

SNOWVILLE VOLUNTEER FIRE DEPARTMENT

BRUSH TRUCK

Bidder Complies	
Yes	No

SPECIFICATIONS FOR OUTFITTING BRUSH TRUCK

INTENT OF SPECIFICATIONS

It shall be the intent of these specifications to cover the outfitting and delivery of a complete fire apparatus on a 2016 Ford F-350 4x4 Super Cab pickup with single rear wheels and a regular bed. This vehicle will be purchased and delivered to the successful bidder by Pulaski County. These detailed specifications cover the requirements as to the type of construction and test to which the apparatus shall conform, together with certain details as to finish, equipment and appliances with which the successful bidder shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the contractor. The manufacturer shall provide loose equipment only when specified by the customer. Otherwise, in accordance with the current edition of NFPA 1901 standards, the proposal shall specify whether the fire department or apparatus dealership shall provide required loose equipment.

Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 15 years. Further, bidder shall maintain dedicated service facilities for the repair and service of products. Evidence of such a facility shall be included in bidder proposal.

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

Each bid shall be accompanied by a detailed set of Contractor's Specifications consisting of a detailed description of the apparatus and equipment proposed, and to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model and make of all component parts and equipment.

Images and illustrative material in this specification are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment.

QUALITY AND WORKMANSHIP

The design of the apparatus shall embody the latest approved automotive engineering practices. The workmanship shall be of the highest quality in its respective field. Special consideration shall be given to the following points: Accessibility of the various units which require periodic maintenance; ease of operation (including both pumping and driving); and symmetrical proportions. Construction shall be rugged and ample safety factors shall be provided to carry the loads specified and to meet both on and off road requirements and speed conditions as set forth under Performance Tests and Requirements. Welding shall not be

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<p>employed in the assembly of the apparatus in a manner that shall prevent the ready removal of any component part for service or repair. All steel welding shall follow American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding shall follow American Welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal.</p> <p><u>DELIVERY</u> Apparatus, to ensure proper break in of all components while still under warranty, shall be delivered under its own power - rail or truck freight shall not be acceptable. A qualified delivery engineer representing the contractor shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in the proper operation, care and maintenance of the equipment delivered.</p> <p><u>INFORMATION REQUIRED</u> The manufacturer shall supply at time of delivery, complete operation and maintenance manuals covering the completed apparatus as delivered. A permanent plate shall be mounted in the driver's compartment which specifies the quantity and type of fluids required including engine oil, engine coolant, transmission and drive axle.</p> <p><u>LIABILITY</u> The successful bidder shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.</p> <p><u>SPECIFICATION BID REQUIREMENTS</u> Bidders shall also indicate in the "yes/no" column if their bid complies on each item (PARAGRAPH) specified. Exceptions shall be allowed if they are equal to or superior to that specified and provided they are listed and fully explained on a separate page.</p> <p>Proposals taking total exception to specifications shall not be acceptable.</p> <p>Also, bidders shall submit a detailed proposal. A letter only, even though written on a company letterhead, shall not be sufficient. Bid proposals shall be submitted in the same sequence as specifications for ease of evaluation, comparison and checking of compliance. An exception to these requirements shall not be tolerated.</p> <p><u>EXCEPTIONS</u> All exceptions shall be stated no matter how seemingly minor. Any exceptions not taken shall be assumed by the purchaser to be included in the proposal, regardless of the cost to the bidder.</p>		

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<p><u>TRIP ALLOWANCES</u></p> <p>Bid proposal shall include for the customer to travel for final inspection to the manufacturing facility in which unit will be built. This will include fuel, meals and rooms, etc. for (4) fire department personnel.</p> <p><u>GENERAL CONSTRUCTION</u></p> <p>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.</p> <p><u>NFPA STANDARDS</u></p> <p>The body as built by the manufacturer must comply with the most current NFPA standards as effective July of 2016.</p> <p>Certification of slip resistance of all stepping, standing and walking surfaces must be supplied with delivery of the apparatus.</p> <p>A plate that is highly visible to the driver while seated shall be provided. This plate shall show the overall height, length, and gross vehicle weight rating.</p> <p>The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications.</p> <p>An official of the company shall designate, in writing, who is qualified to witness and certify test results.</p> <p><u>NFPA COMPLIANCY</u></p> <p>Apparatus proposed by the bidder shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications shall be indicated in the proposal as "non-NFPA".</p> <p><u>APPROVAL DRAWING</u></p> <p>A drawing of the proposed apparatus shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.</p> <p>A "revised" approval drawing of the apparatus shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing.</p> <p><u>WEIGHT REVIEW</u></p>		

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<p>A factory weight distribution review of the proposed vehicle shall be included with the proposal.</p> <p>A bid submitted without the weight review will be considered as non-responsive, and will not be accepted. <u>(NO EXCEPTIONS)</u></p> <p><u>ELECTRICAL WIRING DIAGRAMS</u></p> <p>Two (2) electrical wiring diagrams, prepared for the body as it interfaces with the commercial chassis, shall be provided.</p> <p><u>MANUALS, SERVICE</u></p> <p>A service manual supplement containing parts and service information on factory installed components shall be provided with the completed unit.</p> <p>The manual shall be specifically written for the unit being purchased. It shall not be a generic manual for a multitude of different units.</p> <p><u>MANUAL, CHASSIS OPERATION</u></p> <p>One (1) chassis operation (manufacturer's standard) shall be provided with the completed unit.</p> <p><u>SERVICE AND WARRANTY</u></p> <p>Bidder shall have a service location within 100 miles of the Snowville Fire Department. Bidder shall have a mobile service unit and no travel charges of any kind will be charged for in house warranty repairs. These will be the responsibility of the vendor.</p> <p><u>PUMP WARRANTY</u></p> <p>A pump warranty of 2 years or 2000 hours (whichever comes first) will be provided by the pump manufacturer for manufacturing defects and workmanship under normal recommended use and service.</p> <p><u>TANK WARRANTY</u></p> <p>A lifetime tank warranty will be provided by tank manufacturer.</p> <p><u>MAXIMUM OVER ALL HEIGHT REQUIREMENT</u></p> <p>Apparatus not to exceed a maximum of 83"</p> <p><u>BATTERY CHARGER / CONDITIONER / SHORELINE EJECT</u></p> <p>1 - PRO Battery Charger capable of 15 amps output that will completely turn off at battery perfect gravity and 12.65volts – Unit must not "float" a charge in to batteries.</p> <p>A LED indicator will be built into charger.</p> <p>A Kussmaul 20 amp Super Auto eject will be installed with a black cover.</p>		

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WINCH AND FRONT BUMPER

Winch will be a Warn 12,000 lb Heavy duty winch with a stainless steel transformer and brush guard with cable and hook. A remote extension cable, 100' 7/16" cable and black roller fairleads will be provided. Center LED light bar will be provided.

BULLY STEPS

(2) Adjustable stainless steps to transfer weight to frame.

WORK LIGHTING

Whelen # PSCO CDCR with angle mount bracket mounted under side rail of pickup bed 1 each side. Compartment lighting will be utilized and switched at pump panel as well side scenes will be switched in cab. Rear scenes will be switched in cab as well.

LETTERING AND STRIPING

White reflective stripe provided along the sides of the cab and body and a band across the rear of the unit equal to at least 25% of the width as described.

4" wide White stripe with a 1/4" pinstripe

The scheme will run horizontal to just before the rear wheel well (front to rear) upward and above the rear wheel well to rear of truck

Hand applied 23 K gold leaf will be applied to driver and officer cab doors as followed and covered with a clear vinyl.

SNOWVILLE - arched downward

VOL FIRE DEPT. Straight

BRUSH 7 – front fenders

Emergency 911 On both sides rear of truck bed

CHEVRONS

Provided and installed RED YELLOW to meet NFPA

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<p><u>VISORS</u></p> <p>Weather Tech vent visors will be provided and installed on side windows.</p> <p><u>RADIOS</u></p> <p>Customer provided radios will be recessed installed in console and 12v and ground will be provided for radios.</p> <p><u>SIDE / REAR SCENES</u></p> <p>4 lights 2 each side 700 Whelen LED Opti-scene will be used on sides of tread plate box. 2 – Whelen 900 LED scene will be used on the rear of tread plate boxes and switched in cab.</p> <p><u>SKID UNIT SPECIFICATIONS</u></p> <p>Water tank capacity shall be 200 U.S. gallons.</p> <p>Tank will be manufactured by a reputable manufacturer of ½” thick polypropylene sheet stock.</p> <p>The material shall be certified high Quality non corrosive stress relieved thermo plastic, black in color textured finish and UV stabilized.</p> <p>Will be completely modular slide in capable.</p> <p>Fill tower will be round or square 8 – 10” located on the top rear on drivers side.</p> <p>Overflow will be 3” schedule 40. The vent / overflow will terminate out front of tank with a 1” extension past the front of the tank and will not dump into trays.</p> <p>Tank shall have lifting dowels with ½” x 13 threads</p> <p><u>OUTLETS / INLETS</u></p> <p>1 - 3” female NPT tank to pump suction fitting and 1 - 1” tank refill NPT fitting with flow deflector.</p> <p><u>REEL MOUNTING BLOCKS</u></p>		

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<p>2 sets of reel mounting blocks will be provided on top of tank as far forward as possible. They will be made to use uni-strut nuts to attach the reels to top of tank.</p> <p>MOUNTING BLOCKS</p> <p>Three (3) additional mounting blocks will be provided on each side of the top of the rearward portion of the tank for future mounting of equipment. One (1) across rear of tank.</p> <p>A mounting block provision will be across the rear of tank for a saw bracket or leaf blower bracket.</p> <p><u>PUMP PLATFORM AND STORAGE BAYS</u></p> <p>Three (3) lengthwise – 1” thick x 8 “ high vertical rails of polypropylene with full length gussets will be provided by tank manufacturer with mounting blocks on both sides, front, and rear. The usable storage areas will be 92” x 22”x 6”</p> <p>A full width and depth pump platform of ¾” polypropylene.</p> <p>Platform of 2” x 3” T6 tubing will be provided and welded to a .125 5052 smooth plate and bolted to the vertical poly rails.</p> <p><u>UNDER TANK STORAGE TRAYS</u></p> <p>Two (2) aluminum trays will be fabricated of .125 5052 smooth aluminum and will have Nylatron to permit ease of sliding the trays in and out. Each tray will have a stop device to prevent over extension and dropping the tray on the ground.</p> <p>Each tray will have a chrome or stainless handle to pull tray out.</p> <p>Both trays will have black turtle-tile installed. A stainless 4” D-ring handle will be installed in each drawer to lock in.</p> <p><u>PUMP AND MOTOR</u></p> <p>A Hale HPX 200-B18 pump unit powered by a Briggs and Stratton18 hp engine with a 12 volt electric start and manual start override will be provided.</p> <p>A remote 3 gallon fuel tank will be provided and mounted to the right of the skid unit or on top of the water tank in a tray.</p> <p>Pump engine will have an exhaust muffler and with a flapper cover for keeping water out of exhaust.</p> <p>A 24” extended hose to drain engine oil will be provided.</p>		

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PUMP PERFORMANCE RANGE

245 GPM @ 10 PSI

195 GPM @ 75 PSI

150 GPM @ 100 PSI

60 GPM @ 150 PSI

DELUXE OPERATORS PANEL

Approx 24" wide 18" high rearward facing Hale control panel and related controls including pressure gauge, engine start, stop, choke, and throttle.

ELECTIC PRIMER UPGRADE

Hale ESP electric primer assembly will be installed with heavy cables to handle amp draw. Will be modified so operator doesn't have to reach over hot items to open and close valves. Primer valve will be incorporated into the panel.

ENGINE OIL DRAIN

Engine oil drain will be plumbed with 24" Aero Quip or Parker braided hose and extended and plugged with plug for ease of changing pump engine oil. Fittings will be brass.

PUMP PLUMBING

All valves 1" and larger will be Akron 8800 series ¼ turn valves. All hard piping will be schedule 40 galvanized plumbing. All flexible 1" piping will be reinforced 250 -300 psi with stainless fittings.

All flexible smaller than 1" will be air line brake hose with reusable brass fittings.

All plumbing will be tested to 250 psi.

Where vibration is an issue either a high pressure hose with high torque bands or Victaulic connections will be used. These will include but not limited to tank fill and hose reels.

All plumbing will be painted satin black.

All fittings to be compression type.

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<p>NO TUBING PUSH FITTINGS WILL BE ALLOWED</p> <p><u>CATHODIC PROTECTION</u></p> <p>A removable sacrificial zinc anode in discharge plumbing for corrosion protection of plumbing and housing.</p> <p><u>ELECTRONIC WATER GAUGE</u></p> <p>A Fire Research water level gauge will be installed with transducer and LED display will be installed on pedestal.</p> <p><u>TANK TO PUMP PIPING</u></p> <p>Will be 2.5" Diameter Sch 40 galv. With an Akron 2.5" 8800 series valve. A stainless rod will be used to extend the rear with a T-handle.</p> <p>Handle will be labeled with a black aluminum etched tag that reads "TANK TO PUMP". Either hose or Victaulic's will be used for flexible connection and ease of removal.</p> <p>Plumbing will extend to the rear with a Akron 2.5" valve with a swivel connection made into the valve flange for a gated intake with a handle valve will be marked "2.5" INTAKE" by a aluminum etched black label. A chrome or stainless 2.5" plug will be used with a cable. Valves are to be marked with OPEN / CLOSED positions.</p> <p>1" TANK FILL/ RECIRCULATION LINE</p> <p>1 Akron 8810 will be used with a TS style handle. High Pressure flex Hose will be used between tank and Valve. Will be labeled with aluminum etched Black Tag.</p> <p>Mounted to a manifold custom made without lets for reels and tank fill and garden hose fitting</p> <p>BOOSTER REEL DISCHARGES</p> <p>2 Hanney Booster reels with electric rewinds 1 each side in determined location. Provided and Supplied with (2) Akron 8800 series valves with TS handles. And Labeled with aluminum etched black tags.</p> <p>2.5" DISCHARGE TO REAR</p> <p>1 – 2.5" Akron 8800 series valve will be installed on the rear of the unit will have a TS Handle and a M1S adapter. A 2.5" x 1.5" either stainless or chrome brass adapter with a 1.5" cap will be provided with cable or chain. An Aluminum etched black label will be provided.</p>		

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<p>GARDEN HOSE OUTLET</p> <p>1/ 4 turn valve for filling water extinguishers and back packs with a male GHT adapter.</p> <p>A black aluminum label will be provided</p> <p>HANNAY ELECTRIC REWIND REELS</p> <p>Two (2) will be provided Hanna F series 12v electric rewind booster reels capable of holding 150' of light weight booster hose with 1/3 HP motors. Mounted to the tank mounting blocks. Each will have a swivel 90 and both will be painted in satin black color. 2 rewinds will be provided and determined at a later date each rewind will be labeled with an aluminum black etch tag.</p> <p>2 – 100' and (2) 50' sections of Mercedes 1" reel hose will be provided and installed. This is No exception due to not having to customize reel and risers to accommodate hose.</p> <p>2 – Crestar nozzles will be provided with settings of 5 -10 -24 gpm and pistol grip.</p> <p>2 - Handlelok clips for nozzle mounting with .125 smooth bracket.</p> <p>CHAINSAW AND LEAFBLOWER MOUNTING</p> <p>Skid unit builder is responsible for mounting of customer supplied chainsaw and leaf blower on top of tank. With Zico straps and mounts.</p> <p>ELECTRICAL CUTOFF</p> <p>Will be wire through a 200 amp solenoid with master switch for installed items.</p> <p>LIGHTS, SIREN CONTROL SWITCH, SPEAKER</p> <p>List to be installed by skid unit builder</p> <p>2 - IX34UFZ Red</p> <p>1 - Whelen model 295HFS4 siren with switches</p> <p>8 -Whelen ION series LED with Black Flange</p>		

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<p>2 – Grill, 2 intersection, 2 rearward of the rear wheels</p> <p>2 – Whelen Vertex Super LED lights in tail lights</p> <p>Whelen Justice 8 light light bar 50” with take downs and alleys</p> <p>Whelen SA315P speaker</p> <p>CONSOLE</p> <p>A console will be mounted in the center seat section when removed by installer. It will be made of .100 aluminum with a black finish. All electrical controls ex. Siren light control, radios drink holders etc will be mounted in plates to be easily remove for service. A map box with a padded cover will be provided and serve also as an arm rest on rear portion.</p> <p>CHASSIS ITEMS TO BE INSTALLED</p> <p>Aluminum Headache bar will be provided and mounted to floor of bed or side of bed rails and incorporate reel rewinds 1 each side. DA finish</p> <p>COMPARTMENTS</p> <p>2 custom treadplate compartments with 2 doors each with hold open cylinders will be provided with 2 lift up doors on each Ferrara style slam latches on doors Compartments and angled at same as Cab to not hang on brush. LED strip lighting will be provided and controlled at panel. Material will be .125 treadplate.</p> <p>RADIOS</p> <p>Installed in console by Skid builder but hooked up by radio shop</p> <p>INPOWER</p> <p>High Idle module will be provided for high idle</p>		

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<p>ECCO REVERSE CAMERA</p> <p>Provided and installed by unit builder mounted to console.</p>		
<p>BACKUP ALARM</p> <p>A back up alarm with a 120 db will be provided.</p>		
<p>SUCTION HOSE</p> <p>3 – 2.5” x 70” pieces of 2.5 “ light weight suction hoses will be provided with RL fittings and will fit in drawers</p>		
<p>PRIMER</p> <p>A electric Hale primer ESP and primer valve and be installed on unit controlled at console.</p>		
<p>STREAMLIGHTS</p> <p>2 Liteboxes, 2 surviors installed in customer location.</p> <p>Provided and installed and wired to battery fused 3 amp</p>		
<p>PAINT</p> <p>Unit will be changed from factory color to Lime yellow to match existing units Color break will be just below side window top will be white. A ¼” pinstripe will be provided on paint break.</p>		
<p>DELIVERY TIME</p> <p>Each vendor will provide a delivery / completion date from time of receipt of order. Customer would prefer 60 days from receipt of Chassis.</p>		