SEAWESTERN EV

WEST COAST
BRUSH/ ATTACK UNIT
SRW SUSPENSION

SeaWestern Emergency Vehicles
123 S Front Street
Yakima, WA 98901
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1-800-572-3939

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).

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

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.

APPARATUS DIMENSIONS

These are standard truck dimensions. Changes in configuration or additional options may affect these dimensions. The contract specification shall contain the exact dimensions.

OVERALL HEIGHT

The overall height shall be less than 96.00".

OVERALL LENGTH

The overall length shall be no longer than 26.00'.

OVERALL WIDTH

The overall width of the body shall be 96.00" wide; chassis mirrors will extend out past this width.

ANGLE OF APPROACH

The angle of approach for the apparatus shall not be less than twenty (20) degrees as specified by the current edition of NFPA 1900 for Wildland apparatus.

ANGLE OF DEPARTURE

The angle of departure for the apparatus shall not be less than twenty (20) degrees as specified by the current edition of NFPA 1900 for Wildland apparatus.

COMPLIANCE

The fire apparatus shall be built to the purchaser's requirements in compliance to all State, Local, and Federal highway safety requirements. The vehicle is not intended to meet any or all standards of the NFPA 1900 requirements.

"NO RIDE" LABEL

A label shall be located on the vehicle at the rear step areas, and at any cross walkways, if they exist. The label(s) shall warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.

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 (if applicable)
- 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 (if applicable)
- Equipment rack fluid (if applicable)

- Air compressor system lubricant
- Generator system lubricant (if applicable)

Chassis Data:

- Chassis Manufacturer
- Production Number
- Year Built
- 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.

COMMERCIAL CHASSIS SPECIFICATION

CHASSIS PROVIDER

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

CHASSIS

One (1) new FORD F-550 rear axle drive 4x4, dual rear wheels (DRW), four door, crew cab XL cab and chassis.

Wheelbase: 179.00"

Cab to Axle: 60.00"

GVW RATING

The chassis will include the Payload Plus Upgrade Package so that the gross vehicle weight rating is 19,500 pounds.

FRAME

The frame rails shall include the upgrade required to meet the enhanced GVWR.

Rear Axle and Suspension: wide track, rigid rear axle, HD rear suspension package, anti-roll bar, HD rear leaf springs, HD rear shocks

FRONT AXLE

The front axle will be a driving type with a 7,500 lb capacity rating at the ground.

FRONT SUSPENSION

An "Extra Heavy Service Suspension" will be provided on the front axle. The rating will be as described below, but it will provide enhanced support over the standard suspension:

- Front Mono-beam non-independent suspension with coil spring and anti-roll bar
- Capacity at Ground: 7,500 lb
- Front Stabilizer Bar

Shock absorbers will be provided on the front axle.

REAR AXLE

The single reduction limited slip rear axle will have a ground rating capacity of 14,706 lbs.

REAR AXLE RATIO

The ratio of the rear axle will be provided by the chassis manufacturer.

REAR SUSPENSION

The rear suspension will be a leaf spring type, with a capacity at ground level of 15,000 lbs.

The rear stabilizer bar will be included.

PARKING BRAKE

The parking brake will be located on the rear axle service brake.

Rear axle brakes will be disc style.

HIGH CAPACITY TRAILOR TOW PACKAGE

Package includes:

- Trailer brake wiring kit
- Increase GCW on diesel engine from 32,500 lbs. to 40,000 lbs. (F-550)

BRAKING SYSTEM

Power vented disc with Anti-Lock Brake System (ABS), electronically controlled brake boost and Automatic Emergency Braking (AEB).

SHIFT ON THE FLY

Transfer case: Electronic shift-on-the-fly cab controlled high and low range HD front package, stabilizer bar, front shocks, with auto/manual locking hubs and rotary switch on dash.

SKID PLATE

Transfer Case Skid Plate Shield

POWERTRAIN

- 6.7L Power Stroke V8 Turbo Diesel Engine, OHV (32-valve)
- Horsepower: 330 HP @ 2,200 RPM

- Rated Torque: 950 lb.-ft. @ 1,850 rpm
- Stationary Elevated Idle Control, SEIC

Exhaust System: horizontally mounted, discharge on right side aft of wheels

TRANSMISSION

TorqShift 10-speed automatic with selectable drive modes.

FIRE/ RESCUE PREP PKG w/EPA SPECIAL EMISSIONS (LPO)

Includes 7,000 lbs. max front springs/GAWR rating for configuration selected. Incomplete vehicle package - requires further manufacture and certification by a final stage manufacturer. Ford urges Fire/Rescue Vehicle manufacturers to follow the recommendations of the Ford Incomplete Vehicle Manual and the Ford Truck Body Builders Layout Book (and pertinent supplements). NOTE 1: Stationary Elevated Idle Control (SEIC) has been integrated into the engine control module. NOTE 2: Engine calibration significantly reduces the possibility of depower mode when in stationary PTO operation. NOTE 3: Operator commanded regen allowed down to 30% of DPF filter full, instead of 100%. NOTE 4: Must meet the definition of an Emergency Vehicle, an Ambulance or Fire Truck per 40 CFR 86.1803.01 in the Federal Register. NOTE 5: California Code of Regulations allows for the sale of Federally certified emergency vehicles in California.
Includes:
- Dual Extra Heavy-Duty Alternators (Total 377-Amps)
- Operator Commanded Regeneration (OCR) Includes active regeneration inhibit.

MANUAL REGENERATION

A push button switch on the dash to initiate manual DPF regeneration.

CHASSIS FUEL TANK

40 gallon aft-axle with auxiliary fuel tap

NFPA 1900 section 9.3.4.6 requires a means for draining the tank without removing the tank.

As provided by the chassis manufacturer, there will be no means to drain the fuel tank. This apparatus will be non-compliant to NFPA 1900 standards effective at time of contract execution.

REAR AXLE RATIO

The ratio of the rear axle shall be 4.30 limited slip.

Engine Block Heater

PTO PROVISION

Transmission Power Take-Off Provision

CAB TYPE

Conventional, engine forward, four (4) door crew cab

Construction: Welded steel

Accessories:

- Solar Tinted glass in all windows
- Dual sun visors
- Electric windshield washer
- Dome light
- Fresh air heater and defroster
- Dual electric horns
- Driver, passenger, curtain, and rear air bags
- Gray Vinyl Upholstery
- Roof Clearance Lights
- Black vinyl full floor covering
- 12V Auxiliary Power Point
- Black Fender Moldings

Headlamps: dual beam jewel effect

Climate Controls: controls for heat, defroster, and air conditioning

Mirrors: black manually telescope fold-away in/out for view adjustment.

Instrumentation:

- Tachometer
- Speedometer
- Turbo boost (diesel only)
- Oil pressure
- Coolant temperature
- Fuel gauge
- Transmission temperature gauge
- Indicator lights & Message Center/odometer, trip odometer, engine hour meter & warning messages.

POWER EQUIPMENT GROUP

The electrical power equipment group shall be provided on the chassis. The option package shall include power door locks, power side windows and a momentary down driver's window.

CAB SEATING

The front seating shall consist of a heavy duty vinyl 40/20/40 split front bench seat w/center armrest, cup holder, storage and manual driver-side lumbar support

The rear seating shall consist of a heavy duty vinyl bench rear seat (folding)

AUDIO

AM/FM stereo, MP3 player
Regular Cabs standard with 4-speakers, Super and Crew Cabs standard with 6-speakers.

GRILLE

Black painted

BUMPER

Black painted steel

WHEELS

Six (6), 10-hole Disc, 19.50" x 6.00" RW Steel

TIRES

Six (6) LT225/70Rx19.5G BSW Max Traction tires shall come supplied from ford with the chassis.

FORD SUPERDUTY WARRANTY

Description
Months/Distance
Basic.....36 month/36,000 miles
Powertrain.....60 month/60,000 miles
Corrosion Perforation.....60 month/unlimited mileage
Roadside Assistance .....60 month/60,000 miles
Diesel Engine .....60 month/100,000 miles

CHASSIS PAINT COLOR

The cab shall be painted a single color by the chassis manufacturer.

Color: Ford Race Red

Paint Number: PQ

CHASSIS MODIFICATIONS

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

RUNNING BOARDS

One (1) set of Trail FX TFX model RBA008TI Aggressive Tread Running Boards shall be mounted to each side of the chassis. They shall be

constructed of 3003-H24 aluminum and have a titanium black powder coated finish. Each running board shall be 6.50" wide x 60.00" long.

FRONT MOUNTED WINCH

A WARN model 16.5ti-S electric winch with 16,500 pound (7,484 kg) rated line pull shall be installed. The winch shall be equipped with 80.00' of 3/8" synthetic rope clevis hook and a 4-way roller fairlead. The winch shall have a durable 3-stage planetary gear train for smooth, reliable operation. The winch shall be operated through a 12.00' pendant with a hand held control. The winch shall include an automatic direct drive cone brake. It shall feature an easy to use free-spooling rotating ring gear clutch.

TOWING HITCH RECEIVER

A trailer towing hitch receiver with safety chain anchors shall be installed at the rear of the apparatus.

The hitch receiver shall be constructed of heavy steel tubing and fastened directly to the rear chassis frame rails. The hitch receiver shall have a Class V rating of 16,000 pounds towing and 1,600 pounds tongue weight when used with a weight distributing hitch assembly.

The receiver shall accept a 2.50" hitch.

One (1) 7-prong connector with a weatherproof cover shall be supplied and mounted near the rear receiver tube.

FRONT AND REAR SUPER SINGLE TIRES

The front and rear tires shall be Continental MPT81 335/80R20, severe service radial all terrain tread. Each tire shall have a rated capacity of 6,780 lbs at 94 psi, max speed of 68 mph. Tire dimensions: 40.63" OD. Tread width: 10.75"

FRONT AND REAR SUPER SINGLE WHEELS

Wheels for the front and rear axles shall be 20.00" x 11.00" aluminum disc. Each wheel shall have a ten (10)-hole pattern and be DOT compliant.

SPARE TIRE - SUPER SINGLE

One (1) full size spare tire and wheel shall be included.

BUCKSTOP FRONT BUMPER

The stock front bumper shall be removed and replaced by the OEM with a Buckstop steel front bumper with grille guard and headlight covers. It shall be constructed of 0.25" steel in the primary impact zone, and 0.375" steel under the headlights. A winch mount shall be included in the bumper and shall be capable of mounting most 4.50" x 10.00" bolt pattern winches. The bumper shall be black in color.

DRIVING/ FOG LIGHTS

Two (2) 6.00" yellow LED driving lights shall be supplied and mounted in the replacement front bumper. The lights shall be controlled by a switch on the siren controller.

REAR MUD FLAPS

A pair of black rubber mud flaps, with NO Logo's, shall be provided and installed behind the rear wheels.

CONSOLE

A Vehicle Specific Havis type console shall be installed between the driver's and officer's seats.

The console shall have all necessary mounting plates for emergency lighting switch panels and/or electronic siren control boxes, radio plate, and all other relevant accessories within reach of the driver or officer.

The Havis console shall also have a binder slot installed on the officer side 3.30” wide section. The console shall include the following, in addition to the component and switch mounting plates: Dual Cupholder, 2 x Armrests, Dual 12v Power Points (1 x USB & 1 x Round Style).

BATTERY SYSTEM

The battery system shall be supplied with the chassis.

MASTER BODY DISCONNECT SWITCH

A master body disconnect on/off switch shall be provided in the cab, near the driver's door. The switch shall disconnect the power to the apparatus body when the ignition switch is in the off position.

One (1) reset breaker shall be installed between the 12v output and any electrical load.

One (1) indicator light shall be provided to indicate the apparatus 12-volt system is on. The light shall be located in the chassis cab and be visible from the driver's positions. The light shall be green in color and labeled "Master Battery".

KUSSMAUL BATTERY CHARGER

A Kussmaul Auto Charge LPC 40 Series model #091-200-12 low profile 40 amp high output battery charger shall be installed.

The lightweight and low profile battery charger shall supply a 'single battery system' and with an aluminum enclosure. The unit shall include an auxiliary 15 amp output circuit with power source selector for operating accessory loads.

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.

BATTERY CHARGER DISPLAY/ COVER

One (1) Kussmaul model 091-55-234-RD universal single battery bank voltage display shall be supplied with the charger.

The cover shall be red in color.

AUTO-EJECT MATING PLUG

A 5-20P, 20 amp mating female cord end shall be shipped loose with the apparatus.

ELECTRICAL INLET LOCATION

The electrical inlet shall be installed near the wheel well, on the left hand side of the body.

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.

REAR PUMP MOUNTING

The pump shall be mounted at the rear of the flat bed body.

ELECTRIC START WIRING TO CHASSIS

The 12 volt positive and negative cables shall be provided from the chassis battery to the fire pump area, wired through the master disconnect solenoid system.

PORTABLE PUMP, GASOLINE

A DARLEY model 1-1/2AGE 21H, high pressure, low volume pump shall be furnished and installed.

It shall be a single stage centrifugal pump, bolted directly to the engine, with a 2.00" NPT suction inlet, and a 2.50" NPT discharge outlet. The volute and pump head shall be made from high strength aluminum alloy.

The impeller shall be a bronze, accurately balanced and splined to the pump shaft for a precision fit. With a double seal ring design which eliminates end thrust.

The pump shaft shall be stainless steel, corrosion resistant, precision ground and splined for broached impeller hubs, to resist wear, vibration,

corrosion and torque. It shall have deep groove radial ball bearings which shall be oversize for longer life.

The shaft seal shall be self-adjusting, self-lubricating, and mechanical type. The pump shall be equipped with a brass drain cock.

The pump shall be capable of a maximum discharge volume of 120 g.p.m. at 155 psi, and a maximum discharge pressure of 300 psi while pumping 30 g.p.m. In the center of the performance curve, the pump shall be capable of pumping 75 g.p.m. at 230 psi.

PUMP ENGINE

The pump engine shall be a Honda GX 630, 21 horsepower, 4 cycle, V-Twin, OHV, gasoline engine complete with electronic ignition, electric starter, 20 amp regulated alternator, fuel pump and filter.

THREE YEAR FIRE PUMP WARRANTY

A three (3) year warranty for the Darley fire pump shall be provided.

SPARK ARRESTOR

The pump engine exhaust shall be equipped with a spark arrestor.

6 GALLON REMOTE FUEL TANK

The pump engine shall be supplied by a 6 gallon fuel tank located on the left hand side of the skid base.

EXHAUST SYSTEM

The pump engine shall have a vertical exhaust pipe. The exhaust pipe shall be directed upward and away from the pump operator. An additional guard or wrapping around the exhaust pipe shall be installed where the pipe is exposed to touch by an operator. The exhaust pipe shall have a rain cap installed to keep dirt, dust, rain, and any other foreign materials out of the pump engine exhaust.

HAND PRIMER

A guzzler hand primer shall be installed. The guzzler hand primer shall have a composite body with aluminum handle and reinforced buna-n diaphragm and flapper valves. It shall have a lift of 12 ft with the capability of approximately 16 ft when a foot valve is used on the pump suction hose. The hand primer shall be capable of handling a maximum pressure of 15 PSI.

The hand primer shall be mounted to the skid base in pump operation area on an angled bracket to for ease of use. Angled bracket shall be made of 1/8" aluminum.

PUMP CONTROL PANEL

The pump control panel shall be installed at the rear of the unit. It shall contain the following:

- Keyless RUN/STOP ignition switch
- Hour Meter / Tach
- Engine Choke Lever
- Discharge Pressure Gauge
- Engine Throttle
- Panel Light
- Reset Breaker

The control panel shall be fully accessible to an operator standing on the ground at the rear of the truck.

DISCHARGE PRESSURE GAUGE

One (1) 2.50" master discharge pressure gauge shall be provided at the pump operator's panel at the rear of the skid unit.. The gauge shall read from -30" Hg. to 300 psi, and have a black face with white markings.

WATER LEVEL GAUGE

One (1) Fire Research **Tank Vision Pro 300** water tank level gauge shall be installed on the apparatus. The gauge shall have an LED display, which flashes when the tank level reaches 25% of capacity. A built in calibration system shall allow a bottom tank mounted transducer to be mounted with any tank configuration.

Location of water tank indicator shall be: Rear control panel.

CAB MOUNTED WATER TANK INDICATOR

One (1) Fire Research TankVision model WLA205-A00 miniature tank indicator shall be installed in the cab. The indicator shall show the volume of water in the tank on five (5) easy to see super bright LEDs.

PLUMBING SYSTEM

The plumbing system shall consist of stainless steel hard piping, or flexible high pressure hose with stainless steel ends, as deemed necessary for the application. Upon completion, the entire system shall be fully pressure tested.

The stainless steel plumbing shall remain unpainted.

PLUMBING SYSTEM VALVES

All valves used in plumbing system operation (excluding valve sizes for plumbing UNDER 1.00" [IE:Drain lines, snubber valves, etc]) shall be Akron Brass 8800 series full flow "swing out" brass valves with 316 stainless steel balls and HydroMax technology. These valves are a rebuildable type Fire Service valve. The valves shall meet NFPA 1900 standards.

HOSE THREADS

All hose threads shall be NST on all base threads on the apparatus intake and discharges, unless otherwise specified.

LABELS

All controls, inlets, and discharges shall be clearly labeled. The labels shall comply with applicable NFPA standards.

MASTER DRAIN

A master drain valve shall be plumbed to the pump, suction plumbing and discharge plumbing as required to fully drain the piping and pump

and prevent damage from freezing. The master drain shall be mounted at the rear of the apparatus on the tail apron.

SUCTION PIPING

All piping on the suction side shall be made of stainless steel.

The suction piping shall consist of a 2.50" tank to pump line with a 2.50" flexible rubber hump hose to minimize flex and vibration between the pump and the tank.

Between the tank and the pump there shall be an Akron Brass 2.50" model 8825 valve. This valve shall remain open to pump from the tank.

This pipe shall have a tee into the suction side of the pump and shall continue to the rear of the truck for overboard suction where there shall be an additional Akron Brass 2.50" model 8825 valve.

To draft, the tank to pump valve shall be closed, a suction hose connected to the overboard suction connection and placed in a static water supply, and the primer activated.

INTAKE ADAPTER

The valve inlet shall be supplied with a 2.50" chrome swivel with FNST rocker lug threads. A screen shall be installed in the intake to prevent debris from entering the pump.

PLUG

One (1) 2.50" chrome plated plug shall be provided. The threads shall be NST and the plug shall be equipped rocker lugs and chain.

TANK REFILL

There shall be one (1) 1.50” tank fill/ re-circulating line provided between the pump and the water tank. It shall be plumbed with a 1.50” valve and flexible, reinforced wire-braid, hydraulic hose.

TANK REFILL VALVE

An Akron Brass 1.50" model 8850 swingout valve shall be provided, and shall be controlled by an Akron Brass model TS manual actuator installed on the valve.

REAR DISCHARGE

One (1) 2.50" discharge outlet with 2.50" pipe and inline valve shall be supplied. the discharge shall be directed towards the rear of the unit.

~~**REAR DISCHARGE VALVE**~~

~~An Akron Brass 2.50" model 8825 swingout valve shall be provided, and shall be controlled by an Akron Brass model TS manual actuator installed on the valve.~~

~~**DISCHARGE ADAPTER**~~

~~A rigid 2.50" FNPT x 2.50" MNST chrome plated hex type adapter shall be provided for the discharge outlet.~~

~~**CAP**~~

~~One (1) 2.50" NST vented rocker lug chrome plated brass cap with restraint chain shall be provided for the discharge.~~

REAR DISCHARGE

One (1) 1.50" discharge outlet with 1.50" pipe and inline valve shall be supplied. The discharge shall be directed towards the rear of the unit.

REAR DISCHARGE VALVE

An Akron Brass model 8815 1.50" swingout valve shall be provided, and shall be controlled by an Akron Brass model TS manual actuator installed on the valve.

DISCHARGE ADAPTER

A rigid 1.50" FNPT x 1.50" MNST chrome plated adapter shall be provided for the discharge outlet.

CAP

One (1) 1.50" Rocker Lug, Chrome Cap w/ chain shall be supplied with the discharge

HOSE REEL PLUMBING

A 1.00” discharge sahll be inbstalled and piped to the hose reel with flexible reinforced wire-braid, hydraulic hose.

BOOSTER REEL VALVE

An Akron Brass 1.00" model 8810 swingout valve shall be provided, and shall be controlled by an Akron Brass model TS manual actuator installed on the valve.

BEZEL COLOR: WHITE

BOOSTER REEL

One (1) HANNAY painted steel booster reel with electric rewind shall be supplied and mounted on the right hand side rear of the flat bed. The reel shall be capable of carrying 150.00' of 1.00" booster hose.

The reel shall have a 1.00” FNPT inlet connection with a 90 degree ball bearing swivel joint. The reel shall have a 1.00” MNST outlet.

The reel shall have an auxiliary gear-driven crank rewind that shall be easily accessible.

HOSE REEL PAINTING

The hose reel(s) shall be painted graphite.

REEL LOCATION

The booster hose reel mounted on the right hand side rear corner of the flatbed body.

SWITCH, REWIND BOOSTER REEL

There shall be one (1) hose reel rewind switch installed. It shall be a weather-resistant momentary push button switch and shall be located near the booster reel. The switch shall be labeled "BOOSTER REEL REWIND".

One (1) high mounted polished stainless steel roller guide assembly shall be installed on the booster reel, allowing the booster hose to be deployed to the rear of the apparatus.

BOOSTER REEL HOSE

The booster reel shall be supplied with 150' of 1.00" NST red lightweight booster hose.

FOAM SYSTEM - CLASS A

A Scotty Model #4171 Class A through-the-pump foam system shall be installed to supply all discharges. The unit shall be mounted between the discharge and suction side of a pump. The unit shall be adjustable, permitting various foam ratio percentages to be educted depending on the nozzles in use. Foam selection percentages between .07 and 1% shall be available. The foam system has been designed for simplicity of operation and maintenance.

BOOSTER TANK

The tank shall have a capacity of 400 US gallons.

CONSTRUCTION

The water tank shall be constructed of 0.50" thick Polyprene™ sheet stock. The material shall be non-corrosive and stress relieved, black in color, and UV stabilized for maximum protection.

All external joints and seams shall either be bent, extrusion or butt-welded and electronically tested for maximum strength. The unit shall incorporate transverse partitions that shall interlock with a series of longitudinal partitions. All swash partitions shall be designed to allow for maximum water and air flow between compartments and are fully welded to each other as well as to the inside of the tank.

FILL TOWER

The tank shall be equipped with a combination vent/overflow and manual fill tower. The fill tower shall be square and constructed of 0.50” Polyprene ™ with dimensions of 10.00” x 10.00” with a hinged cover.

SUMP

There shall be one (1) sump as standard per tank. The sump shall be recessed into the tank floor and be a minimum of 0.625”. The sump shall not be visible from or protrude thru the bottom of the tank more than 0.625”.

MOUNTING BLOCKS

Tank to incorporate two (2) booster reel-mounting blocks with adjustable T-nuts for maximum use.

TANK OUTLETS

There shall be two (2) standard outlets located in the same vertical plane on the driver side rear wall of the tank. One (1) 2.50" female NPT tank to pump suction fitting, and one (1) 1.50" female NPT tank fill fitting with a flow deflector.

FOAM CELL

One (1) ten (10) US gallon foam cell shall be provided and installed in the main water tank. The foam cell shall be constructed using the same materials and methods as the main water tank. The cell shall be marked to hold class "A" foam only.

ALUMINUM FLAT BED

BODY LENGTH

The apparatus body shall be 114.00" long.

BODY WIDTH

The apparatus body shall be 96.00" wide from side to side.

BODY CAB TO AXLE

The apparatus body shall be designed for a 60.00" cab to axle dimension.

BODY CONSTRUCTION

The deck shall be constructed of 0.125” diamond plate deck plate, with 4.00" cross members 12.00" on center front to back, constructed of 6061-T6 alloy.

The outer rails shall be 6.00” high extruded rails, with a 1.50” lower flange.

The floor cross members shall be 4.00" 6061-T6 alloy.

Two (2) 4.00” wide x 1.50” flange x 0.175” thick channel long sill caps with flanges downward shall be installed to cap the rumber mounting isolation members.

The all-aluminum flatbed body construction shall hand welded together at ALL structural connections. (No Exceptions) The 0.125” aluminum deck plate shall be welded to shall be welded to the 4.00" cross-members, that are welded to the side rail extrusion.

COMPARTMENT CONSTRUCTION

The side compartment body and doors shall be constructed of 0.125" smooth aluminum.

Each vertically hinged door shall be equipped with one pneumatic gas cylinder retainer/assist. Each horizontal top hinged door shall be equipped with dual pneumatic gas cylinder retainer/assists.

All compartment doors shall have a continuous polished stainless steel hinge bolted to both the body and the door with stainless steel bolts and nuts. The hinge pin shall also be stainless steel and shall have a minimum diameter of .250".

The doors shall be fully gasketed with closed cell neoprene sponge.

Door latches shall be 6.00" D-Ring style with a keyed lock.

FENDER PANELS

A single piece fender panel made of 0.125" smooth aluminum shall be installed on each side of the apparatus body.

INTERIOR COMPARTMENT VENTILATION LOUVERS

The interior of the specified compartments shall be provided with louvered ventilation units.

SIDE COMPARTMENTATION

The following compartment(s) shall be supplied on the apparatus:

CROSS FRAME COMPARTMENT, FRONT BODY -- LH AND RH SIDES

One (1) cross frame storage compartment shall be installed on the forward portion of the flatbed body creating two (2) full height compartments, one (1) each side. The dimensions shall be approximately 30.00" wide x 46.00" high x 23.00" deep.

Each compartment shall be equipped with a vertically hinged door with a D-Ring latch installed.

This storage compartment shall have a transverse tunnel that extends from the left hand side to the right hand side bedrail. The transverse tunnel will have approximate dimensions of 16.00" wide X 26.00" tall X width of the body.

LEFT HAND SIDE UPPER BODY COMPARTMENT

A body equipment storage compartment shall be installed on the flatbed surface on the left hand side of the apparatus. The dimensions shall be approximately 50.00" wide, 26.00" high, and 23.00" deep. The compartment shall be equipped with a horizontally hinged lift-up door with a D-Ring latch installed.

LEFT HAND SIDE LOWER BODY COMPARTMENT

A body equipment storage compartment shall be installed below the flatbed surface, on the left hand side of the apparatus, rear of the axle. The dimensions shall be approximately 22.00" wide, 14.00" high, and 18.00" deep. The compartment shall be equipped with a vertically hinged door with a D-Ring latch installed.

HEX PUNCHED TOP BASKET – LEFT HAND SIDE

One (1) aluminum topside basket approx. 23.00” wide x 12.00” tall x 80.00” long shall be installed on top of the left-side compartment(s). The basket shall be made of 0.125" smooth aluminum, with rolled over top edges. The faces of the basket shall be “hex punched” in place of traditional expanded metal.

RIGHT HAND SIDE UPPER BODY COMPARTMENT

A body equipment storage compartment shall be installed on the flatbed surface, right hand side of the apparatus. The dimensions shall be approximately 50.00" wide, 26.00" high, and 23.00" deep. The compartment shall be equipped with a lift up door with D-Ring latch installed.

RIGHT HAND SIDE LOWER BODY COMPARTMENT

A body equipment storage compartment shall be installed below the flatbed surface, on the right hand side of the apparatus, rear of the axle. The dimensions shall be approximately 22.00" wide, 14.00" high, and 18.00" deep. The compartment shall be equipped with a vertically hinged door with a D-Ring latch installed.

TOP LID BOX - CENTER MOUNT TOPSIDE TRANSVERSE

A tool storage compartment shall be installed on top of the transverse L1/R1 compartment. The dimensions shall be approximately: 48.00" wide, 12.00" tall, and 15.00" deep.

The compartment shall be constructed entirely of .125" smooth aluminum on all exterior surfaces.

The compartment shall have a horizontally hinged lift-up door installed, that shall open towards the front of the body. The door shall have a

stainless steel hinge and two (2) gas shocks strong enough to hold the door open at 70 degrees. Two (2) butterfly latches shall be installed to hold down the door.

HEX PUNCHED TOP BASKET –RIGHT HAND SIDE

One (1) aluminum topside basket approx. 23.00” wide x 12.00” tall x 80.00” long shall be installed on top of the right-side compartment(s). The basket shall be made of smooth aluminum, with rolled over top edges. The faces of the basket shall be “hex punched” in place of traditional expanded metal. The basket shall be open to the top.

UNDERBODY HOSE BOX

A under body compartment shall be fabricated between the long sills and run the length of the bed. The compartment shall be approx. 25.00" wide x 4.625" tall x 101.50" long. The compartment shall be equipped with a hinged drop down door with dual latches installed.

The hose box shall have full length dividers to allow for two (2) 2 sections of suction hose as well as long tool storage.

FUEL PIPING AND FILL CAP

There shall be a fuel fill cap provided to be installed in exterior channel of the left side rear wheel well clearly marked, "**ULTRA LOW SULFUR DIESEL FUEL ONLY**". The fill shall be piped to the fuel tank.

DEF PIPING AND FILL CAP

There shall be a def fill cap and fill neck with enclosed housing. Mounted to the front of the body on the Driver’s Side of the body. The fill shall be piped to the DEF reservoir.

REAR LIGHT APRON

A rear light apron shall be installed at the rear of the apparatus body. It shall be constructed of 0.125” thick smooth aluminum x 10.00” deep with 1.50” perimeter stiffening flanges.

12 VOLT ELECTRICAL SYSTEM

The truck shall have a 12-Volt electrical system. All wiring will be run in convoluted high temperature plastic loom. The wiring shall be color-coded, numbered, and function imprinted for permanent identification. All wiring devices shall be rated to carry 125% of the maximum ampere load for which the circuit is protected. All added electrical equipment shall be served by circuits separate and distinct from the chassis circuits. 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 electrical will be accordance with modern automotive wiring standards. All under side terminal junctions shall be fully enclosed in sealed plastic weather proof boxes.

ELECTRICAL SYSTEM (CHASSIS OEM)

The commercial chassis electrical system shall be furnished and installed by the chassis manufacturer and shall not be altered in any way so as to void or diminish the manufacturer's warranty responsibilities. Body builder wiring interface harnesses shall be specific to the chassis being utilized and the apparatus specifications with all such harnesses, circuits and connections being documented by the body builder and made part of the electrical schematics provided with the completed apparatus.

ELECTROMAGNETIC INTERFERENCE PROTECTION

The apparatus shall incorporate modern electrical system design, installation procedures, grounding techniques and wave generating components to provide the highest level of protection against electromagnetic (EMI) and radio wave frequency (RFI) interferences.

The apparatus shall be designed to operate and correctly function in congested municipal environments as well as industrial or concentrated commercial scenes without adverse effects from either EMI or RFI. Communications equipment installed after the apparatus is delivered shall be immediately tested by the installer for reception and transmission signal quality.

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

Two (2) TecNiq model E10-WS00-1 LED ground lights with outward facing angle brackets shall be installed under the front 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 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 ground lights shall be switched to come on automatically when doors are opened, as well as switched in the cab to turn all ground illumination lights on regardless of whether a cab door is opened.

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 ROAD LIGHTING

Two (2) sets of 6.00” angled oval LED stop, turn and back-up lights shall be provided, one (1) set on each side of the rear of the truck. The lights shall be attached with a black rubber grommet.

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

LICENSE PLATE LIGHT

A license plate bracket with LED light shall be provided and installed on the rear of the body. It shall be wired to come on with the headlights.

COMPARTMENT LIGHT(S)

Two (2) full height OnScene Solutions Access LED strip lights shall be vertically installed in in the upper body compartments, one (1) on each side of the door frame..

The lights will be controlled by a switch integrated into the door open gas shock. No exceptions.

LED WORK/ SCENE LIGHTS

Two (2) Whelen NP6BB Nano-Pioneer adjustable LED flood lights shall be mounted on the top of the compartments, rearward facing to illuminate rear working area.

The lights shall be wired to the Cencom Core controller in center console as well as the main pump panel for control from either position. The lights shall be also tied on to automatically illuminate with reverse gear.

BACK-UP CAMERA INSTALLATION

The chassis supplied back-up camera shall be installed at the rear of the body.

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.

WARNING LIGHT FLASH PATTERN

All of the perimeter warning lights shall be set to the default NFPA flash pattern as provided by the warning light manufacturer.

WARNING PACKAGE ACTUATION CONTROLS

All warning light switches shall be wired and integrated to the Whelen Cencom Core system.

LIGHTBAR

One (1) WHELEN model JE2NFPA 56.00” LED lightbar shall be supplied and mounted. The lightbar shall have clear lenses and contain the following modules:

Four (4) RED LIN6 LED modules, two (2) on each corner.
Four (4) RED CON3 LED modules, across the front.
Two (2) WHITE CON3 LED modules, on the front.

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

LIGHT BAR MOUNTING

The light bar shall be mounted on the roof of the chassis.

LOWER FRONT WARNING LIGHTS

Two (2) Whelen model ML2RX red warning lights with smoke lenses shall be installed, one (1) on each front corner of the apparatus, in the 3.5" x 5" Buckstop bumper cutouts.

Each light shall be mounted with a Whelen model M2FB black flange.

LOWER INTERSECTION WARNING LIGHTS

Two (2) Whelen model ML2RX red warning lights with smoke lens shall be installed, one (1) each side of the front fenders.

Each light shall be mounted with a Whelen model M2FB black flange.

LOWER MID-BODY WARNING LIGHTS

Two (2) Whelen model ML2RX red warning lights with smoke lenses shall be installed, one (1) each side of the apparatus, directly above the rear wheel in the bed rail.

Each light shall be mounted with a Whelen model M2FB black flange.

LOWER REAR WARNING LIGHTS

Two (2) Whelen model ML2RX red warning lights with smoke lenses shall be installed, one (1) each side of the lower rear of the apparatus body.

Each light shall be mounted with a Whelen model M2FB black flange.

ELECTRIC SIREN AND LIGHT CONTROL(S)

One (1) Whelen model #C399 CenCom Core system shall provided and installed.

ELECTRIC SIREN AND LIGHT CONTROL(S)

One (1) Whelen model #C399 CenCom Core system shall provided and installed.

CONTROL HEAD

The control head shall be a Whelen model #CCTL7 and include (21) push button switches, 4-position slide switch, and a noise canceling microphone.

ELECTRONIC SIREN SPEAKER

One (1) Whelen model SA315P 100 watt speaker shall be provided. The speaker shall produce a minimum sound output of 120 dB at 10 feet to meet current NFPA 1900.

The speaker shall be mounted behind the chassis grille on the right hand side.

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.

PAINT, STRIPING, AND LETTERING SECTION

CHASSIS PAINT COLOR

The cab shall be painted a single color by the chassis manufacturer.

Color: Ford Race Red

WHEEL PAINTING

The exterior faces of the front wheels and outer rear wheels only, shall be finish painted by the apparatus manufacturer.

COLOR: Black

BODY FINISH

The flatbed aluminum body, compartments, and baskets shall be powder coated by the body builder as follows to match chassis paint color:

- Entire flatbed, apron, and skirt assy – PRISMATIC FLAG RED
- Left and right hand compartments (Inside & Outside) – PRISMATIC FLAG RED
- Compartment shelving – BLACK BK62
- Topside – top lift center compartment – BLACK BK62
- Topside left and right hand baskets – BLACK BK62
- Front rock guard diamond plate overlay – BLACK BK62

REFLECTIVE LETTERING - PURCHASER SUPPLIED

Reflective lettering shall be installed by the purchaser.

CHEVRON STRIPING

There shall be alternating chevron striping located on the rear skirt of the apparatus. Each stripe shall be a minimum of 6" in width and shall be applied to the apparatus at 45° angle.

The chevron striping colors shall consist of 3M diamond grade 983-72NL Red and 983-23ES Fluorescent Yellow-Green.

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, LIFETIME

The apparatus body as detailed herein shall have a LIFETIME WARRANTY provided by the body builder. (NO EXCEPTIONS).

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.

AKRON BRASS WARRANTY

The Akron Brass valves shall be warranted by Akron Brass for a period of ten (10) years from the date of delivery. The warranty for electronics shall be warranted by Akron Brass for a period of five (5) years from date of delivery.

SEAWESTERN EV

WEST COAST
BRUSH/ ATTACK UNIT
STD SUSPENSION

SeaWestern Emergency Vehicles
123 S Front Street
Yakima, WA 98901
evsales@seawestern.com
1-800-572-3939

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).

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

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.

APPARATUS DIMENSIONS

These are standard truck dimensions. Changes in configuration or additional options may affect these dimensions. The contract specification shall contain the exact dimensions.

OVERALL HEIGHT

The overall height shall be less than 96.00".

OVERALL LENGTH

The overall length shall be no longer than 26.00'.

OVERALL WIDTH

The overall width of the body shall be 96.00" wide; chassis mirrors will extend out past this width.

ANGLE OF APPROACH

The angle of approach for the apparatus shall not be less than twenty (20) degrees as specified by the current edition of NFPA 1900 for Wildland apparatus.

ANGLE OF DEPARTURE

The angle of departure for the apparatus shall not be less than twenty (20) degrees as specified by the current edition of NFPA 1900 for Wildland apparatus.

COMPLIANCE

The fire apparatus shall be built to the purchaser's requirements in compliance to all State, Local, and Federal highway safety requirements. The vehicle is not intended to meet any or all standards of the NFPA 1900 requirements.

"NO RIDE" LABEL

A label shall be located on the vehicle at the rear step areas, and at any cross walkways, if they exist. The label(s) shall warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.

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 (if applicable)
- 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 (if applicable)
- Equipment rack fluid (if applicable)

- Air compressor system lubricant
- Generator system lubricant (if applicable)

Chassis Data:

- Chassis Manufacturer
- Production Number
- Year Built
- 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.

COMMERCIAL CHASSIS SPECIFICATION

CHASSIS PROVIDER

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

CHASSIS

One (1) new FORD F-550 rear axle drive 4x4, dual rear wheels (DRW), four door, crew cab XL cab and chassis.

Wheelbase: 179.00"

Cab to Axle: 60.00"

GVW RATING

The chassis will include the Payload Plus Upgrade Package so that the gross vehicle weight rating is 19,500 pounds.

FRAME

The frame rails shall include the upgrade required to meet the enhanced GVWR.

Rear Axle and Suspension: wide track, rigid rear axle, HD rear suspension package, anti-roll bar, HD rear leaf springs, HD rear shocks

FRONT AXLE

The front axle will be a driving type with a 7,500 lb capacity rating at the ground.

FRONT SUSPENSION

An "Extra Heavy Service Suspension" will be provided on the front axle. The rating will be as described below, but it will provide enhanced support over the standard suspension:

- Front Mono-beam non-independent suspension with coil spring and anti-roll bar
- Capacity at Ground: 7,500 lb
- Front Stabilizer Bar

Shock absorbers will be provided on the front axle.

REAR AXLE

The single reduction limited slip rear axle will have a ground rating capacity of 14,706 lbs.

REAR AXLE RATIO

The ratio of the rear axle will be provided by the chassis manufacturer.

REAR SUSPENSION

The rear suspension will be a leaf spring type, with a capacity at ground level of 15,000 lbs.

The rear stabilizer bar will be included.

PARKING BRAKE

The parking brake will be located on the rear axle service brake.

Rear axle brakes will be disc style.

HIGH CAPACITY TRAILOR TOW PACKAGE

Package includes:

- Trailer brake wiring kit
- Increase GCW on diesel engine from 32,500 lbs. to 40,000 lbs. (F-550)

BRAKING SYSTEM

Power vented disc with Anti-Lock Brake System (ABS), electronically controlled brake boost and Automatic Emergency Braking (AEB).

SHIFT ON THE FLY

Transfer case: Electronic shift-on-the-fly cab controlled high and low range HD front package, stabilizer bar, front shocks, with auto/manual locking hubs and rotary switch on dash.

SKID PLATE

Transfer Case Skid Plate Shield

POWERTRAIN

- 6.7L Power Stroke V8 Turbo Diesel Engine, OHV (32-valve)
- Horsepower: 330 HP @ 2,200 RPM

- Rated Torque: 950 lb.-ft. @ 1,850 rpm
- Stationary Elevated Idle Control, SEIC

Exhaust System: horizontally mounted, discharge on right side aft of wheels

TRANSMISSION

TorqShift 10-speed automatic with selectable drive modes.

FIRE/ RESCUE PREP PKG w/EPA SPECIAL EMISSIONS (LPO)

Includes 7,000 lbs. max front springs/GAWR rating for configuration selected. Incomplete vehicle package - requires further manufacture and certification by a final stage manufacturer. Ford urges Fire/Rescue Vehicle manufacturers to follow the recommendations of the Ford Incomplete Vehicle Manual and the Ford Truck Body Builders Layout Book (and pertinent supplements). NOTE 1: Stationary Elevated Idle Control (SEIC) has been integrated into the engine control module. NOTE 2: Engine calibration significantly reduces the possibility of depower mode when in stationary PTO operation. NOTE 3: Operator commanded regen allowed down to 30% of DPF filter full, instead of 100%. NOTE 4: Must meet the definition of an Emergency Vehicle, an Ambulance or Fire Truck per 40 CFR 86.1803.01 in the Federal Register. NOTE 5: California Code of Regulations allows for the sale of Federally certified emergency vehicles in California.
Includes:
- Dual Extra Heavy-Duty Alternators (Total 377-Amps)
- Operator Commanded Regeneration (OCR) Includes active regeneration inhibit.

MANUAL REGENERATION

A push button switch on the dash to initiate manual DPF regeneration.

CHASSIS FUEL TANK

40 gallon aft-axle with auxiliary fuel tap

NFPA 1900 section 9.3.4.6 requires a means for draining the tank without removing the tank.

As provided by the chassis manufacturer, there will be no means to drain the fuel tank. This apparatus will be non-compliant to NFPA 1900 standards effective at time of contract execution.

REAR AXLE RATIO

The ratio of the rear axle shall be 4.30 limited slip.

Engine Block Heater

PTO PROVISION

Transmission Power Take-Off Provision

CAB TYPE

Conventional, engine forward, four (4) door crew cab

Construction: Welded steel

Accessories:

- Solar Tinted glass in all windows
- Dual sun visors
- Electric windshield washer
- Dome light
- Fresh air heater and defroster
- Dual electric horns
- Driver, passenger, curtain, and rear air bags
- Gray Vinyl Upholstery
- Roof Clearance Lights
- Black vinyl full floor covering
- 12V Auxiliary Power Point
- Black Fender Moldings

Headlamps: dual beam jewel effect

Climate Controls: controls for heat, defroster, and air conditioning

Mirrors: black manually telescope fold-away in/out for view adjustment.

Instrumentation:

- Tachometer
- Speedometer
- Turbo boost (diesel only)
- Oil pressure
- Coolant temperature
- Fuel gauge
- Transmission temperature gauge
- Indicator lights & Message Center/odometer, trip odometer, engine hour meter & warning messages.

POWER EQUIPMENT GROUP

The electrical power equipment group shall be provided on the chassis. The option package shall include power door locks, power side windows and a momentary down driver's window.

CAB SEATING

The front seating shall consist of a heavy duty vinyl 40/20/40 split front bench seat w/center armrest, cup holder, storage and manual driver-side lumbar support

The rear seating shall consist of a heavy duty vinyl bench rear seat (folding)

AUDIO

AM/FM stereo, MP3 player
Regular Cabs standard with 4-speakers, Super and Crew Cabs standard with 6-speakers.

GRILLE

Factory Ford XL Trim Grille.

BUMPER

Black painted steel

WHEELS

Six (6), 10-hole Disc, 19.50" x 6.00" RW Steel

WHEEL COVERS

Four (4), 10-hole Disc, 19.50" Stainless Steel Eagle Flight Type Wheel Covers shall be provided and installed to the factory wheels. 2 Front and 2 rear wheel covers shall be provided (outside duals only)

TIRES

Six (6) LT225/70Rx19.5G BSW Max Traction tires shall come supplied from ford with the chassis.

FORD SUPERDUTY WARRANTY

Description
Months/Distance

Basic.....36 month/36,000 miles
Powertrain.....60 month/60,000 miles
Corrosion Perforation.....60 month/unlimited mileage
Roadside Assistance .....60 month/60,000 miles
Diesel Engine .....60 month/100,000 miles

CHASSIS PAINT COLOR

The cab shall be painted a single color by the chassis manufacturer.

Color: Ford Race Red

Paint Number: PQ

CHASSIS MODIFICATIONS

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

RUNNING BOARDS

One (1) set of Trail FX TFX model RBA008TI Aggressive Tread Running Boards shall be mounted to each side of the chassis. They shall be constructed of 3003-H24 aluminum and have a titanium black powder coated finish. Each running board shall be 6.50" wide x 60.00" long.

BUCKSTOP FRONT BUMPER

The stock front bumper shall be removed and replaced by the OEM with a Buckstop steel Outback Type front bumper. It shall be constructed of 0.25" steel in the primary impact zone and winch center and 0.375" steel under the headlights. It shall include a grill guard and winch mount. The bumper shall be black in color.

FRONT MOUNTED WINCH

A WARN model 16.5ti-S electric winch with 16,500 pound (7,484 kg) rated line pull shall be installed. The winch shall be equipped with 80.00' of 3/8" synthetic rope clevis hook and a 4-way roller fairlead. The winch shall have a durable 3-stage planetary gear train for smooth, reliable operation. The winch shall be operated through a 12.00' pendant with a hand held control. The winch shall include an automatic direct drive cone brake. It shall feature an easy to use free-spooling rotating ring gear clutch.

TOWING HITCH RECEIVER

A trailer towing hitch receiver with safety chain anchors shall be installed at the rear of the apparatus.

The hitch receiver shall be constructed of heavy steel tubing and fastened directly to the rear chassis frame rails. The hitch receiver shall have a Class V rating of 16,000 pounds towing and 1,600 pounds tongue weight when used with a weight distributing hitch assembly.

The receiver shall accept a 2.50" hitch.

One (1) 7-prong connector with a weatherproof cover shall be supplied and mounted near the rear receiver tube.

DRIVING/ FOG LIGHTS

Two (2) 6.00" yellow LED driving lights shall be supplied and mounted in the replacement front bumper. The lights shall be controlled by a switch on the siren controller.

REAR MUD FLAPS

A pair of black rubber mud flaps, with NO Logo's, shall be provided and installed behind the rear wheels.

CONSOLE

A Vehicle Specific Havis type console shall be installed between the driver's and officer's seats.

The console shall have all necessary mounting plates for emergency lighting switch panels and/or electronic siren control boxes, radio plate, and all other relevant accessories within reach of the driver or officer.

The Havis console shall also have a binder slot installed on the officer side 3.30” wide section. The console shall include the following, in addition to the component and switch mounting plates: Dual Cupholder, 2 x Armrests, Dual 12v Power Points (1 x USB & 1 x Round Style).

BATTERY SYSTEM

The battery system shall be supplied with the chassis.

MASTER BODY DISCONNECT SWITCH

A master body disconnect on/off switch shall be provided in the cab, on the center console. The switch shall disconnect the power to the apparatus body when the ignition switch is in the off position.

One (1) reset breaker shall be installed between the 12v output and any electrical load.

One (1) indicator light shall be provided to indicate the apparatus 12-volt system is on. The light shall be located in the chassis cab and be visible from the driver's positions. The light shall be green in color and labeled "Master Battery".

KUSSMAUL BATTERY CHARGER

A Kussmaul Auto Charge LPC 40 Series model #091-200-12 low profile 40 amp high output battery charger shall be installed. Battery charger shall be mounted on upper inside corner of the L1 compartment.

The lightweight and low profile battery charger shall supply a 'single battery system' and with an aluminum enclosure. The unit shall include an auxiliary 15 amp output circuit with power source selector for operating accessory loads.

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.

BATTERY CHARGER DISPLAY/ COVER

One (1) Kussmaul model 091-55-234-RD universal single battery bank voltage display shall be supplied with the charger.

The cover shall be red in color.

AUTO-EJECT MATING PLUG

A 5-20P, 20 amp mating female cord end shall be shipped loose with the apparatus.

ELECTRICAL INLET LOCATION

The electrical inlet shall be installed near the wheel well, on the left hand side of the body in the rear wheel skirt area.

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.

REAR PUMP MOUNTING

The pump shall be mounted at the rear of the flat bed body.

ELECTRIC START WIRING TO CHASSIS

The 12 volt positive and negative cables shall be provided from the chassis battery to the fire pump area, wired through the master disconnect solenoid system.

PORTABLE PUMP, GASOLINE

A DARLEY model 1-1/2AGE 21H, high pressure, low volume pump shall be furnished and installed.

It shall be a single stage centrifugal pump, bolted directly to the engine, with a 2.00" NPT suction inlet, and a 2.50" NPT discharge outlet. The volute and pump head shall be made from high strength aluminum alloy.

The impeller shall be a bronze, accurately balanced and splined to the pump shaft for a precision fit. With a double seal ring design which eliminates end thrust.

The pump shaft shall be stainless steel, corrosion resistant, precision ground and splined for broached impeller hubs, to resist wear, vibration, corrosion and torque. It shall have deep groove radial ball bearings which shall be oversize for longer life.

The shaft seal shall be self-adjusting, self-lubricating, and mechanical type. The pump shall be equipped with a brass drain cock.

The pump shall be capable of a maximum discharge volume of 120 g.p.m. at 155 psi, and a maximum discharge pressure of 300 psi while

pumping 30 g.p.m. In the center of the performance curve, the pump shall be capable of pumping 75 g.p.m. at 230 psi.

PUMP ENGINE

The pump engine shall be a Honda GX 630, 21 horsepower, 4 cycle, V-Twin, OHV, gasoline engine complete with electronic ignition, electric starter, 20 amp regulated alternator, fuel pump and filter.

THREE YEAR FIRE PUMP WARRANTY

A three (3) year warranty for the Darley fire pump shall be provided.

SPARK ARRESTOR

The pump engine exhaust shall be equipped with a spark arrestor.

6 GALLON REMOTE FUEL TANK

The pump engine shall be supplied by a 6 gallon fuel tank located on the left hand side of the skid base.

EXHAUST SYSTEM

The pump engine shall have a vertical exhaust pipe. The exhaust pipe shall be directed upward and away from the pump operator. An additional guard or wrapping around the exhaust pipe shall be installed where the pipe is exposed to touch by an operator. The exhaust pipe shall have a rain cap installed to keep dirt, dust, rain, and any other foreign materials out of the pump engine exhaust.

HAND PRIMER

A guzzler hand primer shall be installed. The guzzler hand primer shall have a composite body with an aluminum handle and reinforced buna-n diaphragm and flapper valves. It shall have a lift of 12 ft with the capability of approximately 16 ft when a foot valve is used on the pump suction hose. The hand primer shall be capable of handling a maximum pressure of 15 PSI.

The hand primer shall be mounted to the skid base in pump operation area on an angled bracket for ease of use. Angled bracket shall be made of 1/8” aluminum.

PUMP CONTROL PANEL

The pump control panel shall be installed at the rear of the unit. It shall contain the following:

- Keyless RUN/STOP ignition switch
- Hour Meter / Tach
- Engine Choke Lever
- Discharge Pressure Gauge
- Engine Throttle
- Panel Light
- Reset Breaker

The control panel shall be fully accessible to an operator standing on the ground at the rear of the truck.

DISCHARGE PRESSURE GAUGE

One (1) 2.50” master discharge pressure gauge shall be provided at the pump operator's panel at the rear of the skid unit.. The gauge shall read from -30" Hg. to 300 psi, and have a black face with white markings.

WATER LEVEL GAUGE

One (1) Fire Research **Tank Vision Pro 300** water tank level gauge shall be installed on the apparatus. The gauge shall have an LED display, which flashes when the tank level reaches 25% of capacity. A built in calibration system shall allow a bottom tank mounted transducer to be mounted with any tank configuration. This gauge shall have a blue trim bezel.

Location of water tank indicator shall be: Rear control panel.

FOAM LEVEL GAUGE

One (1) Fire Research **Tank Vision Pro 300** foam tank level gauge shall be installed on the apparatus. The gauge shall have an LED display,

which flashes when the tank level reaches 25% of capacity. A built in calibration system shall allow a bottom tank mounted transducer to be mounted with any tank configuration. This gauge shall have a green trim bezel.

Location of water tank indicator shall be: Rear control panel.

CAB MOUNTED WATER TANK INDICATOR

One (1) Fire Research TankVision model WLA205-A00 miniature tank indicator shall be installed in the cab. The indicator shall show the volume of water in the tank on five (5) easy to see super bright LEDs.

PLUMBING SYSTEM

The plumbing system shall consist of stainless steel hard piping, or flexible high pressure hose with stainless steel ends, as deemed necessary for the application. Upon completion, the entire system shall be fully pressure tested.

The stainless steel plumbing shall remain unpainted.

PLUMBING SYSTEM VALVES

All valves used in plumbing system operation (excluding valve sizes for plumbing UNDER 1.00" [IE:Drain lines, snubber valves, etc]) shall be Akron Brass 8800 series full flow "swing out" brass valves with 316 stainless steel balls and HydroMax technology. These valves are a rebuildable type Fire Service valve. The valves shall meet NFPA 1900 standards.

HOSE THREADS

All hose threads shall be NST on all base threads on the apparatus intake and discharges, unless otherwise specified.

LABELS

All controls, inlets, and discharges shall be clearly labeled. The labels shall comply with applicable NFPA standards.

MASTER DRAIN

A master drain low point valve shall be plumbed to the pump low point [volute] and shall drain all suction plumbing and discharge plumbing as required to fully drain the piping and pump and prevent damage from freezing.

SUCTION PIPING

All piping on the suction side shall be made of stainless steel.

The suction piping shall consist of a 2.50" tank to pump line with a 2.50" flexible rubber hump hose to minimize flex and vibration between the pump and the tank.

Between the tank and the pump there shall be an Akron Brass 2.50" model 8825 valve. This valve shall remain open to pump from the tank.

This pipe shall have a tee into the suction side of the pump and shall continue to the rear of the truck for overboard suction where there shall be an additional Akron Brass 2.50" model 8825 valve.

To draft, the tank to pump valve shall be closed, a suction hose connected to the overboard suction connection and placed in a static water supply, and the primer activated.

INTAKE ADAPTER

The valve inlet shall be supplied with a 2.50" chrome swivel with FNST rocker lug threads. A screen shall be installed in the intake to prevent debris from entering the pump.

PLUG

One (1) 2.50" chrome plated plug shall be provided. The threads shall be NST and the plug shall be equipped rocker lugs and chain.

TANK REFILL

There shall be one (1) 1.00” tank fill/ re-circulating line provided between the pump and the water tank. It shall be plumbed with a 1.50” valve and flexible, reinforced wire-braid, hydraulic hose.

TANK REFILL VALVE

An Akron Brass 1.00" model 8810 swingout valve shall be provided, and shall be controlled by an Akron Brass model TS manual actuator installed on the valve.

REAR DISCHARGE MANIFOLD

One (1) Stainless Steel plumbing manifold shall be installed and plumbed to the discharge side of the pump. On the Front face of the manifold, there shall be One (1) 2” FNPT, and Two (2) 1” FNPT bungs. On the opposite face. There shall be Two (2) 1.5” FNPT bungs and One (1) ¾” FNPT bung. These bungs shall be utilized for Two (2) Rear Discharges (1.5”), One (1) Booster Reel Discharge, One (1) Tank Recirc/Fill, One (1) ATP Foam Pickup, and One (1) Plugged 2” Port for future expansion.

FUTURE EXPANSION PORT

From the Rear Discharge manifold, as outlined above – One (1) 2” FNPT Port shall be plugged and available for future discharge plumbing and expansion by upfit or end user.

REAR DISCHARGES

Two (2) 1.50" discharge outlets with 1.50" pipe and inline valve shall be supplied. The discharges shall be directed towards the rear of the unit.

REAR DISCHARGE VALVES

Two Akron Brass model 8815 1.50" swingout valve shall be provided, and shall be controlled by an Akron Brass model TS manual actuator installed on the valve.

DISCHARGE ADAPTER

Two rigid 1.50” FNPT x 1.50” MNST chrome plated adapters shall be provided for the discharge outlets.

CAP

Two (2) 1.50" Rocker Lug, Chrome Cap w/ chain shall be supplied with the discharges.

HOSE REEL PLUMBING

A 1.00” discharge shall be installed and piped to the hose reel with flexible reinforced wire-braid, hydraulic hose.

BOOSTER REEL VALVE

An Akron Brass 1.00" model 8810 swingout valve shall be provided, and shall be controlled by an Akron Brass model TS manual actuator installed on the valve.

BEZEL COLOR: WHITE

BOOSTER REEL

One (1) HANNAY painted steel booster reel with electric rewind shall be supplied and mounted on the right hand side rear of the flat bed. The reel shall be capable of carrying 150.00' of 1.00" booster hose.

The reel shall have a 1.00” FNPT inlet connection with a 90 degree ball bearing swivel joint. The reel shall have a 1.00” MNST outlet.

The reel shall have an auxiliary gear-driven crank rewind that shall be easily accessible.

HOSE REEL PAINTING

The hose reel(s) shall be painted graphite.

REEL LOCATION

The booster hose reel mounted on the right hand side rear corner of the flatbed body.

SWITCH, REWIND BOOSTER REEL

There shall be one (1) hose reel rewind switch installed. It shall be a weather-resistant momentary push button switch and shall be located near the booster reel. The switch shall be labeled "BOOSTER REEL REWIND".

One (1) high mounted polished stainless steel roller guide assembly shall be installed on the booster reel, allowing the booster hose to be deployed to the rear of the apparatus.

BOOSTER REEL HOSE

The booster reel shall be supplied with 150' of 1.00" NST red lightweight booster hose.

FOAM SYSTEM - CLASS A

A Darley Foam Flurry Class A around-the-pump foam system shall be installed to supply all discharges. The unit shall be mounted between the discharge and suction side of a pump. The unit shall be adjustable, permitting various foam ratio percentages to be educted depending on the nozzles in use. Foam selection percentages between .07 and 1% shall be available. The foam system has been designed for simplicity of operation and maintenance.

BOOSTER TANK

The tank shall have a capacity of 400 US gallons.

CONSTRUCTION

The water tank shall be constructed of 0.50" thick Polyprene™ sheet stock. The material shall be non-corrosive and stress relieved, black in color, and UV stabilized for maximum protection.

All external joints and seams shall either be bent, extrusion or butt-welded and electronically tested for maximum strength. The unit shall

incorporate transverse partitions that shall interlock with a series of longitudinal partitions. All swash partitions shall be designed to allow for maximum water and air flow between compartments and are fully welded to each other as well as to the inside of the tank.

FILL TOWER

The tank shall be equipped with a combination vent/overflow and manual fill tower. The fill tower shall be square and constructed of 0.50" Polyprene ™ with dimensions of 10.00" x 10.00" with a hinged cover.

SUMP

There shall be one (1) sump as standard per tank. The sump shall be recessed into the tank floor and be a minimum of 0.625". The sump shall not be visible from or protrude thru the bottom of the tank more than 0.625".

MOUNTING BLOCKS

Tank to incorporate two (2) booster reel-mounting blocks with adjustable T-nuts for maximum use.

TANK OUTLETS

There shall be two (2) standard outlets located in the same vertical plane on the driver side rear wall of the tank. One (1) 2.50" female NPT tank to pump suction fitting, and one (1) 1.50" female NPT tank fill fitting with a flow deflector.

FOAM CELL

One (1) ten (10) US gallon foam cell shall be provided and installed in the main water tank. The foam cell shall be constructed using the same materials and methods as the main water tank. The cell shall be marked to hold class "A" foam only.

FILL TOWER

The foam cell shall be equipped with a combination vent/overflow and manual fill tower. The fill tower shall be square and constructed of 0.50” Polyprene ™ with dimensions of 10.00” x 10.00” with a hinged cover.

ALUMINUM FLAT BED

BODY LENGTH

The apparatus body shall be 114.00" long.

BODY WIDTH

The apparatus body shall be 96.00" wide from side to side.

BODY CAB TO AXLE

The apparatus body shall be designed for a 60.00" cab to axle dimension.

BODY CONSTRUCTION

The deck shall be constructed of 0.125” diamond plate deck plate, with 4.00" cross members 12.00" on center front to back, constructed of 6061-T6 alloy.

The outer rails shall be 6.00” high extruded rails, with a 1.50” lower flange.

The floor cross members shall be 4.00" 6061-T6 alloy.

Two (2) 4.00” wide x 1.50” flange x 0.175” thick channel long sill caps with flanges downward shall be installed to cap the rumber mounting isolation members.

The all-aluminum flatbed body construction shall hand welded together at ALL structural connections. (No Exceptions) The 0.125” aluminum deck plate shall be welded to shall be welded to the 4.00" cross-members, that are welded to the side rail extrusion.

COMPARTMENT CONSTRUCTION

The side compartment body and doors shall be constructed of 0.125" smooth aluminum.

Each vertically hinged door shall be equipped with one pneumatic gas cylinder retainer/assist. Each horizontal top hinged door shall be equipped with dual pneumatic gas cylinder retainer/assists.

All compartment doors shall have a continuous polished stainless steel hinge bolted to both the body and the door with stainless steel bolts and nuts. The hinge pin shall also be stainless steel and shall have a minimum diameter of .250".

The doors shall be fully gasketed with closed cell neoprene sponge.

Door latches shall be 6.00" D-Ring style with a keyed lock.

FENDER PANELS

A single piece fender panel made of 0.125" smooth aluminum shall be installed on each side of the apparatus body.

INTERIOR COMPARTMENT VENTILATION LOUVERS

The interior of the specified compartments shall be provided with louvered ventilation units.

SIDE COMPARTMENTATION

The following compartment(s) shall be supplied on the apparatus:

CROSS FRAME COMPARTMENT, FRONT BODY -- LH AND RH SIDES

One (1) cross frame storage compartment shall be installed on the forward portion of the flatbed body creating two (2) full height compartments, one (1) each side. The dimensions shall be approximately 30.00" wide x 46.00" high x 23.00" deep.

Each compartment shall be equipped with a vertically hinged door with a D-Ring latch installed.

This storage compartment shall have a transverse tunnel that extends from the left hand side to the right hand side bedrail. The transverse tunnel will have approximate dimensions of 16.00" wide X 26.00" tall X width of the body.

LEFT HAND SIDE UPPER BODY COMPARTMENT

A body equipment storage compartment shall be installed on the flatbed surface on the left hand side of the apparatus. The dimensions shall be approximately 50.00" wide, 26.00" high, and 23.00" deep. The compartment shall be equipped with a horizontally hinged lift-up door with a D-Ring latch installed.

LEFT HAND SIDE LOWER BODY COMPARTMENT

A body equipment storage compartment shall be installed below the flatbed surface, on the left hand side of the apparatus, rear of the axle. The dimensions shall be approximately 22.00" wide, 14.00" high, and 18.00" deep. The compartment shall be equipped with a vertically hinged door with a D-Ring latch installed.

HEX PUNCHED TOP BASKET – LEFT HAND SIDE

One (1) aluminum topside basket approx. 23.00” wide x 12.00” tall x 80.00” long shall be installed on top of the left-side compartment(s). The basket shall be made of 0.125" smooth aluminum, with rolled over top edges. The faces of the basket shall be “hex punched” in place of traditional expanded metal.

RIGHT HAND SIDE UPPER BODY COMPARTMENT

A body equipment storage compartment shall be installed on the flatbed surface, right hand side of the apparatus. The dimensions shall be approximately 50.00" wide, 26.00" high, and 23.00" deep. The compartment shall be equipped with a lift up door with D-Ring latch installed.

RIGHT HAND SIDE LOWER BODY COMPARTMENT

A body equipment storage compartment shall be installed below the flatbed surface, on the right hand side of the apparatus, rear of the axle. The dimensions shall be approximately 22.00" wide, 14.00" high, and 18.00" deep. The compartment shall be equipped with a vertically hinged door with a D-Ring latch installed.

TOP LID BOX - CENTER MOUNT TOPSIDE TRANSVERSE

A tool storage compartment shall be installed on top of the transverse L1/R1 compartment. The dimensions shall be approximately: 48.00" wide, 12.00" tall, and 15.00" deep.

The compartment shall be constructed entirely of .125" smooth aluminum on all exterior surfaces.

The compartment shall have a horizontally hinged lift-up door installed, that shall open towards the front of the body. The door shall have a stainless steel hinge and two (2) gas shocks strong enough to hold the door open at 70 degrees. Two (2) butterfly latches shall be installed to hold down the door.

HEX PUNCHED TOP BASKET –RIGHT HAND SIDE

One (1) aluminum topside basket approx. 23.00” wide x 12.00” tall x 80.00” long shall be installed on top of the right-side compartment(s). The basket shall be made of smooth aluminum, with rolled over top edges. The faces of the basket shall be “hex punched” in place of traditional expanded metal. The basket shall be open to the top.

UNDERBODY HOSE BOX

A under body compartment shall be fabricated between the long sills and run the length of the bed. The compartment shall be approx. 25.00" wide x 4.625" tall x 101.50" long. The compartment shall be equipped with a hinged drop down door with dual latches installed.

The hose box shall have full length dividers to allow for two (2) 2 sections of suction hose as well as long tool storage.

FUEL PIPING AND FILL CAP

There shall be a fuel fill cap provided to be installed in exterior channel of the left side rear wheel well clearly marked, "**ULTRA LOW SULFUR DIESEL FUEL ONLY**". The fill shall be piped to the fuel tank.

DEF PIPING AND FILL CAP

There shall be a def fill cap and fill neck with enclosed housing. Mounted to the front of the body on the Driver's Side of the body. The fill shall be piped to the DEF reservoir.

REAR LIGHT APRON

A rear light apron shall be installed at the rear of the apparatus body. It shall be constructed of 0.125" thick smooth aluminum x 10.00" deep with 1.50" perimeter stiffening flanges.

12 VOLT ELECTRICAL SYSTEM

The truck shall have a 12-Volt electrical system. All wiring will be run in convoluted high temperature plastic loom. The wiring shall be color-coded, numbered, and function imprinted for permanent identification. All wiring devices shall be rated to carry 125% of the maximum ampere load for which the circuit is protected. All added electrical equipment shall be served by circuits separate and distinct from the chassis circuits. 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 electrical will be accordance with modern automotive wiring standards. All under side terminal junctions shall be fully enclosed in sealed plastic weather proof boxes.

ELECTRICAL SYSTEM (CHASSIS OEM)

The commercial chassis electrical system shall be furnished and installed by the chassis manufacturer and shall not be altered in any way so as to void or diminish the manufacturer's warranty responsibilities. Body

builder wiring interface harnesses shall be specific to the chassis being utilized and the apparatus specifications with all such harnesses, circuits and connections being documented by the body builder and made part of the electrical schematics provided with the completed apparatus.

ELECTROMAGNETIC INTERFERENCE PROTECTION

The apparatus shall incorporate modern electrical system design, installation procedures, grounding techniques and wave generating components to provide the highest level of protection against electromagnetic (EMI) and radio wave frequency (RFI) interferences.

The apparatus shall be designed to operate and correctly function in congested municipal environments as well as industrial or concentrated commercial scenes without adverse effects from either EMI or RFI. Communications equipment installed after the apparatus is delivered shall be immediately tested by the installer for reception and transmission signal quality.

CHASSIS GROUND LIGHTS

Four (4) 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

Two (2) TecNiq model E10-WS00-1 LED ground lights with outward facing angle brackets shall be installed under the front 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. (L1 + R1)

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. (L3 + R3)

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 ground lights shall be switched to come on automatically when doors are opened, as well as switched in the cab to turn all ground illumination lights on regardless of whether a cab door is opened.

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 ROAD LIGHTING

Two (2) sets of 6.00” angled oval LED stop, turn and back-up lights shall be provided, one (1) set on each side of the rear of the truck. The lights shall be attached with a black rubber grommet.

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

LICENSE PLATE LIGHT

A license plate bracket with LED light shall be provided and installed on the rear of the body. It shall be wired to come on with the headlights.

COMPARTMENT LIGHT(S)

Two (2) full height OnScene Solutions Access LED strip lights shall be vertically installed in in the upper body L1, R1, L2, and R2 compartments, one (1) on each side of the door frame.

One (1) 6" OnScene Solutions Access LED strip light shall be installed horizontally to the top of the underbody L3 and, R3 comartment.

Two (2) 6" OnScene Solutions Access LED strip lights shall be installed horizontally in the topside center coffin box.

The lights will be controlled by a switch integrated into the door open gas shock. No exceptions.

LED WORK/ SCENE LIGHTS

One (1) LED Work light shall be installed to top of skid unit to light work area. This light shall be switched in place.

Two (2) Whelen NP6BB Nano-Pioneer adjustable LED flood lights shall be mounted on the top of the compartments, rearward facing to illuminate rear scene area. These lights shall be wired to the Cencom Core controller in center console as well as the main pump panel for control from either position. The lights shall be also tied on to automatically illuminate with reverse gear.

BACK-UP CAMERA INSTALLATION

The chassis supplied back-up camera shall be installed at the rear of the body. This back up camera shall utilize the Ford Upfitter Back up cam wiring harness and display to the factory head unit.

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.

WARNING LIGHT FLASH PATTERN

All of the perimeter warning lights shall be set to the default NFPA flash pattern as provided by the warning light manufacturer.

WARNING PACKAGE ACTUATION CONTROLS

All warning light switches shall be wired and integrated to the Whelen Cencom Core system.

LIGHTBAR

One (1) WHELEN model JE2NFPA 56.00” LED lightbar shall be supplied and mounted. The lightbar shall have clear lenses and contain the following modules:

Four (4) RED LIN6 LED modules, two (2) on each corner.
Four (4) RED CON3 LED modules, across the front.
Two (2) WHITE CON3 LED modules, on the front.

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

LIGHT BAR MOUNTING

The light bar shall be mounted on the roof of the chassis.

LOWER FRONT WARNING LIGHTS

Two (2) Whelen model ML2RX red warning lights with smoke lenses shall be installed, one (1) on each front corner of the apparatus, in the 3.5" x 5" Buckstop bumper cutouts.

Each light shall be mounted with a Whelen model M2FB <u>black</u> flange.

LOWER INTERSECTION WARNING LIGHTS

Two (2) Whelen model ML2RX red warning lights with smoke lens shall be installed, one (1) each side of the front fenders.

Each light shall be mounted with a Whelen model M2FB black flange.

LOWER MID-BODY WARNING LIGHTS

Two (2) Whelen model ML2RX red warning lights with smoke lenses shall be installed, one (1) each side of the apparatus, directly above the rear wheel in the bed rail.

Each light shall be mounted with a Whelen model M2FB black flange.

LOWER REAR WARNING LIGHTS

Two (2) Whelen model ML2RX red warning lights with smoke lenses shall be installed, one (1) each side of the lower rear of the apparatus body.

Each light shall be mounted with a Whelen model M2FB black flange.

ELECTRIC SIREN AND LIGHT CONTROL(S)

One (1) Whelen model #C399 CenCom Core system shall provided and installed.

ELECTRIC SIREN AND LIGHT CONTROL(S)

One (1) Whelen model #C399 CenCom Core system shall provided and installed.

CONTROL HEAD

The control head shall be a Whelen model #CCTL7 and include (21) push button switches, 4-position slide switch, and a noise canceling microphone.

ELECTRONIC SIREN SPEAKER

One (1) Whelen model SA315P 100 watt speaker shall be provided. The speaker shall produce a minimum sound output of 120 dB at 10 feet to meet current NFPA 1900.

The speaker shall be mounted behind the chassis grille on the right hand side.

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.

PAINT, STRIPING, AND LETTERING SECTION

CHASSIS PAINT COLOR

The cab shall be painted a single color by the chassis manufacturer.

Color: Ford Race Red

BODY FINISH

The flatbed aluminum body, compartments, and baskets shall be powder coated by the body builder as follows to match chassis paint color:

- Entire flatbed, apron, and skirt assy – PRISMATIC FLAG RED
- Left and right hand compartments (Inside & Outside) – PRISMATIC FLAG RED
- Compartment shelving – BLACK BK62
- Topside – top lift center compartment – BLACK BK62
- Topside left and right hand baskets – BLACK BK62
- Front rock guard diamond plate overlay – BLACK BK62

REFLECTIVE LETTERING - PURCHASER SUPPLIED

Reflective lettering shall be installed by the purchaser.

CHEVRON STRIPING

There shall be alternating chevron striping located on the rear skirt of the apparatus. Each stripe shall be a minimum of 6" in width and shall be applied to the apparatus at 45° angle.

The chevron striping colors shall consist of 3M diamond grade 983-72NL Red and 983-23ES Fluorescent Yellow-Green.

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, LIFETIME

The apparatus body as detailed herein shall have a LIFETIME WARRANTY provided by the body builder. (NO EXCEPTIONS).

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.

AKRON BRASS WARRANTY

The Akron Brass valves shall be warranted by Akron Brass for a period of ten (10) years from the date of delivery. The warranty for electronics shall be warranted by Akron Brass for a period of five (5) years from date of delivery.