INVITATION TO BID

1 3000-GALLON TACTICAL PUMPER TENDER
Pumper Tender Bid 2025-01339
Pages 1 through 21

JUNIPER FLAT RURAL FIRE PROTECTION DISTRICT
53333 RESERVATION Rd. Maupin, Oregon 97037

Date Issued: March 12, 2025
Date Due: March 31, 2025, at 6:00 PM local
Administered By: Chief Eugene Walters

INVITATION TO BID

The Juniper Flat Rural Fire Protection District is now accepting sealed Bids for a Custom-Built 3000-gallon TACTICAL- Pumper-Tender Fire Truck built on a 2026 Freightliner 114SD plus, tandem axle truck chassis which will be supplied by Juniper Flat Rural Fire Protection District.

This Custom-Built TACTICAL Pumper-Tender Fire Truck is designed as a 1st out apparatus for emergency responses to operate on steep and curvy roads, rural dirt roads, off road in adverse terrain in North Central Oregon. It will provide Initial Attack and Structure Protection during Wildland Fires with 300 gpm/100 psi front monitor and 8 bumper nozzles supplied by a gasoline power auxiliary pump. A 3000-gallon, ¾" thick polypropylene water tank will provide a water supply. An NFPA 1000 GPM pump with a Gasoline power Air Compressor for the CAFS enclosed in heated compartments will provide Structure Fire Attacks with associate equipment and hoses including a 1250 gpm deck gun in all weather conditions.

A copy of the Invitation to Bid specifications may be obtained by visiting the district's website at www.juniperflatrfpd.com or by contacting Fire Chief, Eugene Walters at Eugene@Juniperflatrfpd.com with: "ITB request: 2025-01339" in the subject line.

Bids are required to be submitted and received by March 31st 2025 at 6:00 P.M PST Local time. Responses received after the deadline will not be accepted. The district will open and evaluate the bids on April 1st 2025. The district will award the bidder on April 9th 2025

Seal bids must be clearly marked on front of envelope "Pumper Tender Bid No: 2025-01339,
Seal Bid must be signed, dated and sent to attention: Eugene Walters, at Juniper Flat RFPD, 53333 Reservation Rd., Maupin, Oregon 97037 by certified mail, one day UPS or Fed Ex

The Juniper Flat Rural Fire Protection reserves the right to waive informalities and to reject any and all bids

The district reserves the right to withdraw and cancel this solicitation at any time, without liability to any respondent or prospective respondent.

INVITATION TO BID INSTRUCTIONS TO BIDDERS

The Juniper Flat Rural Fire Protection District is accepting Sealed bids for the furnishing of all necessary labor, materials and other equipment for a Fire Apparatus as outlined in the following specifications. Bidder shall submit a signed and dated detail proposal by March 31st 2025 at 6:00 PM Local time. Bids will be addressed and submitted in sealed envelopes clearly marked with **Pumper Tender Bid 2025-01339** stated on the front of the bid envelope. Bids will be received at Juniper Flat Rural Fire Protection District, Station 1, 53333 Reservation Rd. Maupin, Oregon 97037 until 6PM March 31th by certified mail, UPS, FedEx,

The manufacture shall be the prime Bidder. The Bidder must have in operation a factory adequate for the production of the apparatus as specified herein. All bidders shall have been in business for a minimum of ten (10) years. Bidders must state in their bids in calendar days when the apparatus will be completely built and furnished with equipment as stated in the bid spec's. This date is also when the apparatus is ready for the fire department to inspect, approve and take ownership. The number of days shall be subject to adjustment after award, due to delays caused by strikes, riots, acts of God, or other causes beyond the control of the contractor, limitations or restrictions by any governmental agency having jurisdiction over the subject matter of the contract.

Manufacturer's specifications shall be submitted in the same order as the published specifications, to facilitate effective proposal review by the fire department

Under each heading of the fire department apparatus specifications, the bidder will state YES ☐ or NO ☐ indicating compliance with the specifications.

All deviations, no matter how slight, will be clearly explained on a separate cover sheet entitled "EXCEPTIONS TO SPECIFICATIONS".

VEHILCE ACCEPTANCE AND DELIVERY

Juniper Flat Rural Fire Protection District shall pick up the fire apparatus at the manufacturing facility and shall supply evidence of sufficient insurance coverage to transport the vehicle. During the inspection prior to accepting the new apparatus at the manufacture facility the project manager will describe the basic build and operation of the apparatus and provide any road and/or equipment test data that was perform after completion.

PAYMENT TERMS

Full payment for the apparatus shall be made at time the fire district inspects, approves and take ownership of the completed fire apparatus.

PENALTY CLAUSE

Non-delivery by the contract's specified date, or other vendor nonperformance, will require a penalty that is no less than $100 per day until such time that the vehicle, compliant with the terms of the contract, has been accepted by the recipient.

AMERICAN OWNED

Bidding manufacturers shall be wholly owned and operated by United States of America corporations or entities. No bids will be considered from manufacturers that are fully or partially owned or operated by outside or foreign entities.

JUNIPER FLAT RURAL FIRE PROTECTION DISTRICT (JF RFPD), AS THE PURCHASER WILL NOT ACCEPT ANY BIDS, WHICH DO NOT MEET THESE SPECIFICATIONS, IS THE SOLE DECIDER TO DEEM WHICH BID IS IN THE BEST INTEREST AND MOST ADVANTAGEOUS TO THE FIRE DISTRICT AND WILL NOT BE BOUND TO ACCEPT THE LOWEST BID.

EXCEPTIONS

These specifications are based upon design and performance criteria, which have been developed by the fire department from of tactical experience, historical incidents, extensive research and careful analysis. Subsequently these specifications reflect the only type of fire apparatus that is acceptable. Therefore, major exceptions to specifications will not be accepted.

PROPOSE

This Custom-Built TACTICAL Pumper-Tender Fire Truck is designed as a 1st out apparatus for emergency responses to operate on steep and curvy roads, rural dirt roads, off road in adverse terrain in North Central Oregon. It will provide Initial Attack and Structure Protection during Wildland Fires with 300 gpm/100 psi front monitor and 8 bumper nozzles supplied by a gasoline power auxiliary pump. A 3000-gallon, ¾" thick polypropylene water tank will provide a water supply. An NFPA 1000 GPM pump with a Gasoline power Air Compressor for the CAFS enclosed in heated compartments will provide Structure Fire Attacks with associate equipment and hoses including a 1250 gpm desk gun in all weather conditions.

MINIMUM SPECIFICATIONS

The following Specifications are beneficial to the intended operation of the apparatus. The Specifications are to provide for a custom-built 3000-gallon **TACTICAL- Pumper Tender Fire Apparatus** to be built and installed by the MANUFACTURER on a 2026 Freightliner 114SD plus, tandem axle truck chassis that is to be supplied by JUNIPER FLAT RURAL FIRE PROTECTION DISTRICT. The custom-built service maintenance type body will be fabricated from heavy channel iron frame, premium sheet steel with welded seams. The apparatus will be painted to match the fire department supplied chassis. No exceptions to these minimum standards will be allowed relating to gauge, alloy, and type of metal. Only the Fire Chief may approve modifications and/or exceptions to these minimum specifications.

PREPAYMENT BOND

YES ☐ or NO ☐

Due to the Fire District is supplying the truck chassis, a prepayment bond is required.

COMPLIANCE TO STANDARDS:

YES ☐ or NO ☐

This vehicle shall meet or exceed State and Federal Motor Vehicle Standards. This vehicle shall be considered 100% "compliant" to applicable NFPA #1900 Standards for Aircraft Rescue and Firefighting Vehicles, Automotive Fire Apparatus, Wildland Fire Apparatus, and Automotive Ambulances.

APPARATUS DIMENSIONS

YES ☐ or NO ☐

The apparatus shall have approximately the following dimensions:
Overall length 29.5 ft
Height 10ft
Approach angle 25 Deg
Departure angle 25 Deg

FRAME

YES ☐ or NO ☐

There is to be **no exception** to the frame material (Steel only ~ NO aluminum).
The long sills in the apparatus frame (main stringers) will be constructed with 6-inch 9-lb. per foot steel channel. When possible, full-length channels are to be used, and steel cross channels (3-inches) are to be securely welded in place using fabrication jigs for accuracy.

The frame design will be welded to allow the lowest center of gravity possible for the tank. The tank will be recessed into the deck of the apparatus.

The main frame will be painted to prevent rust between the deck and any other part of the structure before it is welded to the frame.

There will be four (4) mounting plates located one (1) each corner of the fire bed which allows the bed to flex in rough terrain. Detailed specifications and design shall be included and submitted with the manufacture bid.

3 x 10 REAR BUMPER

YES ☐ or NO ☐

A custom fabricated, heavy-duty steel rear bumper will be made of 3-inch x 10-inch x 1/4-inch rectangular tubing. The rectangular tubing will be laid flat on the ten-inch side. This is coated with a bed liner product. A steel plate will be welded to the back edge of the tubing to enclose the area between the tubing and the underneath side of the bed. The bumper will extend 7-inches from the back of the rear rail The bumper assembly will be mounted directly to the truck and bed frames and have a receiver attached to the tubing.

The bumper is equipped with four (4) flush mounted, red LED turn signal lights, and two (2) clear LED back up lights, completely sealed in a Lexan housing and lens. These lights will be cut into the bumper at a 45-degree angle, with 6-1/2-inch 90-degree centers. There will be three (3) flush-mounted rectangular mini thin line sealed LED clearance lights completely sealed and waterproof mounted in a rubber grommet. The mini thin sealed LED's will be installed in the center to indicate an 8-foot or wider vehicle, which meets DOT standards.

BODY

YES ☐ or NO ☐

The body is to be constructed of a least 12-gauge premium sheet steel with brake formed and welded seams. The completed apparatus structure is to be free of sharp edges and exposed nuts and bolts that could cause injury. No aluminum is incorporated into the super structure of this bed.

SURFACE PREPARATION & CORROSION PREVENTION

YES ☐ or NO ☐

The steel superstructure will be sand blasted to remove any mill scaling

During fabrication, any bare steel not accessible after assembly will have two coats of primer applied before assembly to control corrosion. All bare steel will be coated with the appropriate primer/sealer and polyurethane acrylic enamel, or equivalent finish to match the color of the chassis/cab provided.

Body assemblies that cannot be finish-painted AFTER assembly, are to be finish-painted BEFORE assembly. Prior to applying primers and color finish, all removable items such as handrails, brackets, compartment doors, door hinges, trim, etc. shall be removed and painted separately to insure finished paint behind all mounted items.

All dissimilar metals are protected with ECK corrosion protection or equivalent.

CORASHIELD UNDERCOATING

YES ☐ or NO ☐

The underneath side of the fire bed will be coated with Corashield or equivalent to prevent chipping, cracking or marring of painted surfaces.

3000-GALLON POLY TANK

YES ☐ or NO ☐

The tank shall be a 3000-gallon capacity wet side and will be manufactured from three-quarter inch (3/4") polypropylene material. The tank will be black in color.

The tank will feature a sump located on the bottom between the frame rails of the truck with a 4-inch drain in the sumps bottom. The volume of the sump will not be figured into the tanks 3000-gallon capacity. The sump will allow for 100% water usage.

The tank will incorporate cross and lengthwise baffles internally. They will be engineered into the design to minimize the effects of water slosh. A fill tower approximately 16-inch x 16-inch x 8-inch will be located at the front of the tank in the center. There will be a 4-inch overflow pipe located in the fill tower plumbed through the tank to the bottom of the sump. Other features include a hinged lid on the fill tower, stainless steel strainer basket, anti-swirl plate, 4-inch suction fitting, suction tube plumbed to the sump, removable lifting eye, and a limited lifetime warranty.

TOP TANK STORAGE

YES ☐ or NO ☐

The tank front and sides will be extended up to allow the storage of 600 feet of laid flat 5" LDH in 50 ft lengths of hose with Storz fittings and space for 6"x10' hard suction hoses. The top tank hose bed storage for 5" LDH with Storz fittings will be covered with a rigid aluminum door or doors

TANKVISION WATER LEVEL INDICATOR

YES ☐ or NO ☐

The apparatus will feature a digital tank water level indicator with a true 180 degree viewing angle with super bright LED's and built-in diagnostic "text" messages for easy troubleshooting. The indicator will be installed on the driver's side of the pump module. Foam in the tank will not affect this light indicator.

MINI SLAVE LED WATER LEVEL INDICATOR (TWO (2) LOCATIONS)

YES ☐ or NO ☐

There will be Two (2) mini slave LED water level indicators installed on the apparatus. Each feature four (4) red mini-LEDs indicating the water level status. One (1) located at the front of the apparatus near the remote auxiliary pump controls and One (1) located inside the cab mount in the custom-built console.

FOUR (4) LIGHT LED TANK LED INDICATOR (TWO (2) LOCATIONS)

YES ☐ or NO ☐

Four (4) LED Tank Status Lights; One (1) set includes- One (1) green, One (1) blue, One (1) amber and One (1) red light. They will provide bright indication of water tank status. Mounted vertically, located on the passenger side of pump module and at the rear of the apparatus. This option will also include Two (2) mini slaves. One (1) located at the front of the apparatus near the remote auxiliary pump controls and One (1) located inside the cab mount in the custom-built console.

FIRE PUMP SPECIFICATION

YES ☐ or NO ☐

A Hale model MBP1000 single stage, centrifugal, PTO driven fire pump shall be provided and installed. The pump shall be of a size and design to mount on the chassis of a commercial and custom truck, and have the capacity of 1000 gallons per minute (U.S. GPM), NFPA 1901 rated performance

Pump body shall be vertically split on a single plane, for easy removal of impeller, clearance rings and mechanical seal assembly, from the pump without disturbing the mounting of the pump in the chassis. As an alternative, it must be possible to remove all these items without disturbing the pump body, manifolds and associated pipe work.

Pump impeller shall be hard, fine grain bronze of the mixed flow design, accurately machined and individually balanced. The vanes of the impeller intake eye shall be hand-ground and polished to a sharp edge. The impeller to be of sufficient size and design to provide ample reserve capacity. The impeller shall be keyed to the pump shaft

The pump shaft shall have only one mechanical seal. The mechanical seal shall be a self-adjusting mechanical type, incorporating a rotating spring-loaded hard carbon ring running against a stationary silicon carbide seat with a PTFE backup ring that provides best in class reliability. The seal shall be pre-loaded during pump assembly and shall require no maintenance or adjustments during its life. (No exceptions.)

Gearbox construction

The gearbox as well as the pump shall be constructed and tested at the pump manufacturer's factory. Gearbox shall be of sufficient size to withstand the torque of the engine in pump operating conditions. The gearbox shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature. All gears both drive and pump, shall be of highest quality electric furnace chrome nickel steel. Bores shall be ground to size and teeth integrated and hardened, to give an extremely accurate gear for long life, smooth, quiet running, and higher load carrying capability. An accurately cut helical high contact design shall be provided. The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine, transmission and power take-off selected.

Priming Pump

The priming pump shall be a positive displacement, oil-less rotary vane electric motor driven pump conforming to the requirements of NFPA 1901. The pump body shall be manufactured of heat-treated anodized aluminum for wear and corrosion resistance. The pump shall be capable of producing a minimum 24 Hg vacuum at 2000 feet above sea level. The electric motor shall be a 12 VDC totally enclosed unit. The priming pump shall not require lubrication. The priming pump shall be operated by a single push-pull control valve mounted on the pump operator panel. The control valve shall be of all bronze construction.

PUMP MODULE

YES ☐ or NO ☐

The pump module body shall be a self-supported structure mounted independently from the body and chassis cab. The pump module shall be constructed entirely of extrusions and aluminum plate. The framework shall be formed from beveled aluminum alloy extrusions and shall be electrically seam welded at each joint using 5356 aluminum alloy welding wire. The main framework to be 3.00 x 3.00 x 0.18, or 3.00 x 1.5 webbed 0.25, 6063-T5 aluminum extrusion. The pump module design must allow normal frame deflection through isolation mounts without imposing stress on the pump module structure or side running boards. The pump module shall consist of a welded framework, properly braced to withstand chassis frame flexing. The pump module support shall be bolted to the frame rails of the chassis.

The pump module panels shall be 14 gauge brushed stainless steel. The panels shall be an integral part of the module.

Pressure Governor, main pressure gauges and discharge line pressure gauges incorporated with flow meters will be located on the driver’s side of the pump module.

AUXILIARY PUMP

YES ☐ or NO ☐

The auxiliary pump shall be a Darley HGE 37V powered by a reliable Briggs & Stratton 37HP, electric fuel ignition (EFI), OHV, 4 cycle, air cooled gas engine, electric start, flywheel alternator, fuel and oil pump filters.

The pump will use fuel from a portable 12-gallon gasoline fuel tank. This application will have an electric fuel pump installed.

The auxiliary pump performance from the tank, shall be 100 GPM @ 195 PSI, 300 GPM @ 105 PSI, and 550 GPM @ 30 PSI. The pump will have a hand priming system as well as a 1/4-inch full time bypass line installed to prevent pump overheating. The impeller is built from high strength corrosion resistant bronze (fully enclosed). The wear rings are long wearing bronze. The gear drive for the pump is built of helical gears. The aluminum gear case and engine adapter have been sulfuric anodized to help prevent corrosion. When required to restore auxiliary pump to original performance, they are simple to change. The shaft sleeve is made of high strength stainless steel. The shaft seal is a spring-loaded mechanical seal. The pump will have a 4-inch inlet and 2-1/2-inch discharge fitting.

The auxiliary pump will be mounted at the rear of the apparatus, on four (4) 1-1/2" x 5/8" thick rubber pads, behind the tank.

The auxiliary pump will have a suction manifold built with 4" schedule 40 carbon steel, attached to the pump volute with a 4" Victaulic. (There are a total of two (2) valves on the suction manifold for the pump.)

The suction manifold line used for drafting and hydrant use is to be 2-1/2-inches. Installed will be a 2-piece, full port, quarter turn valve, suction adapter, 30-degree turn down and chrome plug with chain.

The suction manifold line used for sucking water from the water tank is to be 4-inch, EPDM, spiral-plied synthetic fabric, wire helix reinforced hose. Installed will be a 4-inch electric butterfly valve between tank and suction manifold. The 4-inch electric butterfly valve will be controlled by a SP/ST rocker switch installed in the custom-built console located in the cab.

The pump shall be equipped with a diaphragm type hand primer at the rear of the apparatus near the auxiliary pump. There will be a quarter turn isolation valve mounted on the pump volute plumbed with 3/8" DOT line to hand primer.

The auxiliary pump will be operated by two remote mounted control panels. One (1) at the front of the apparatus positioned in a way that the controls will be easily accessible and protected for debris. One (1) will be located inside the cab mounted in the custom-built console. These panels will include an electric momentary DPDT throttle switch, ignition switch, starter button, a 2.5-inch liquid filled discharge gauge and an oil pressure warning light.

ENGINE DRIVEN AIR COMPRESSOR

YES ☐ or NO ☐

An oil injected, rotary screw, 70 CFM air compressor will be installed at the rear of the apparatus to provide air for CAFS.

The air compressor will be powered by a reliable Briggs & Stratton 37HP, electric fuel ignition (EFI), OHV, 4 cycle, air cooled gas engine, electric start, flywheel alternator, fuel and oil pump filters and use fuel from the portable 12-gallon gasoline fuel tank. This application will have an electric fuel pump installed.

Airflow & pressure will be constant & continuous, eliminating the need for an air tank.

Automatic shutdown systems will protect against low engine oil and high temperature of air end.

Temperature gauge, pressure gauge & rpm/hour meter will be mounted on control panel near compressor.

The compressor control panel will be mounted on the custom-built console located inside the cab.

1601 FOAMPRO FOAM SYSTEM

YES ☐ or NO ☐

The apparatus shall be equipped with an electronic, fully automatic, variable speed, direct injection, and discharge side foam proportioning system. The system shall be capable of handling Class A foam concentrate. The foam proportioning operation shall be based on direct measurement of water flows and remain consistent within the specified flows and pressures. System must be capable of delivering accuracy to within 5% of calibrated settings over the advertised operation range when installed according to factory standards. The system shall be equipped with a control module suitable for installation on the pump panel. Incorporated within the motor driver shall be a microprocessor that receives input from the system flowmeter, while also monitoring foam concentrate pump output. This compares values to ensure that the operator's preset is proportional to the amount of foam concentrate injected into the discharge side of the fire pump.

A paddlewheel-type flowmeter shall be installed in the discharge system specified to be "foam capable." A simulated flow feature shall be incorporated into the motor driver to simulate an approximate flow value of 100 gpm. This feature is to be engaged or disengaged with a momentary switch and will automatically disengage when the main system switch is turned off.

The control module shall enable the pump operator to:

- Activate the foam proportioning system
- Select proportioning rates from 0.1% to 1.0%
- See a "low concentrate" warning light flash when the foam tank runs low. In two minutes, if foam concentrate is not added to the tank, shut the foam concentrate pump down.

A 12-volt electric motor driven positive displacement plunger pump shall be provided. The pump capacity shall be from 0.1 gpm (0.38 L/min) to 1.0 gpm (3.8 L/min) at 200 psi (13.8 BAR) with a maximum operating pressure up to 400 psi (27.6 BAR). The pump shall have the capability to draw 3 ft. of lift. The system will draw a maximum of 30 amps @ 12 VDC or 15 amps @ 24 VDC. The motor shall be controlled by the microprocessor (mounted to the base of the pump). It shall receive signals from the control module and power the 1/3 hp (.25 Kw) electric motor in a variable speed duty cycle to ensure that the correct proportion of concentrate is injected into the water stream. A full flow check valve shall be provided in the discharge piping to prevent foam contamination of fire pump and water tank. A 12 psi
(.83 BAR) opening pressure check valve shall be provided in concentrate line.
A separately mounted switch, mounted in the cab, interfaces with digital control head allowing remote activation of the proportioner. Designed for in-cab pump & roll operations.
The foam system shall feature a remote-mounted simulated flow switch with recirculation valve.
A foam flush valve shall be incorporated into the system, allowing operator to direct pressurized water through foam pump to clean-out any slugs or debris.
Components of the complete proportioning system as described above shall include:

- Operator control module
- Paddlewheel flowmeter
- Pump and electric motor/motor driver
- Wiring harnesses
- Low level tank switch
- Foam tank
- Foam injection check valve
- Main waterway check valve

FOAM BATCH MIX WITH CIRCULATION

YES ☐ or NO ☐

Installed will be a transfer pump allowing for batch mixing foam into the main water tank. It will draw foam from a foam Batch mix tank separate from the main CAFS foam tank and inject into a 1" discharge line plumbed from the auxiliary pump to the water tank with a switch located in the cab.

The 1" discharge line from the auxiliary pump to the water tank, will feature a 1" valve controlled by a 12VDC actuator, operated by a switch installed in the cab. The 1" line will act as a circulator mixing the foam through the water tank by drawing water from the tank and recirculating it back into the water tank with foam mixed in.

FOAM TANKS

YES ☐ or NO ☐

The apparatus will be equipped with two (2) foam tanks. One labeled BATCH and the 2nd labeled CAFS. Location to be determined by manufacturer. One (1) 15 to 30 Gallon tank will supply the foam for the 1601 Foam Pro for CAFS system, one (1) 8 to10-gallon tank gallon tank will supply the foam for BATCH mixing. Each foam tank will have a foam fill system that allows the operator to draw foam from a foam bucket and fill the foam tank, removing the need to pour foam from a bucket into the foam tank. The foam fill system includes a 12VDC transfer pump operated by a momentary switch with a hose and stainless-steel tube which length, at a minimum, will allow the operator to stand on the ground to transfer foam into the foam tank.

CAFS System

YES ☐ or NO ☐

The CAFS System will utilize the pressurized water discharged from the Auxiliary pump. A measured amount of foam solution will be injected into the pressurized water based off the rate of flow with a check valve to prevent any foam from back flushing into the water source. The compressed air will be introduced into the water and foam solution at a rate of 70 CFM and will not use any moving, mechanical or electrical processes.

The CAFS System will have safety measures incorporated into it, preventing the air from ever entering the system without having a pressurized water and foam solution.

The CAFS System works in conjunction with the foam system.

The air is produced by a rotary screw, which is certified at 70 CFM and 100-PSI. The foam injection system that is required is a Foam Pro 1601.

The CAFS System will be a compact design, which allows for easy operation and minimal maintenance.

The CAFS System will be simple and dependable with No balancing valves, tweaking, or pressure adjustments. The CAFS system will generates a fire retardant without the need for balanced static water and air pressures. Water pressure can be set from 100 to over 200 PSI while air pressure can range from 100 to 175 PSI without stopping the flow of the fire retardant. The fire retardant will be generated inside the CAFS System and is properly mixed when it enters the hose. There is no minimum hose length needed to mix air and water/foam solution. Simultaneous or independent flows of air, water, foam solution water, or compressed air foam are available at any time during operation. Fluctuating pressure from the opening of any line, hydrant or air, will not affect the flow of the Compressed Air Foam.

The CAFS System will be constructed of stainless steel, with no moving parts to wear out, and backed by a limited lifetime warranty. The Foam generating device will have a 10-year warranty with the apparatus on which it is originally installed, to be free from defects in materials or workmanship under normal operating conditions.

AKRON VALVE PACKAGE

YES ☐ or NO ☐

All discharge valves shall be Akron Heavy-Duty Swing-Out controlled from the pump operator's panel unless otherwise specified.

The Akron Swing-Out Heavy-Duty valves are designed for operating pressures to 250 psi (17 bars). All valve packages shall meet current NFPA 1901 Standards for valve operating speeds when controlled by gear, electric actuator, or slow close device.

REAR TANK FILL PRECONNECT

YES ☐ or NO ☐

Two (2) 2-1/2” quarter turn valves will be installed at the rear of the tank. This will allow for the filling of the water tank. They will have a 2-1/2” full-flow check valve installed on each location to prevent back flow contamination to water source.

Two (2) compartments will be located at the rear of the apparatus for the storage of hose preconnected to the tank fill valves. Each compartment will hold a minimum of 15-feet of 2-1/2” soft fill hose.

MASTER INTAKE

YES ☐ or NO ☐

The pump module will feature two (2) 6-inch master intakes, one per side. They will include a strainer and chrome cap.

MASTER INTAKE VAVLE

YES ☐ or NO ☐

An Akron Brass Style 7982 Intake Valve shall be provided. The Intake Valve shall be constructed of lightweight, corrosion-resistant, hard-anodized aluminum and stainless steel. To protect against corrosion, the casting shall be coated with a powder coat finish and all components on the wet side of the valve shall be constructed from stainless steel. The fire truck intake valve shall have an adjustable (50–250 psi) relief valve, ¾” air bleeder that discharges at the same location as the pressure relief valve, 30° down angle inlet with adjustable rotational positions, a stainless ball sector, durable non-stick seat, and a minimum 4 ½” diameter waterway. A position indicator shall be included to indicate the position of the ball. A 12.5” diameter handwheel shall be included to operate valve open and close functions. The valve shall not exceed 7 psi friction loss at 2000 GPM and 14.875” depth. Inlet shall be 5” Storz and outlet will be 6” NST female. Product must carry a 10-year warranty against corrosion and manufacturer defects.

SUCTION, 2-1/2" LEFT FRONT PANEL

YES ☐ or NO ☐

One-(1) 2-1/2" swing operated ball valve shall be installed at the pump panel, left front plumbed to the suction side of the pump with 2-1/2” piping, 2-1/2" FNST chrome inlet swivel, chrome plug with chain, and drain valve.

NO. 1 CROSSLAY, 1-1/2" DOUBLE LAY

YES ☐ or NO ☐

One (1) pre-connected crosslay compartment shall be provided on apparatus behind the chassis at the front on top of the pump module accommodating 200' of 1-3/4" double jacket hose. Installed will be a discharge pressure gage and flow meter.

One-(1) 2” ball valve with mechanical 1-1/2” swivel shall be installed. The valve shall be plumbed to the crosslay with 1-1/2" high-pressure flexible hose and/or stainless-steel couplings.

NO. 2 CROSSLAY, 1-1/2" DOUBLE LAY

YES ☐ or NO ☐

One-(1) pre-connected crosslay compartment shall be provided on the apparatus on top of the apparatus behind the No. 1 crosslay accommodating 200' of 1-3/4" double jacket hose. Installed will be a discharge pressure gage and flow meter.

One-(1) 2” ball valve with mechanical 1-1/2” swivel shall be installed. The valve shall be plumbed to the crosslay with 1-1/2" high-pressure flexible hose and/or stainless-steel couplings.

CROSSLAY DIVIDER

YES ☐ or NO ☐

One (1) crosslay hose bed divider shall be provided manufactured from 1/4" (.250") smooth aluminum plate, extruded aluminum base mounted in an extruded track for horizontal adjustment, with radius corners, and DA sanded to prevent damage to the hose.

CROSSLAY COVERS

YES ☐ or NO ☐

There shall be crosslay covers provided with the apparatus. The top of the cover shall by rigid aluminum. The covers prevent hose from inadvertently deploying during normal operations meeting the current NFPA requirements.

DISCHARGE, 2-1/2" LEFT FRONT PANEL

YES ☐ or NO ☐

One-(1) Akron 2-1/2" Heavy-Duty ball valve with drain shall be installed at the pump module, left front, plumbed to the discharge side of the pump controlled from the pump operator's panel with discharge pressure gage and flow meter.

DISCHARGE, 2-1/2" LEFT REAR PANEL

YES ☐ or NO ☐

One-(1) Akron 2-1/2" Heavy-Duty ball valve with drain shall be installed at the pump module, left rear, plumbed to the discharge side of the pump controlled from the pump operator's panel with discharge pressure gage and flow meter.

DISCHARGE, 2-1/2" RIGHT FRONT PANEL

YES ☐ or NO ☐

One-(1) Akron 2-1/2" Heavy-Duty ball valve with drain shall be installed at the pump module, right front, plumbed to the discharge side of the pump controlled from the pump operator's panel with discharge pressure gage and flow meter.

DISCHARGE, 2-1/2" RIGHT REAR PANEL

YES ☐ or NO ☐

One-(1) Akron 2-1/2" Heavy-Duty ball valve with drain shall be installed at the pump module, right rear, plumbed to the discharge side of the pump controlled from the pump operator's panel with discharge pressure gage and flow meter.

DISCHARGE, 2-1/2" FRONT BUMPER

YES ☐ or NO ☐

There shall be two (2) 2-1/2” NH Male discharges plumbed at the front bumper with Akron 2-1/2" Heavy-Duty ball valves and 2-1/2” continuous swiveling elbows installed at the discharge’s location.

DISCHARGE, 1-1/2" REAR BUMPER

YES ☐ or NO ☐

There shall be at least one (1) 1-1/2” NH Male discharges plumbed at the rear of the apparatus with Akron 1-1/2" Heavy-Duty ball valves

DISCHARGE, 2" PRE-CONNECT FRONT BUMPER

YES ☐ or NO ☐

There shall be one (1) 2” discharge pre-connect on the front bumper provided. Pre-connected for storage of 200’ of 2” double jacket hose with 1-1/2” NH fitting. 1-1/2” NH Male adapter installed at the valve discharge location. CAFS capable.

DECK GUN PLUMBING, 3"

YES ☐ or NO ☐

One-(1) Akron 3" Heavy-Duty (Slo-Close) inline valve with 3/4” drain shall be plumbed to the Deck Gun discharge outlet with 3” pipe terminating 3" FNPT x four-(4) bolt flange push-pull controlled at the pump operator's panel with discharge pressure gage and flow meter.

MONITOR

YES ☐ or NO ☐

The 1250 gpm (4800 lpm) rated monitor is to be an all-electric, single waterway monitor constructed of lightweight Pyrolite. The monitor shall have a 3” (75 mm), 150lb flanged inlet and 2-1/2” (65 mm) NH outlet. The monitor shall have cast-in turning vanes in each elbow. The monitor shall have fully enclosed motors and gears with manual overrides for both horizontal and vertical rotation and may be operated simultaneously. The monitor is not to exceed 15” (381 mm) high and 11-5/8” (295 mm) wide. The vertical travel shall be from 45° below to 120° above horizontal with adjustable stops at -15°, +45° and +90. The horizontal rotation shall be 355° with physical stops at ±45°, ±90°, ±135° and at ±157°. The monitor shall have absolute position feedback to provide programmable soft stops anywhere within the physical travel range. The control system shall also provide programmable oscillation and obstacle avoidance functions. These programmable features shall be capable of being copied and cloned for fast installment on other monitors using a USB stick. The electronic control system shall be attached to the inlet base of the monitor and be totally encapsulated to prevent moisture intrusion and use of locking electrical connectors for all motor control outputs and control inputs. The control system shall have one environmentally sealed USB port to facilitate control system updates. The control system shall receive commands from J1939 CAN network control devices to control elevation, rotation, nozzle pattern, and electric valve open/close. The control system shall have a built-in wireless transceiver to facilitate operation from wireless remote-control devices.

An Akron model # 2499 stack tip set: 1 3/8" x 1 1/2" x 1 3/4" x 2" will be supplied by manufacture

MONITOR RISER

YES ☐ or NO ☐

An electric riser shall be installed on the pump module for the deck gun to be able to nest below the top of the cab for transport and be raised above the cab for operation. It will have a 3”-waterway with 12” of extension. It will be actuated with 12VDC controller at the driver’s side of the pump module.

DISCHARGE ELBOWS

YES ☐ or NO ☐

All 2-1/2" side discharge outlets shall terminate with chrome-plated 30-Degree elbows with 2-1/2" MNST threads, chrome vented cap and chain.

Caps shall automatically release pressure in the discharge outlet before the threads are completely disengaged unless the outlet and the cap are equipped with drains or bleeder valves.

STAINLESS STEEL PLUMBING

YES ☐ or NO ☐

All plumbing on the pressure side of the pump will be Stainless Steel. All other plumbing will be high-pressure pipe or hose.

REMOTE FORESTRY MONITOR

YES ☐ or NO ☐

The 300gpm rated monitor is to be an all-electric single waterway monitor constructed of lightweight Pyrolite. The monitor shall have cast-in turning vanes in each elbow. The monitor shall have fully enclosed motors and gears with manual overrides for both horizontal and vertical rotation and may be operated simultaneously. The monitor is not to exceed 13 3/16" high and 11 9/16" wide. The vertical travel shall be from 45° below to 90° above horizontal with adjustable stops at -20° and +45°. The horizontal rotation shall use fast speed ratio gears, be 320° with adjustable stops at ±90°. The control system electronics shall be integrated with the monitor wiring harness. The control system shall use sealed, locking connectors for the monitor and nozzle motors. Two additional sealed, locking connectors shall be supplied for input power/electric valve control and J1939 CAN bus interface. A sealed USB connector shall be provided for updating control system firmware. All electrical connectors shall be minimum IP65 rated.

A 1” smooth bore nozzle will be installed on the monitor capable of flowing a minimum of 300 GPM @ 100 PSI. Forestry Monitor will be mounted in the grill guard on the front of the truck.
Monitor will be controlled by custom built joystick installed in console, located in cab with ON/OFF Bat handle toggle switch controlling water valve. The front forestry monitor will be CAFS capable.

FOUR (4) NOZZLE FRONT BUMPER SWEEPS

YES ☐ or NO ☐

There will be four (4) Elkhart NTS-C nozzles mounted at the front bumper with electric valve controls located in the cab or to fire department specifications. The valves come equipped with the following features: 316 stainless steel ball and stem, stainless steel hardware, fiberglass reinforced polypropylene, glass reinforced PTFE ball seats, FKM (Viton type) O-rings, 12-volt DC operation, 150-PSI maximum pressure and internally fused/automatic reset. This will be plumbed 1-inch all the way and will have foam capabilities. Location of sweeps shall be: one (1) each on the driver and passenger corners mounted 45 deg outward behind and above the bumper with two (2) towards the center behind and underneath the bumper mounted straight down

FOUR (4) NOZZLE REAR BUMPER SWEEPS

YES ☐ or NO ☐

There will be four (4) Elkhart NTS-C nozzles underneath the rear of the apparatus with electric valve controls located in the cab or to fire department specifications. The valves come equipped with the following features: 316 stainless steel ball and stem, stainless steel hardware, fiberglass reinforced polypropylene, glass reinforced PTFE ball seats, FKM (Viton type) O-rings, 12-volt DC operation, 150-PSI maximum pressure and internally fused/automatic reset. This will be plumbed 1-inch all the way. Location of sweeps shall be: one (1) each on the driver and passenger corners with two (2) towards the center mounted straight down. Each nozzle will have a brush protection guard built around them.

DIGITAL FLOWMETER

YES ☐ or NO ☐

Fire Research Insight model DFA400-025 digital flowmeter kit shall be installed monitoring the flow of water to the front bumper of the apparatus, mounted in the custom-built console located in the cab. The kit shall include a display module, paddlewheel flow sensor, sensor housing with a mount for 2-1/2" plumbing, and a 10' sensor cable. The flowmeter case shall be waterproof, manufactured of anodized machined aluminum, and have dimensions not to exceed 3 1/4" high by 3 1/4" wide by 2 1/2" deep. It shall have an LED display with super bright digits more than 1/2" high. Flow rate shall be displayed in GPM (Gallons Per Minute).

The flowmeter program features shall be accessed via push buttons on the front of the module. The program shall support multiple calibration points to correct for nonlinear flow, set points for high and low flow warnings, and summing and totalizing functions. The flowmeter shall be able to communicate with other FRC Insight flowmeters over a datalink.

HEATED PUMP CONTROL MODULE, REAR PUMP & COMPRESSOR COMPARTMENT

YES ☐ or NO ☐

The pump control module and exposed plumbing shall be sealed to contain heat. The rear auxiliary pump and compressor area shall have a structure to contain heat around the pump and plumbing. This structure shall be bolted onto the rear deck of the apparatus for removal during warm weather. Two (2) 25,000 BTU heavy duty space heaters will utilize the commercial chassis coolant to radiate heat through them. Incorporated into the heaters shall be 12VDC fans that will circulate air through the heavy-duty space heaters into the enclosed plumbing areas. One (1) 25,000 BTU heavy duty space heater shall be installed in the pump control module enclosure and one (1) 25,000 BTU heavy duty space heater shall be installed in the rear auxiliary pump area with controls mounted in the cab. The heaters shall be wired and controlled independently.

COMMERCIAL CHASSIS ELECTRICAL SYSTEM

YES ☐ or NO ☐

The commercial chassis electrical system will be provided as furnished by the original manufacturer. A customized interface will be provided and designed, so as not to disturb any of the required chassis' functions. The necessary interfaces will only be provided in areas where load management is allowed or with accessory components provided on the chassis.

12 VOLT BODY ELECTRICAL SYSTEM

YES ☐ or NO ☐

All electrical lines in the body will be protected by automatic circuit breakers, conveniently located to permit ease of service. Flashers, heavy solenoids, and other major electrical controls will be located together near the circuit breakers.

All wires will be color-coded, or function coded every 3-inches, easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram. Wiring will be carefully protected from weather elements and snagging. Heavy-duty loom will be used for the entire length.

To minimize the risk of damage from heat, wires running through the engine compartment area will be carefully installed and suitably protected.

BODY ELECTRICAL JUNCTION COMPARTMENT

YES ☐ or NO ☐

An electric junction compartment will be installed inside the chassis' cab for a controlled atmosphere environment. A removable panel will be provided for access to this compartment.

CUSTOM CONSOLE

YES ☐ or NO ☐

A custom-built console will be installed in the cab between the driver and passenger seat.
Installed in the console will be all emergency lighting, scene lighting if not controlled from dash switches, ground sweep switches, controls for the auxiliary pump and compressor, flow meter, and foam transfer switch. Three (3) 12-volt sources will be wired into console to allow for the charging of cell phones, I-pads, etc. The custom-built joystick for the forestry monitor will be incorporated into the console. Built directly above the console will be a level transparent cover designed to prevent accidental engagement of any switches while leaving adequate space for operator access. Incorporated in the cover will be a small door over the ground sweep switches to provide access. The entire cover will be constructed of clear UV stable polycarbonate sheeting that maintains glass-like clarity and is highly impact resistant. The Fire Chief will make the final decisions for the layout of the switches on the console

DEDICATED GROUNDS

YES ☐ or NO ☐

All grounds will terminate directly at the battery as well as in parallel at all lighting brackets which are frame grounded. Ground screws at lighting brackets shall be #10-24 stainless steel screws welded to the bracket, insuring a good ground to all electrical components even in the event of a ground failure. The bed will ground directly to the chassis frame using a ground strap fastened to a stainless-steel bolt that is welded to each frame. All electric components will in turn have a double or more ground termination.

MASTER DISCONNECT SWITCH

YES ☐ or NO ☐

A master disconnect switch will be installed for added electrical equipment. The switch will work through the chassis ignition system. When the key is turned on, it will allow the electrical system to operate for the apparatus.

APPROVED DOT RUNNING LIGHTS

YES ☐ or NO ☐

Approved dot running lights amber and red Mini Thin Line sealed LED marker/clearance lights will be installed by the manufacturer in Grommets for shock and vibration protection in addition to all other emergency lighting.

The rear bumper is equipped with four (4) flush mounted, red LED turn signal lights, and two (2) clear LED back up lights, completely sealed in a Lexan housing and lens. These lights will be cut into the sheet metal bumper plate at a 45-degree angle, with 6-1/2-inch 90-degree centers. There will be three (3) flush-mounted rectangular mini thin line red LED clearance lights completely sealed and waterproof, mounted in a rubber grommet. The mini thin sealed LED's will be installed in the center to indicate an 8-foot or wider vehicle, which meets DOT standards.

The rear of the apparatus will be equipped with two (2) flush-mounted rectangular mini thin line red LED clearance lights completely sealed and waterproof, mounted in rubber grommets. One (1) light will be installed per corner.

The side of the apparatus will be equipped with two (2) flush-mounted rectangular mini thin line LED clearance lights completely sealed and waterproof, mounted in rubber grommets. One (1) red light will be installed near the rear of the apparatus. One (1) amber light will be installed near the front of the apparatus.

EMERGENCY LIGHTING EQUIPMENT

YES ☐ or NO ☐

The light bar will be a Whelen 56" LED NFPA Justice Light bar (JE2NFPA) with a total of five (5) red, five (5) blue, and two (2) clear LED flashers. The lightbar will be mounted on top of the chassis towards the front with a brush guard constructed around the lightbar that will not impede the visibility of the emergency lights.
Configuration is Red/Blue/Red/White/Blue/Red/Blue/Red/White/Blue/Red/Blue.

The headlights (high beams) will be equipped for "wig-wags".

Six (6) Whelen M6 series lights will be installed on the apparatus (three (3) red, three (3) blue). Two (2) will be installed on the grill of the chassis. One (1) will be installed onto each front fender. Two (2) will be installed at the rear of the apparatus.

There will be six (6) Whelen 500 series grommet mounted lights installed on the apparatus three (3) red and three (3) blue. They will be mounted in the bed rail around the apparatus.

Two (2) Whelen 600 series ROTO-Beam will be mounted at the rear of the apparatus one (1) red and one (1) blue.

SIREN & SPEAKER

YES ☐ or NO ☐

The siren will be a Whelen model ALPHASL with an SA315P projector speaker mounted in the front bumper. The controls for the siren will be located in the steering wheel. This enables the driver to turn on, turn off and change tones without taking their eyes off the road.

GROUND LIGHTING

YES ☐ or NO ☐

There will be eleven (11) sealed LED clear lights illuminating the ground around the apparatus. The lights will turn on when the chassis parking brake is set and will have an independent switch in the cab to manually turn them on. One (1) each will be installed under the apparatus on each corner. One (1) each will be installed under the apparatus per side under the pump module. One (1) each will be installed under the apparatus per side at the front of the body. One (1) will be installed under the apparatus at the rear of the body. One (1) on each side will be installed to luminated the cab door steps

WORK LIGHTING

YES ☐ or NO ☐

Eight (8) clear LED work lights will be installed. The lights will turn on when the chassis parking brake is set and will have an independent switch in the cab to manually turn them on. Two (2) each will be installed on both sides of the pump module to illuminate the pump controls and the valving. Two (2) will be installed at the rear of the apparatus to illuminate the auxiliary pump and engine driven air compressor. Two (2) will be install on front bumper area to illuminate Auxiliary Pump controls and discharge valves.

SCENE LIGHTING

YES ☐ or NO ☐

There will be eight (8) ORBT9-108WQ-MB aluminum housed LED scene lights, with polycarbonate lens and dual spot/flood beams installed on the apparatus. Two (2) scene lights will be mounted in the front bumper/grill guard below the headlights, controlled by a switch in the cab. A total of four (4) scene lights will be mounted on sides of the body (two (2) driver side, two (2) passenger side). The switches will be located in the cab to control them independently. One (1) switch for the driver side and one (1) switch for the passenger side. Two (2) scene lights will be mounted on the rear of the apparatus with the switch located in the cab.

BACK-UP ALARM

YES ☐ or NO ☐

A solid-state back-up alarm will be provided and installed at the rear of the apparatus. The back-up alarm will activate automatically when the transmission is placed in the reverse gear and the ignition is "on".

SUPER AUTO-EJECT(S), 20 AMP

YES ☐ or NO ☐

There shall be provided one (1) super auto-eject type receptacle(s) model 091-55-120. A solenoid wired to the vehicle starter is energized when the engine is started. The receptacle shall be provided with a weatherproof cover. The cover shall be spring loaded to close, preventing water from entering when the shoreline is not connected. The super auto eject receptacle shall be mounted in a location specified by the department and is designed to accept a 120V AC from a shoreline plug.

The UL maximum allowable amperage draw on receptacles is generally 80% of their listed rating, for example, the 20-amp receptacle should not carry more than 16-amp continuous load. When adding the different amperage draws of the components being installed on the chassis, be sure to figure in whether the components shall draw a continuous load or intermittent load.

The Auto Eject cover(s) shall be a Kussmaul 091-55YW, yellow in color.

AIR SUPPLY SHORE LINE CONNECTION

YES ☐ or NO ☐

An air brake supply line will terminate on the driver side behind the cab with a ¼ turn valve and a air fitting of a male "M". This air supply shoreline connection will supply compressed air to the air brake system to charge the truck air brake system while in the station bay to ready the apparatus for service.

BATTERY CHARGER

YES ☐ or NO ☐

A Kussmaul EV series model #445-5393-0, low profile 20-amp battery charger shall be installed. The unit shall have 2-step charging, with bulk-float, and no overcharging feature. A remote single bar graph display Model #023-5353-1 shall be installed. This display shall include a "charger on" LED light and bar graph, which operates when charger is not in operation.

The charger shall have the following operational specifications:

1. 120/240 volts AC input at 3.1 amps
2. 12 volts DC output at 20 amps
3. Dimensions of: 2.32" high x 6.8" wide x 13.12" deep and weighs 5 lbs.

The unit shall include an auxiliary 15-amp output circuit with power source selector for operating accessory loads. The unit shall include front panel connections for a remote display and auxiliary loads. Charger output shall pose no interference with other electronic systems on the vehicle.

MUD FLAPS

YES ☐ or NO ☐

Mud flaps will be mounted behind the rear dual wheels. A bracket that is incorporated into the bed of the fire apparatus will hold the mud flaps.

REFLECTIVE STRIPING

YES ☐ or NO ☐

The side and rear of the body shall be marked with white 3M 4-inch reflective striping.

The chassis doors will be marked with white 3M reflective striping in a triple stripe design.

There will be 3M Scotchlite reflective tape (900 candlepower; 90-degree reflectivity) applied to the truck. (This tape complies with NHTSA and DOT-C2.) The tape will be located on the inside edge of each chassis door to increase visibility of open door at night. The tape will be applied to the rear bumper to increase visibility at night.

CHEVRON STRIPING

YES ☐ or NO ☐

3M Diamond Grade Panels with 6-inch red/lime alternating stripes in an inverted V pattern (meets NFPA 1900 standards) will be applied to the rear of the apparatus and front bumper where applicable.

LETTERING AND DECALS

YES ☐ or NO ☐

Lettering and decals shall match the current fleet

CUSTOM FRONT BUMPER/GRILLE GUARD WITHOUT WINCH

YES ☐ or NO ☐

Unitized construction of the front bumper will be fabricated with 3-inch x 10-inch rectangular tubing x 1/4-inch wall thickness mounted to the front frame rails of the commercial chassis. The grille guard protection will be fabricated with 2-inch x 11-gauge square steel tubing. The grille guard of the bumper assembly shall hinge forward allowing for the opening of the chassis hood. The front bumper/grille guard is designed not to break the pattern of the airflow to the chassis engine. All structural components are aligned with the construction of the chassis grille. This will not interfere with the chassis warranty.

The front bumper will feature two (2) Akron 2-1/2" heavy-duty valve discharge ports, one (1) each side of bumper with 2.5" NH male fittings to fill wildland fire trucks. Each discharge will have a storage compartment for a pre-connect 20 ft, 2" hose with 2.5" fitting. located behind the bumper, outside of the frame rail.

Located on the front bumper, a weather and debris protected control panel to operate the auxiliary pump which supplies the front bumper discharges. The lighted control panel will include a mini-slave, electric momentary DPDT throttle switch, ignition switch, starter button, a 2.5-inch liquid filled discharge gauge and an oil pressure warning light.

Built into the front bumper between the chassis frame rails will be a small compartment for the storage of hose adapters as well as a mounted spanner wrench set. The spanner wrench set shall be supplied by the manufacturer

Included in the front bumper there shall storage for one (1) 2" discharge of 200' of 2" double jacket hose preconnected hose with 1-1/2" NH fittings, nozzle and valve.

A 2" receiver tube, chrome tow hook, ground sweeps, scene lights, ground effect lights and forestry monitor shall be included into the front bumper/grille guard.

INTERCOM SYSTEM (2 WIRELESS HEADSETS)

YES ☐ or NO ☐

This intercom system shall consist of two (2) Firecom UHW-507.V2 wireless under-helmet headsets with red push and hold radio transmit buttons. The headsets have full duplex intercom functionality. A noise cancelling microphone with flex style boom rotates for left or right dress. The rechargeable battery operates for 24 hours on a full charge. The headsets shall include a headset charger and 12VDC charging cable. The headsets shall have up to 1600 ft. line of sight range. The headsets shall be supported by a Firecom WB505.V2 wireless base station and 5000D digital intercom. The base station shall be connected to the installed radios with an interface cable.

INSTALATION OF FD SUPPLIED RADIOS

YES ☐ or NO ☐

Two (2) radios and antennas supplied by the fire department, shall be installed in the chassis equipped storage compartment overhead in the cab.

FRONT INCORPORATED UNDERNEATH CRIBBING BOXES

YES ☐ or NO ☐

These boxes are located at the front of the apparatus, underneath the bed (one per side).
The dimensions of these boxes will utilize the most available space and be determined by engineering in final design. Each box is covered with bright aluminum tread plate and includes a bright aluminum tread plate door. White LED lights will be installed in each box, the lights will turn on when the chassis parking brake is set and will have an independent switch in the cab to manually turn them on.

REAR INCORPORATED UNDERNEATH CRIBBING BOXES

YES ☐ or NO ☐

These boxes are located underneath the bed in front of the rear bumper (one per side). The dimensions of these boxes will utilize the most available space and be determined by engineering in final design. Each box is covered with bright aluminum tread plate and includes a bright aluminum tread plate door. White LED lights will be installed in each box, the lights will turn on when the chassis parking brake is set and will have an independent switch in the cab to manually turn them on.

REAR UNDER BED STORAGE

YES ☐ or NO ☐

Below the rear deck, between the apparatus frame rails there shall be a storage compartment. This compartment will be custom designed to carry an extension style ladder and two-(2) pike poles. Which shall be supplied by manufacturer.

ADDITIONAL STORAGE

YES ☐ or NO ☐

Where applicable, all unused space within the apparatus body will be constructed into storage compartments

BACK-UP AND FORWARD-FACING CAMERAS

YES ☐ or NO ☐

Two-(2) cameras will be installed on the apparatus. One-(1) back-up camera and one-(1) forward facing camera. The back-up camera shall be mounted at the rear of the apparatus in the center as high as functionally possible, while in a position protected from any damage that may occur. The back-up camera will automatically activate when the apparatus is shifted to reverse.

The forward-facing camera shall be mounted on the front of the apparatus on the passenger side of the grill-guard. The camera face away from the front passenger corner of the truck at a 45-degree angle. The passenger side corner spray nozzle shall be in view of the camera.

The visual display monitor for the back-up and forward-facing cameras will be mounted in the cab within view of both driver and passenger occupants. The display monitor will allow operator to switch views between front and rear camera.

THERMAL IMAGING CAMERA

YES ☐ or NO ☐

A Hypersight 320 thermal imaging camera or equivalent shall be provided. The camera provides 320 x 240 resolution, has a stainless-steel body and 40.8-degree field of view. A 9-inch monitor shall be mounted in the cab within the drivers view. The thermal imaging camera will be installed in the top of the cab in front of the lightbar.

LOOSE EQUIPMENT

YES ☐ or NO ☐

All hose(s), nozzles, adapters, tools and equipment shall be supplied by the fire department unless listed in these specifications for the manufacturer.

WARRANTY

YES ☐ or NO ☐

A minimum one (1) year new fire apparatus warranty will be provided, upon delivery and acceptance of the vehicle. The warranty will ensure that the fire apparatus has been manufactured to the contract specifications and will be free from defects in material and workmanship that may appear under normal use and service within the warranty period. The warranty may be subject to different time and mileage limitations for specific components and parts.

The warranty will not apply to tires, batteries or other parts or components that are warranted directly by their manufacturers. The warranty will not apply to routine maintenance requirements as described in the service and operator's manual.

The manufacturer will either repair or replace any defective components or parts. Repair or replacement of the defective item will be at the sole discretion of the manufacturer. The Basic Vehicle Warranty covers all components and parts unless specifically covered by other descriptions or otherwise excluded herein. Repair or replacement of components will be done without cost to the purchaser when performed within the warranty period.

TIRES

YES ☐ or NO ☐

The tires are covered by their respective manufacturer's warranty.

BODY STRUCTURE

YES ☐ or NO ☐

The body weldment, including sheet metal and primary support structure will be warranted against loss of integrity or failure due to defects in material or workmanship for a lifetime to the original owner. Any warranty repair after five years will be done at pre-approved location.

WARRANTY ON 12 VOLT BODY ELECTRICAL SYSTEM

YES ☐ or NO ☐

The 12-volt body electrical system will be warranted against loss of integrity or failure due to defects in material or workmanship for a lifetime to the original owner. Any warranty repair after five years will be done at a pre-approved location.

PLUMBING

YES ☐ or NO ☐

Manufacture will warranty against loss of integrity or failure due to defects in material or workmanship for a lifetime to the original owner. Any warranty repair after five years will be done at a pre-approved location

CORROSION

YES ☐ or NO ☐

The fire bed body will be warranted against rust-through or perforation that are caused by manufacturer defect or workmanship, and corrosion from within, for a period of ten (10) years. Perforation is defined as a condition in which an actual hole occurs in a sheet metal panel due to rust or corrosion from within. Surface rust or corrosion caused by chips or scratches in the paint is not covered by this warranty. This warranty is void if corrosion is caused by neglect. Material that causes removal of the protective covering left unattended. Examples: battery acid or any foam agent not cleaned up.

WATER TANK

YES ☐ or NO ☐

The water tank manufacturer will warrant the water tank for the "Lifetime" of the unit
If the tank does have a defect, the manufacturer of the tank will personally come to our fire department location within 48 hours to get the truck back in service.

PAINT FINISH WARRANTY

YES ☐ or NO ☐

The finish paint on the unit will be provided with a five (5) year paint finish guarantee, which will cover the finish for the following items:

- Peeling or delamination of the topcoat and/or other layers of paint
- Cracking or checking
- Loss of gloss caused by defective PPG Fleet Finishes, which are covered by this guarantee

END OF BID SPECICATIONS ~ PUMPER TENDER BID NO: 2025-01339