includes alphanumeric feedback shall be located in the center of the controller. This display shall provide operational feedback and error codes if they occur.

PAINT, STRIPING, AND LETTERING SECTION

CHASSIS PAINT

The chassis shall be painted by the OEM Chassis Manufacturer.

PAINT PROCESS

The body exterior shall have no mounted components prior to painting to assure full coverage of treatments. Compartment doors (if applicable) will be painted separately to assure proper paint coverage on body, doorjambs and door edges. All surfaces shall be sanded to remove all burrs and imperfections before etching and treatment.

The body shall be totally removed from the chassis during the painting process to insure the entire unit is covered.

PPG wax & grease solvent shall be used to clean and prep the body surface prior to any sanding. The surface shall then be rinsed with freshwater. This step removes wax, grease and other surface contaminants, thus leaving a bright, clean and conditioned surface.

PAINT FINISH

The body shall be painted with a PPG Delfleet Evolution Paint System.

As part of the curing process the painted body shall go through a baking process. The painted components shall be baked at 185 degrees for 3 hours to achieve a complete coating cure on the finished product.

After bake and ample cool down time, the coated surface shall be sanded using 3M 1000, 1200, and or 1500 grit sandpaper to remove surface defects. In the final step, the surface shall be buffed with 3M Super-duty compound to add extra shine to coated surface. No more than .5 mil shall be removed in this process.

All products and technicians shall be certified by PPG every two (2) years.

ANTI-CORROSION PROTECTION

Where dissimilar metals must be joined, overlaid, share perforations or otherwise come in contact with each other to achieve construction, performance or aesthetic requirements, such items shall be separated by a continuous contact, nonconductive coating or film to prevent or otherwise mitigate the effects of electrolysis. Only stainless-steel hardware and fasteners shall be used in the construction of the apparatus. Where stainless steel fasteners pass through an aluminum component, the fastener contact surfaces, including the head, washer and nut shall be coated with ECK anti-corrosion material.

UNDERCOATING

The body underside, including the sub-frame and the inside of the wheel wells, NOT THE WHEEL WELL LINERS, shall be thoroughly coated with SWT commercial automotive undercoat and sound deadening material to protect the body module against corrosion. The coating shall be black and shall be tested to ASTM B117 Salt Spray test for 1,000 hours at 10-mils.

Fouts Bros Fire Equipment

COMPARTMENT INTERIOR FINISH

The interior of the compartments shall be finish painted with Multispec #344767 Gray Stone scuff resistant paint to provide a protective application over all of the compartment interior surfaces.

WHEEL RIMS

The chassis wheels shall be as furnished by the chassis OEM. No additional finishes shall be provided by apparatus manufacturer.

REFLECTIVE LETTERING - PURCHASER SUPPLIED

Reflective lettering shall be installed by the purchaser.

REAR CHEVRON STRIPING

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

Each stripe shall be a minimum of 6.00" in width and shall be applied to the apparatus at 45° angle.

RED & FLUORESCENT YELLOW-GREEN ORALITE V98

The Oralite V98 reflective tape shall be #12 red and #112 fluorescent yellow-green in color.

LOOSE EQUIPMENT

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

ONE YEAR APPARATUS WARRANTY

The complete apparatus detailed herein shall be warranted against defects in materials and workmanship for a period of twelve (12) months, effective upon

pick up or delivery of the completed apparatus to the purchaser, as detailed in the respective warranty documents. Any unauthorized alterations or modifications to the apparatus shall void this warranty.

Other warrantees, as provided by individual component manufacturers may extend beyond this warranty.

APPARATUS BODY WARRANTY, TEN YEAR

The apparatus body as detailed herein shall have a structural warranty against defects in materials and workmanship for a period of ten (10) years, effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the body shall void this warranty.

PAINT WARRANTY, FIVE YEAR

The finish paint as used on the proposed apparatus shall be warranted against defects in materials and workmanship for a prorated period of five (5) years, effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the apparatus shall void this warranty.

APPARATUS ELECTRICAL WARRANTY, TWO YEAR

The apparatus electrical system as detailed herein shall have an electrical warranty against defects in materials and workmanship for a period of two (2) years, effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the electrical system shall void this warranty.