# Pittsburg County, Oklahoma COUNTY PURCHASING OFFICE

Pittsburg County Court House McAlester, Oklahoma Phone: (918) 423-4934

## **INVITATION TO BID**

PLEASE REVIEW TERMS AND CONDITIONS ON REVERSE SIDE RELATING TO SUBMISSION OF THIS BID.  Notarized Affidavit completions and signature required on reverse side.					DATE ISSUED  18-Dec-23 PAGE 1 OF	
BID NUMBER BID CLOSING DATE AND HOUR				REQUIRED DELIVERY DATE		
BID # 12			January 5th, 2023 @ 4:00 PM	Days after award of Purchase Order		
TERMS:					DATE OF DELIVERY:	
Item	Quantity	Unit of issue	DESCRIPTION	Unit Price	Total	
			Pittsburg County wishes to advertise for the following:  One (1) or more, Type 6 Wildland Fire Apparatus Lease Purchase with Financing Included  SEE SPECIFICATIONS ATTACHED  IF BID IS NOT RETURNED IN THE ENCLOSED ENVELOPE OR IS PLACED IN A FEDEX, UPS OR USPS SHIPPING ENVELOPE, PLEASE MARK ON THE OUTSIDE OF THE ENVELOPE "SEALED BID" & BID NUMER			

#### TERMS AND CONDITIONS

- Sealed bids will be opened in the Commissioner's Conference Room, Pittsburg County Courthouse, McAlester, Oklahoma, at the time and date shown on the invitation to bid form.
- 2. Late bids will not be considered. Bids must be received in sealed envelopes (one to an envelope) with bid number and closing date written on the outside of the envelope.
- 3. Unit prices will be guaranteed correct by the bidder.
- 4. Firm prices will be F.O.B. destination.
- 5. Purchases by Pittsburg County, Oklahoma, are not subject to state or federal taxes.
- 6. This bid is submitted as a legal offer and any bid when accepted by the County constitutes a firm contract.
- 7. Oklahoma laws require each bidder submitting a bid to a county for goods or services to furnish a notarized sworn statement of non-collusion. A form is supplied below.
- 8. Bids will be firm until delivered.

(DATE)

6.1291E+19

AFFIDAVIT: I, the undersigned, of lawful age, being first duly sworn on oath say that he (she) is the agent authorized by the bidder to submit the above bid. Affiant further states that the bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or with any state official or employee as to quantity; quality or price in the prospective contract or any other terms of said prospective contract; or in any discussions between bidders and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract; that the bidder/contractor has not paid, given or donated or agreed to pay, give or donate to any officer or employee of the State of Oklahoma (or other entity) any money or other thing of value, either directly or indirectly in the procuring of the award of a contract pursuant to this bid.

Subscribed and swor	n before this20	day (seal)	
		Firm:	
My commission	expires	Signed by:	Title:
		Address:	Phone:
NOTARY PUBLIC (CLERK OR JUDGE)		City:	State
			Zip

## RESOLUTION 24-160 To Re-Advertise

The Board of County Commissioners, Pittsburg County, met in regular session on Monday, December 18, 2023.

WHEREAS, Pittsburg County wishes to advertise for the following:

One (1) or more, Type 6 Wildland Fire Apparatus Lease Purchase with Financing Included

A bid package containing complete specifications and an "Invitation to Bid" are available at the Pittsburg County Clerk's Office, 115 E. Carl Albert Pkwy, Room 103, McAlester, Oklahoma 74501 or online at pittsburg.okcounties.org

THEREFORE, each competitive bid submitted to the County must be accompanied with an affidavit for filing with the competitive bid form, as required by Oklahoma Statute, Title 19 O.S. \$ 1501.

Sealed bids will be received and filed with the Pittsburg County Clerk until Friday, January 5, 2024 at 4:00 p.m. All bids received after 4:00 p.m. on Friday, January 5, 2024 WILL NOT BE OPENED. Bids will be opened on Monday, January 8, 2024 at 10:00 a.m. in the Board of County Commissioners Conference Room, 115 E. Carl Albert Pkwy, McAlester, Oklahoma. The Board of County Commissioners, Pittsburg County, reserves the right to reject any and all bids and readvertise.

BOARD OF COUNTY COMMISSIONERS PITTSBURG COUNTY, OKLAHOMA

ATTEST:

VICE-CHAIRMAN

**MEMBEK** 

COUNTY CLERK TOPO DIAMML

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

#### ~ INTENT OF SPECIFICATIONS ~

It shall be the intent of these specifications to cover the furnishing and delivery of a completed fire apparatus equipped as hereinafter specified.

These specifications cover only the general requirements as to the design, type of construction, and testing to which the apparatus shall conform, together with certain details as to finish, equipment, and appliances with which the successful bidder shall conform.

Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the manufacturer, who shall be solely responsible for the design and construction of all features.

Loose equipment shall be provided only as stated in the following pages.

#### ~ QUALITY AND WORKMANSHIP ~

The design of the apparatus shall meet the most current guidelines of NFPA 1906. The workmanship shall be of the highest quality in its respective field. Special consideration shall be given to the following points: accessibility of the various components which require periodic maintenance, ease of operation (including both pumping and driving), and symmetrical proportioning.

Construction shall be rugged with ample safety factors being provided to carry the loads specified and to meet both on and off road requirements and speed conditions as set forth under "Performance Tests and Requirements".

#### ~ GENERAL CONSTRUCTION ~

The apparatus shall be designed with due consideration to distribution of load between the front and rear axles.

Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association.

### ~ FIRE APPARATUS WARRANTY ~

The manufacturer shall warranty the completed fire apparatus as follows:

- ➤ Materials and Workmanship One (1) Year
- ➤ Stainless Steel Plumbing Ten (10) Years
- ➤ Extruded Aluminum Fire Body Ten (10) Years
- ➤ Apparatus Electrical System Five (5) Years

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

- > Water Tank Lifetime
- \*\* NOTE: See attached manufacturer warranty documents for further information and details on above provided warranties.

Components such as, but not limited to, cab and chassis, fire pump, foam systems, valves, booster reels, hose and nozzles, and lighting shall be covered by warranties issued to the purchaser from the original manufacturers.

Warranties shall not apply to the following:

- > To normal maintenance and adjustments
- ➤ To parts subject to normal service / replacement (fuses, filters, ect.)
- ➤ To any apparatus which has been repaired or altered outside of the factory in any way without the prior express and written consent of a duly authorized representative of the apparatus manufacturer.
- > To any apparatus which has been subject to misuse, neglect, or accident.
- > To any apparatus which shall operate at any speed exceeding the factory rated speed, or loaded beyond the factory rated load capacity.

#### ~ CUSTOMER IDENTIFICATION PLATE ~

There shall be a customer identification plate provided on the fire apparatus. The customer identification plate shall have the following information:

- Customer Name
- Apparatus Build Job Number
- Apparatus Model Name
- Apparatus delivery Date

#### ~ APPARATUS AS BUILT LABEL ~

There shall be a label provided inside the chassis' cab containing the following information:

- Height of the completed fire apparatus (in feet and inches).
- Length of the completed fire apparatus (in feet and inches).
- GVWR of the completed fire apparatus (in tons).

There shall be a notation on the label that the information shown was current as of the fire apparatus completion date. Any modifications to the fire apparatus after the completion date that affects the overall height or overall length must be noted on the original label.

The label shall be located in a position that is visible by the driver while seated.

### **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

#### ~ SEATING CAPACITY LABEL ~

There shall be a label provided inside the chassis' cab identifying the seating capacity of the fire apparatus.

The label shall be located in a position that is visible to all cab occupants.

Seating capacity for this fire apparatus is 2.

#### ~ SEAT BELT WARNING LABEL ~

There shall be a warning label provided inside the chassis' cab stating the following: DANGER – OCCUPANTS MUST BE SEATED AND SEAT BELTS MUST BE FASTENED WHEN APPARATUS IS IN MOTION DEATH OR SERIOUS INJURY MAY RESULT

The label shall be located in a position that is visible to all cab occupants.

#### ~ NOISE HAZARD WARNING ~

There shall be a warning label provided inside the chassis' cab stating the following: WARNING: Noise Hazards Occur During Siren Operation

The label shall be located in a position that is visible to all cab occupants.

## ~ COMPLETED APPARATUS PERFORMANCE TESTS ~

### ~ROAD TEST~

The completed fire apparatus shall undergo a road test with the apparatus fully loaded with a continuous run of no less than ten (10) miles.

The road test shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating.

The chassis' transmission drive shaft or shafts, and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus.

## ~ELECTRICAL RESERVE CAPACITY TEST~

The completed fire apparatus engine shall be started and ran until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged.

The engine shall then be shut down, and the minimum continuous electrical load (as defined by NFPA 1906) shall be activated for ten (10) minutes.

All electrical loads shall then be turned off.

The fire apparatus engine shall then be re-started.

This test will be reported as a "PASS" or "FAIL".

### **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

#### ~ALTERNATOR PERFORMANCE TEST AT IDLE~

The minimum continuous electrical load (as defined by NFPA 1906) shall be activated with the fire apparatus engine running at idle speed.

The fire apparatus engine temperature shall be stabilized at normal operating temperature.

The fire apparatus engine battery system shall then be tested to detect the presence of battery discharge current.

This test will be reported as a "PASS" or "FAIL".

#### ~ALTERNATOR PERFORMANCE TEST AT FULL LOAD~

The total continuous electrical load (as defined by NFPA 1906) shall be activated with the fire apparatus engine running.

The fire apparatus electrical system voltage shall be monitored and shall not drop below 11.8-VDC for more than 120 continuous seconds.

This test duration shall be a minimum of two (2) hours.

This test will be reported as a "PASS" or "FAIL".

#### ~ CAB AND CHASSIS ~

- Customer Supplied Red 2023 Ford F-450 Super Duty Chassis
- Extended Cab
- ❖ 168" WB
- ❖ 60" CA
- 7.3L Gasoline engine

There shall be Westin HDX black powder coated stainless steel running boards installed on the chassis, or equivalent.

## ~SINGLE TIRE CONVERSION PACKAGE~

There shall be a single tire conversion package installed on the chassis.

The package shall include:

Five (5) 335/80R 20 Tires

Five (5) Custom Wheels

One (1) 3" Suspension Lift Kit

All Tires/Wheels to be match mounted and dynamically balanced.

Fender Flares will be replaced with custom flares.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

#### ~ FULL REPLACEMENT FRONT BUMPER ~

There shall be a heavy duty full replacement bumper provided at the front of the apparatus.

The bumper shall have a durable textured black powder coat finish.

The bumper shall have an integral siren mount with protective expanded metal cover.

The bumper shall be constructed to mount a 12K winch inside.

The bumper shall have a monitor platform constructed as part of the bumper.

## ~WINCH~

A 12K winch shall be installed inside the bumper.

The winch shall have the following features.

- 12,000 lb. (5443 kg) single-line pulling capacity.
- Includes 80' of durable 3/8" galvanized steel wire rope.
- Convertible control pack can be attached to the winch or remotely mounted, allowing for various winch mounting options and looks (Relocation kit required and sold separately\*).
- Gear train and motor deliver reliable pulling power that is fast, and quieter than ever.
- Satin-black powder-coated finish with stainless steel fasteners and clutch lever looks great and inhibits corrosion. Improved winch sealing to keep the elements out.
- Large diameter winch drum reduces rope wear, is light weight, and has an integrated rope anchor for easy rope installation.
- Limited Lifetime Warranty for Mechanical Components. Limited Seven (7) year warranty for Electrical Components.

#### ~ IN CAB COMMAND CONSOLE ~

There shall be one (1) custom fabricated smooth aluminum command console located inside the chassis' cab between the front seats.

The console will be designed and fabricated to accommodate all required switches, gauges, and components.

There shall be a grounding point and a power wire provided inside the console for wiring fire department mobile radio.

The console shall be painted.

The console lid shall be hinged, allowing for easy access for maintenance purposes.

The console lid hinge shall be a heavy duty full width stainless steel piano hinge secured with stainless steel fasteners.

There shall be a rear pocket storage compartment located at the rear of the console.

The following components shall be provided on the center command console:

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

- One (1) Computer control module
- One (1) radio specific mobile radio mounting faceplate. Radio and accessories will be provided by local Fire Department and installed by contractor.
  - Two (2) microphone clip brackets
  - One (1) flexible variable intensity LED map light
  - Two (2) cup holders
  - All electric pump controls

### ~ BACK UP CAMERA~

There shall be one (1) factory installed back up camera at the rear of the apparatus.

### ~ SWITCH CONTROL MODULE ~

The control head includes 3 section control head and 8 push buttons, 4-position slide switch with a 7-position rotary siren knob, manual air horn plus 3 traffic advisor switches and microphone with extension cable. This switch module is designed to work with the computer control module and capable of OBD II interface.

## ~ APPARATUS ELECTRICAL SYSTEM ~

All electrical equipment installed by the manufacturer shall conform to current automotive electrical system standards and the requirements of the applicable NFPA fire apparatus standards.

The installation shall meet SAE Standard J1128 in its latest edition for GXL or SXL temperature ratings.

The electrical system shall consist of switches, circuit boards, relays, diodes, resistors, fuses, wiring, wiring harnesses, and connectors as required to ensure consistent and uninterrupted operation of the completed apparatus.

The electrical system shall be composed of individual wiring harnesses that are integrated as a complete unit via bulkhead type Deutsch waterproof electrical connectors, or equivalent, located between the chassis and fire body. All GXL / SXL wiring for the apparatus shall be located within temperature resistant harnesses rated at a minimum of 280°F.

All electrical wires in each harness shall be permanently color and function coded throughout.

All electrical connections made outside of the chassis shall be made utilizing heat shrink type connectors and / or Deutsch weatherproof connectors, or equivalent.

All electrical circuits shall be protected with circuit breakers or fuses.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

The main low voltage electrical circuit board with associated circuit breakers and fuses shall be provided in a protective metal housing in a location inside the chassis' cab which provides easy service access.

All circuit breakers and fuses located on the main low voltage electrical circuit board shall have diagnostic indicator lights providing for ease of diagnostics.

All wiring ran outside of the body will be run along structural members and loom clamped in a neat and orderly manner.

Wiring shall be routed and / or protected to eliminate exposure to moving parts or debris.

All wiring passing through metal shall be protected from tears, abrasions, or cuts by rubber grommets.

## ~ APPARATUS BATTERY CHARGING SYSTEM ~

The apparatus shall be provided with a battery charging/conditioning system with auto eject plug and battery status indicator. The auto eject plug and battery status shall be mounted in the fire body extrusion.

There shall be a breaker box and breakers installed, wired to the 110V side of the charger. There shall be 110v outlets installed in each compartment, controlled by the breaker box and battery charger.

## ~ BATTERY MASTER SWITCH AND INDICATOR LIGHT ~

The fire apparatus shall be supplied with one (1) battery disconnect switch and indicator plate.

The switch shall be rated for 180-amps continuous duty.

The switch shall be located on the chassis' floorboard next to the driver's seat.

A green indicator light shall be provided and located on the center command console.

The indicator light shall be labeled – BATTERY ON

#### ~ REMOTE START/STOP THROTTLE CONTROLS~

There shall be an electronic start/stop/throttle control for the gas fire pump located inside the cab on the custom aluminum console and at the rear mount control panel.

There shall be a 2.5" liquid filled discharge gauge with red LED backlight located inside the cab on the custom aluminum console.

There shall be a mini water level and a mini foam level indicator on the custom aluminum console.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

### ~ D.O.T. LIGHTING ~

All required lighting complying with Federal Government Codes for vehicles of this size and design shall be provided and installed.

These lights shall include headlamps, front turn signals with hazard switch, cab marker and clearance lights, body clearance lights, reverse lights, stop-turn-tail lights, and license plate lights.

The body clearance lights, rear stop-turn-tail lights, and reverse lights shall be LED. A license plate bracket with integrated LED lights shall be provided at the rear of the fire body.

### ~ NFPA UNDERBODY LIGHTING ~

There shall be eight (8) LED underbody lights provided on the apparatus. The underbody lights shall automatically activate when the chassis' transmission is

shifted into park and shall automatically deactivate when the chassis' transmission is shifted out of park.

The underbody lights will be mounted in the following locations:

- One (1) at each front corner of the fire body.
- One (1) at each chassis' cab door.
- ❖ Two (2) at the rear of the apparatus.

### ~ APPARATUS WILDLAND FIRE BODY ~

The fire body dimensions shall be approximately 110"L x 96"W.

The fire body shall be constructed entirely of heavy duty extruded aluminum.

The perimeter of the fire body shall be constructed of a custom heavy duty 5.0" x 3.0" 6061T6 aluminum extrusion.

The fire body cross members shall be constructed of heavy duty 1.5" x 3.0" National Standard 6061T6 extruded aluminum tube.

The extruded aluminum cross members shall be located on 14" centers.

The fire body mounting sills shall be constructed of 6.0" National Standard 6061T6 extruded aluminum channels..

The fire body sills shall be mounted to the fire body sub-frame utilizing a 6-point mounting system.

A rubber isolation barrier shall be provided between the chassis' frame rails and the fire body mounting sills.

There shall be .125" aluminum diamond plate covering the entire deck of the fire body. There shall be a headache rack located at the front of the fire body.

## CUSTOM SPECIFICATIONS FOR:

Crowder, Oklahoma

The headache rack shall be constructed of heavy duty 3.0" x 2.0" 6061T6 extruded aluminum tube.

The headache rack shall have .125" aluminum diamond plate covering the bottom half on the front side and expanded aluminum on the top half.

There shall be a 20" walkway with step wells at the front of the fire body.

There shall be a 60"W x 12"D x .25" aluminum plate light bar mounting platform located on top of the fire body headache rack.

There shall be a 3.0" x 6.0" Steel bumper with integrated receiver tube, to include safety chains connector loops and 7pin/4pin trailer plug provided at the rear of the apparatus. The bumper shall be integrated into the fire body mounting sills and chassis' frame rails. A chassis' fuel fill shall be provided.

A "UNLEADED FUEL ONLY" label shall be provided next to the fuel filler cap.

Mud flaps shall be located behind the chassis' rear wheels.

There shall be a 108"D x 30"W x 5.0"H long tool storage compartment provided between the fire body mounting sills, with the door opening facing the rear of the apparatus.

The compartment door shall be constructed of .125" aluminum smooth plate and shall be horizontally hinged.

Aluminum diamond plate skirting shall be applied to the body sides from the walkway to the rear of the body.

#### ~ REAR STEPS ~

Two (2) pull-out / fold-down steps shall be provided at the rear of the fire body. A warning label shall be provided at the rear of the fire body stating the following: WARNING: DO NOT RIDE ON REAR STEP WHILE VEHICLE IS IN MOTION. DEATH OR SERIOUS INJURY MAY RESULT.

#### ~ GRAB RAILS ~

There shall be two (2) NFPA compliant grab rails provided at the rear of the fire body. The grab rails shall be extruded aluminum with slip resistant inserts. Location of the grab rails shall be determined by the Fire Department.

## ~ DRIVER SIDE UPPER BODY COMPARTMENT ~

There shall be one (1) sweep-out style compartment with two (2) lift-up style compartment doors provided on the driver side deck of the fire body. Dimensions of the compartment shall be 54"L x 22"D x 30"H.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

The body of the compartment shall be constructed of .125" aluminum diamond plate. The compartment doors shall be constructed of .125" smooth aluminum plate and painted chassis color.

Each compartment door shall be attached to the compartment body utilizing a full length stainless steel piano hinge with stainless steel fasteners.

Each compartment door shall be held in the open position by two (2) heavy duty pneumatic struts.

The compartment door latches shall be D-Ring style slam latches.

Door latches shall not be lockable.

The compartment shall be provided with one (1) .125" smooth aluminum plate bulkhead divider, separating the compartment into two (2) separate compartments (L1 / L2).

Compartment L1 shall be provided with two (2) vertical 12" 36-light LED compartment lights, located one (1) on each side of the compartment opening.

Each compartment light shall automatically activate when the compartment door is opened and shall automatically deactivate when the compartment door is closed.

The front 27" compartment (L1) shall be provided with one (1) .1875" smooth aluminum plate adjustable shelf.

Compartment L2 shall be provided with two (2) vertical 12" 36-light LED compartment lights, located one (1) on each side of the compartment opening.

Each compartment light shall automatically activate when the compartment door is opened and shall automatically deactivate when the compartment door is closed. The rear 27" compartment (L2) shall be provided with one (1) .1875" smooth aluminum

plate adjustable shelf.

## ~ PASSENGER SIDE UPPER BODY COMPARTMENT ~

There shall be one (1) sweep-out style compartment with one (1) lift-up style compartment door provided on the passenger side deck of the fire body. Dimensions of the compartment shall be 54"L x 22"D x 30"H.

The body of the compartment shall be constructed of .125" aluminum diamond plate. The compartment doors shall be constructed of .125" smooth aluminum plate and

painted chassis color.

Each compartment door shall be attached to the compartment body utilizing a full length stainless steel piano hinge with stainless steel fasteners.

Each compartment door shall be held in the open position by two (2) heavy duty pneumatic struts.

The compartment door latches shall be D-Ring style slam latches.

Door latches shall not be lockable.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

The compartment shall be provided with one (1) .125" smooth aluminum plate bulkhead divider, separating the compartment into two (2) separate compartments (R1 / R2).

Compartment R1 shall be provided with two (2) vertical 12" 36-light LED compartment lights, located one (1) on each side of the compartment opening.

Each compartment light shall automatically activate when the compartment door is opened and shall automatically deactivate when the compartment door is closed.

The front 27" compartment (R1) shall be provided with one (1) .1875" smooth aluminum plate adjustable shelf.

Compartment R2 shall be provided with two (2) vertical 12" 36-light LED compartment lights, located one (1) on each side of the compartment opening.

Each compartment light shall automatically activate when the compartment door is opened and shall automatically deactivate when the compartment door is closed. The rear 27" compartment (R2) shall be provided with one (1) .1875" smooth aluminum plate adjustable shelf.

## ~ APPARATUS OPEN DOOR WARNING SYSTEM ~

Each compartment door shall be wired into the apparatus open door warning system. The apparatus open door warning system shall have a red LED warning light and audible alarm located inside the chassis' cab.

The red LED warning light shall be labeled "WARNING OPEN DOOR".

The open door warning light shall be activated any time a compartment door is open and the chassis' transmission is in park.

The open door warning light and alarm shall be activated any time a compartment door is open and the chassis' transmission is shifted out of park.

## ~ DRIVER SIDE DUNNAGE COMPARTMENT ~

There shall be a 54"L x 17"W x 8"H dunnage storage compartment located on top of the driver side upper body compartment.

The dunnage storage compartment shall hold 150' of 1.75" double jacket fire hose.

The dunnage storage compartment shall be constructed of aluminum diamond plate.

The dunnage storage compartment lid shall be made from .125 aluminum diamond plate.

There shall be two gas struts to hold the lid in the open position.

## ~ PASSENGER SIDE DUNNAGE COMPARTMENT ~

There shall be a 54"L x 17"W x 8"H dunnage storage compartment located on top of the passenger side upper body compartment.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

The dunnage storage compartment shall hold 150' of 1.75" double jacket fire hose. The dunnage storage compartment shall be constructed of aluminum diamond plate. The dunnage storage compartment lid shall be made from .125 aluminum diamond plate.

There shall be two gas struts to hold the lid in the open position.

#### ~COMPARTMENT MATTING~

All upper compartments, trays and aluminum dunnage shall have dri-deck tile installed.

## ~ APPARATUS FASTENERS ~

All fasteners utilized for construction of the fire apparatus shall be stainless steel.

### ~ CORROSION RESISTANCE TREATMENT ~

Electrolysis Corrosion Kontrol shall be utilized throughout the manufacturing process of the apparatus, or equivalent.

ECK is a proven and patented coating that is utilized to prevent dissimilar metal corrosion of all metals including stainless steel, aluminum, cold rolled steel, and brass.

ECK prevents corrosion by providing a barrier between dissimilar metals, sealing out moisture, and absorbing energy created by a dissimilar metal reaction.

ECK is also dielectric and can be utilized on electrical connections.

All stainless steel fasteners utilized in the manufacturing process shall be pre-treated with ECK prior to being utilized on the apparatus.

ECK shall be applied to ANY areas where dissimilar metals come into, or may come into contact with each other.

### ~ POLYPROPYLENE WATER TANK ~

One (1) polypropylene water tank shall be provided with the apparatus.

The color of the tank shall be black.

The water tank shall have a capacity of 400 gallons.

The integral foam tank shall hold 12 gallons.

The water tank shall be baffled to help prevent sudden movement of the water while driving.

The water tank baffling shall meet or exceed published NFPA standards.

The tank shall have one (1) 8.0" square blue water fill tower with incorporated 3.0" vent / overflow pipe and removable polypropylene screen.

The tank shall have one (1) 8.0" square green foam fill tower with incorporated 3.0" vent / overflow pipe and removable polypropylene screen.

The fill towers shall be located at the front of the water tank.

## **CUSTOM SPECIFICATIONS FOR:**

### Crowder, Oklahoma

The water tank shall have one (1) liquid level sight gauge located on the rear wall of the tank.

The water tank shall have a 3.0" FNPT tank suction located on the left lower rear wall of the tank.

The 3.0" tank suction shall be provided with a recessed sump with anti-swirl plate.

The water tank shall have a 1.5" FNPT recirculation fitting.

The water tank shall have a 1.0" FNPT drain fitting located at the rear of the water tank.

The tank drain shall be plumbed to the underside of the fire body with 1.0" stainless plumbing.

A 1.0" stainless steel full port quarter-turn industrial valve shall be provided for the tank drain.

The water tank shall have two (2) heavy duty mounting tabs molded into the floor of the tank.

There shall be two (2) auxiliary mounting blocks located on top of the water tank.

These mounting blocks can be utilized for mounting equipment to the top of the water tank.

These mounting blocks can be utilized for mounting equipment to the top of the water tank.

The water tank shall have a lifetime warranty.

The tank shall be recessed into the floor of the body.

There shall be 8"H raised sides on the tank to facilitate a dunnage storage area. The raised sides shall not encompass the fill towers.

## ~ STAINLESS STEEL PLUMBING SYSTEM ~

All plumbing on the apparatus shall be heavy duty welded stainless steel plumbing. All plumbing connections shall be completed by either Victaulic couplers or 4-bolt flanges.

When required, a high pressure hose shall be utilized with welded stainless steel fittings.

#### **DISCHARGES**

The discharge plumbing from the fire pump to the water distribution manifold shall be plumbed with 2.5" welded stainless steel pipe.

The discharge plumbing shall integrate into the fire pump discharge with a stainless steel 4-bolt flange and shall integrate into the water distribution manifold with a 2.5" Victaulic fitting.

The water distribution manifold shall be a 4.0" square stainless steel tube.

The water distribution manifold shall have the following inlets / outlets:

One (1) 2.5" Victaulic fitting for the 2.5" plumbing from the fire pump.

➤ One (1) 1.5" 4-bolt flange for the walkway whip lines.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

- ➤ One (1) 1.5" 4-bolt flange for the rear 1.5" discharge
- > Two (2) 1.0" 4-bolt flange for the booster reels.
- ➤ One (1) 1.0" 4-bolt flange for the 1.0" discharge. A ¾"GH adapter shall be provided.
  - One (1) 2.0" Nipple for the monitor valve connection
  - One (1) 1.0" 4-bolt flange for the ground sweep plumbing

There shall be one (1) 1.0" water tank refill / recirculation line provided.

The refill / recirculation line shall be controlled by a 1.0" stainless steel full port, full flow gate valve.

The refill / recirculation line plumbing shall be a high pressure hose with welded stainless steel fittings.

There shall be one (1) 1.5" discharge plumbed from the water distribution manifold to the walkway. The discharge shall be plumbed with 1.5" high pressure flexible hose with welded stainless steel fittings.

This discharge shall terminate in the walkway with a welded T and threaded swivels for use on the whip lines.

There shall be one (1) 1.5" discharge plumbed from the water distribution manifold to the front of the apparatus. The discharge shall be plumbed with 1.5" high pressure flexible hose with welded stainless steel fittings.

There shall be one (1) 1.5" MNST discharge provided at the rear of the apparatus. The entire 1.5" discharge assembly (manifold to valve – valve to discharge) shall be composed entirely of welded stainless steel and shall contain no threaded connections. The 1.5" discharge shall terminate with MNST threads and shall be provided with a chrome 1.5" rocker lug cap and chain.

There shall be one (1) 1.0" discharge plumbed from the water distribution manifold to the booster reel.

There shall be one (1) 1.0" MNST discharge provided at the rear of the apparatus. The entire 1.0" discharge assembly (manifold to valve – valve to discharge) shall be composed entirely of welded stainless steel and shall contain no threaded connections. The 10.0" discharge shall terminate with MNST threads and shall be provided with a chrome 1.0" rocker lug cap and chain. A 3/4" GH adapter shall be supplied.

The complete discharge plumbing system shall be hydrostatically tested at 300 psi for two (2) minutes.

This shall be completed to test the integrity of the plumbing system and to verify the plumbing system is leak free.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

#### **INTAKES**

The tank to pump plumbing shall be 3.0" welded stainless steel.

A wire reinforced flexible connection shall be located between the water tank and tank to pump valve, providing for reduced fire pump vibration and ease of service.

The tank to pump plumbing shall connect to the fire pump intake by a Victaulic coupler, or equivalent,

There shall be a 2.5" gated suction intake provided at the rear of the apparatus. The suction intake shall terminate with a chrome 2.5" FNST swivel connection with integrated suction screen.

The suction intake shall be provided with a chrome 2.5" rocker lug plug and chain.

#### PLUMBING SYSTEM DRAINS

Drain valves shall be provided to adequately drain the entire plumbing system to prevent freezing.

#### LABELING

The pump operator's panel, all discharges, and all intakes shall be labeled.

#### APPARATUS VALVES

All discharge and intake valves provided (unless otherwise noted in the specifications) shall be 4-bolt flange brass fire service heavy duty, full flow, quarter-turn discharge valves with chromed handles.

#### ~ APPARATUS FIRE PUMP ~

There shall be one (1) Hale HPX200-B18 pump, or equivalent, mounted at the rear of the apparatus, or equivalent.

#### Performance

The pump / engine shall perform to the standards of ISO 9 and NFPA 1906.

The fire pump shall have the following performance from draft:

- > 150 GPM @ 100 PSI
- > 50 GPM @ 150 PSI

## **Pump Primer**

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

The priming pump shall be an oil-less electric primer

**Pump Suction** 

The pump suction inlet shall be a 4.0" Victaulic, or equivalent, connection.

**Pump Discharge** 

The pump discharge shall be a 2.5" 4 bolt flange connection.

**Pump Engine** 

The engine shall be a overhead valve (OHV) air cooled gasoline engine.

**Pump Engine Fuel Supply** 

The engine shall be plumbed into the chassis fuel system.

## ~ PUMP OPERATOR'S PANEL ~

There shall be a custom fabricated pump panel located in the walkway of the apparatus. The panel shall be constructed of .125" smooth aluminum plate and shall have a DA sanded finish.

The pump panel shall include the following items:

- Master On / Off Power Switch
- Push Button Start
- Choke Control
- Throttle Control
- Electric Primer Control
- ❖ One (1) 2.5" 0-400 psi Master Discharge Gauge
- Low Oil Pressure Warning Light
- One (1) 12" 36-Light LED Panel Light with Brushed Aluminum Light Shroud
- Trident foam system controller
- Scene Light Switch
- LED Water Level Indicator
- LED Foam Level Indicator

#### ~ BOOSTER REEL ~

Dual heavy duty booster reels shall be provided, mounted one at each rear corner of the fire body, pulling from the sides.

The booster reel shall be plumbed with 1.0" high pressure hose with welded stainless steel fittings.

The booster reel shall be provided with a 40-amp. automatic reset circuit breaker for added protection of the booster reel motor.

The booster reel shall be provided with a single chrome hose roller and spool assembly.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

The booster reel shall be provided with one (1) push button rewind switch, located at the booster reel location.

The booster reel shall have one (1) manual rewind crank assembly. The crank assembly shall be provided loose with the fire apparatus upon delivery.

The driver's booster reel shall be provided with 150' x 1.0" red rubber booster hose with low profile powder coated aluminum couplings.

The passenger side booster reel shall be provided with 200' x 1.0" lightweight booster hose, yellow in color.

Nozzles not included.

#### ~FOAM SYSTEM~

There shall be a through the pump foam induction system installed. Foam will be supplied to all discharges.

#### ~WHIP LINES~

There shall be two (2) 5' x 1.0" forestry whip lines provided in the walkway, connected to the swivel fittings. Nozzles not included.

### ~ NOZZLE CLIP ~

Four (4) holders shall be provided and located as directed by the Fire Department.

### ~GROUND SWEEPS~

There shall be two (2) ground sweep nozzles provided at the front of the apparatus, located one (1) at the driver front corner and one (1) at the passenger front corner. There shall be two (2) ground sweep nozzles provided at the mid body of the apparatus, located one (1) at the driver front corner of the fire body and one (1) at the passenger front corner of the fire body.

Driver side ground sweeps (front and mid-body) shall be operated with one (1) stainless steel electric valve. Passenger side ground sweeps (front and mid-body) shall be operated with one (1) stainless steel electric valve.

There shall be two (2) ground sweep nozzle switches, one (1) for the driver side ground sweep nozzles and one (1) for the passenger side ground sweep nozzles. The switches shall be located on the center console located in the cab.

Each ground sweep nozzle shall have a protective guard mounted over it.

#### ~ FRONT REMOTE CONTROLLED MONITOR ~

There shall be a Forestry monitor provided at the front of the apparatus, mounted on the full replacement front bumper monitor mounting platform. The monitor shall be mounted so that it can be seen from the driver's seat.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

The monitor shall have a 2.25" hard coat anodized aluminum waterway with a durable red powder coat finish.

The monitor shall have a vertical elevation range of 90-degrees above horizontal and 45-degrees below horizontal.

The monitor shall have a 180-degree horizontal travel range (90-degrees each side of center).

The monitor motor control circuits shall utilize position encoders and current limiting to protect the monitors drive train at the ends of travel.

The monitor shall have manual override controls for horizontal movement, vertical movement, and nozzle pattern control.

The monitor water flow shall be controlled by an electrically controlled stainless steel full port ball valve.

The valve shall be located at the rear of the apparatus bolted onto the stainless steel main water distribution manifold by a 4-bolt flange.

The monitor shall have a variable pattern, manually adjustable 30-125 GPM nozzle.

The monitor shall have a joystick control module that shall control the monitor's horizontal rotation, vertical elevation, and nozzle pattern.

The joystick shall also have a trigger lever which shall serve as a momentary type control for the monitor's water flow.

The monitor's electric drives and monitor mounted control panel shall be waterproof.

### ~ APPARATUS EMERGENCY WARNING SYSTEM ~

An emergency warning package shall be provided on the fire apparatus.

The complete emergency warning package shall be compliant to the current edition of NFPA 1906 guidelines.

#### **EMERGENCY LIGHTING**

An NFPA LED 56" LED light bar shall be provided.

The light bar shall feature ultra bright, ultra wide angle, all linear Super-LED technology. The light bar shall be mounted at the front of the fire body on the light bar mounting platform. The lightbar includes alley and takedown lights.

#### **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

There shall be eight (8) LED light heads with chrome bezels provided.

Each light head shall feature six (6) Super-LED diodes with 69 scan-lock flash patterns. The light heads shall be located as follows:

- Two (2) at the front of the apparatus, mounted on the full replacement front bumper.
  - One (1) on each chassis front fender.
  - One (1) on each side of the fire body, front
  - One (1) on each side of the fire body, rear
  - Two (2) at the rear of the apparatus, mounted on the rear of the fire body.

There shall be 4 rear facing 7" LED light heads installed.

#### ~AUDIBLE WARNING~

One (1) full function siren control head with wired microphone shall be provided and designed to integrate with the multi function control head.

The siren control head shall be located inside the chassis' cab in the center command console.

One (1) 100-watt siren speaker shall be provided.

The siren speaker shall be mounted at the front of the apparatus, within the full replacement front bumper.

One (1) back-up alarm shall be provided.

The back-up alarm shall have a 97 dB sound output.

The back-up alarm shall be mounted at the rear of the fire body in a protected location.

## ~SCENE LIGHTS~

There shall be one 20" LED off road bar on the front bumper.

There shall be two (2) 28K lumen, telescoping scene lights mounted on the rear of the upper compartments. Each scene light shall be controlled by a switch on the center console.

## ~ APPARATUS WORK LIGHTING ~

There shall be four (4) LED work lights provided.

The work lights shall be located as follows:

- One (1) on each side of the light bar mounting platform, facing the rear of the apparatus.
- Two (2) at the rear of the fire body

The work lights on the headache rack shall be controlled by a single switch from inside the chassis' cab from the switch module. The work lights at the rear of the apparatus shall be controlled from the rear pump control panel.

## **CUSTOM SPECIFICATIONS FOR:**

Crowder, Oklahoma

There shall be two LED lights in the walkway.

### ~WIRELESS INTERCOM~

There shall be a two person wireless intercom system with headsets installed on the apparatus. The system shall include two (2) wireless, radio transmit headsets.

#### ~DRIP TORCH~

There shall be one (1) drip torch and holder installed on the apparatus. The location shall be determined at the pre-build meeting.

#### ~ APPARATUS REFLECTIVE STRIPING ~

A reflective striping package shall be provided around the perimeter of the apparatus, meeting NFPA 1906 current edition standards.

The reflective striping package shall consist of the following:

- ❖ 1.0" / 4.0" / 1.0" reflective Z stripe on each side of the chassis' body and straight on each upper body compartment door − Color of stripe and design to be determined by the Fire Department.
- ❖ 4.0" reflective stripe within the fire body perimeter extrusion Color of stripe to be determined by Fire Department.
- Red / Yellow Chevron pattern reflective striping on rear vertical skirt of fire body.

#### ~ APPARATUS LETTERING ~

Fire Department specific lettering shall be provided on the apparatus as directed by the Fire Department.

### **OPTIONAL FINANCING -**

Financing shall be provided as an Option for:

- 5 years Lease Purchase with monthly payments
- 8 years Lease Purchase with monthly payments
- 10 years Lease Purchase with monthly payments.

\*NOTE: 2023 F-450 Cab & Chassis (Race Red in Color) is being furnished by the Local Fire Department.