

**INVITATION TO BID**  
**BRUSH TRUCK FABRICATION**  
**BID NO. 2019-E**

Please be advised that Columbia County desires to accept bids on the above referenced item. Bids will be accepted until 2:00 P.M. on April 25, 2019 in the office of the Board of County Commissioners located at 135 NE Hernando Ave. Room 203, Lake City, Florida 32055.

Specifications and bid forms may be downloaded at the County web site:

<http://www.columbiacountyfla.com/PurchasingBids.asp>

Columbia County reserves the right to reject any and/or all bids and to accept the bid in the County's best interest.

**Columbia County, Florida  
Purchasing Department  
General Instructions to Bidders**

These instructions will bind bidders and conditions herein set forth, except as specifically qualified in special bid and contract terms issued with any individual bid.

1. The following criteria are used in determining low responsible bidder:
  - A. The ability, capacity and skill of bidder to perform required service.
  - B. Whether the bidder can perform service promptly or within specified time.
  - C. The character, integrity, reputation, judgment, experience and efficiency of bidder.
  - D. The performance of previous contracts with Columbia County.
  - E. The suitability of equipment or material for county use.
  - F. The ability of bidder to provide future maintenance.
2. Payment Terms are net (30) unless otherwise specified. Favorable terms, discounts, may be offered and will be considered in determining low bids if they are deemed by Purchasing Department to be advantageous to the County.
3. All bids should be tabulated, totaled and checked for accuracy. Unit price will prevail in case of errors.
4. All requested information shall be included in the envelope. All desired information must be included for your bid to receive full consideration.
5. If anything on the bid request is not clear, you should contact the Purchasing Director immediately.
6. A bidders list is available at the Purchasing Office.
7. Quote all prices F.O.B. our warehouse or as specified in bid documents.
8. Each proposal shall be clearly marked on the outside of the envelope including Fed Ex, UPS or other delivery service envelopes, as a sealed bid. The name of the item being bid shall be shown on the outside in full.
9. No responsibility shall attach to any County representative or employee for the premature opening of bids not properly addressed or identified.
10. If only one (1) bid is received, the bid may be rejected and re-advertised or excepted if determined to be in the counties best interest.
11. Bids received late will not be accepted, and the County will not be responsible for late mail delivery.
12. Telephone and facsimile bids will not be acceptable in formal bid openings (sealed bids). Should a bid be misplaced by the County and found later, it may be considered. Any bidder may request and shall receive a receipt showing the day and time any bid is delivered to the appropriate office of the County from the personnel thereof.

13. Bids requiring bid bonds will not be accepted if bond is not enclosed. Cash or certified check will be accepted in lieu of bond except on construction projects where cost exceeds \$40,000.

14. All bidders must be recognized dealers in the materials or equipment specified and is qualified to advise in their application or use. A bidder at any time requested must satisfy the Purchasing Office and the County Manager that he has the requisite organization, capital, plant, stock ability and experience to satisfactorily execute the contract in accordance with the provisions of the contract in which he is interested.

15. Any alterations, erasures, additions, or admissions of required information or any changes to specifications or bidding schedule are done at the risk of the bidder. Any bid will be rejected that has a substantial variation, that is; a variation that affects price, quantity, and quality or delivery date (when delivery is required by a specific time).

16. When requested, samples will be furnished to the County free of expense, properly marked for identification and accompanied by a list where there is more than one (1) sample. The County reserves the right to mutilate or destroy any sample submitted whenever it may be to the best interest of the County to do so for the purpose of testing.

17. The County will reject any material, supplies or equipment that did not meet the specifications, even though the bidder lists the trade names or names of such material on the bid or price quotation form.

18. The unauthorized use of patented articles is done entirely at the risk of the successful bidder.

19. The ESTIMATED QUANTITY given in the specifications or advertisements is for the purpose of bidding only. The County may purchase more or less than the estimated quantity and the vendor must not assume that such estimated quantity is part of the contract.

20. Only the latest model equipment as evidenced by the manufacture's current published literature will be considered. Obsolete models of equipment not in production will not be acceptable. The equipment shall be composed of new parts and materials. Any unit containing used parts or having seen any service other than the necessary tests will be rejected. In addition to the equipment specifically called for in the specification, all equipment catalogued by the manufacturer as standard or required by the State of Florida shall be furnished with the equipment. Where required by the State of Florida Motor Vehicle Code, vehicles shall be inspected and bear the latest inspection sticker of the Florida Department of Revenue.

21. The successful bidder on motor vehicle equipment shall be required to furnish with delivery of vehicle, certificate of origin and any other appropriate documentation as required by the Florida Motor Vehicle Department.

22. Prospective bidders are required to examine the location of the proposed work or delivery and determine, in their own way, the difficulties, which are likely to be encountered in the prosecution of the same.

23. All materials, equipment and supplies shall be subject to rigid inspection, under the immediate supervision of the Purchasing Department, its designee and /or the department to which they are delivered. If defective material, equipment, or supplies are discovered, the contractor, upon being instructed by the Purchasing Department or designee, shall remove, or make good such material, equipment, or supplies without extra compensation. It is expressly understood and agreed that the inspection of materials by the County will in no way lessen the responsibility of the Contractor release him from his obligation to perform and deliver to the

County Sound and satisfactory materials, equipment, or supplies. The Contractor agrees to pay the costs of all tests upon defective material, equipment, or supplies or allow the costs to be deducted from any monies due him from the County.

24. Unless otherwise specified by the Purchasing Department all materials, supplies, or equipment quoted herein must be delivered within thirty (30) days from the day of notification or exceptions noted on bid sheets.

25. A contract will not be awarded to any corporation, firm, or individual who is, from any cause, in arrears to the County or who has failed in former contracts with the County to perform work satisfactorily, either to the character of the work, the fulfillment or guarantee, or the time consumed in completing the work.

26. Reasonable grounds for supposing that any bidder is interested in more than one proposal for the same item will be considered sufficient cause for rejection of all proposals in which he is interested.

27. Submitting a proposal when the bidder intends to sublet the contract may be a cause for rejection of bids or cancellation of the contract by the County Manager.

28. Unless otherwise specified the County reserves the right to award each items separately or on a lump sum basis whichever is in the best interest of the County.

29. The County reserves the right to reject any and/or all quotations, to waive any minor discrepancies in the bids for all bidders equally, quotations, or specifications, when deemed to be in the best interest of the County and also to purchase any part, all or none of the materials, supplies, or equipment specified.

30. Failure of the bidder to sign the bid or have the signature of an authorized representative or agent on the bid proposal in the space provided will be cause for rejection of the bid. Signature must be written in ink. Typewritten or printed signatures will not be acceptable.

31. Any bidder may withdraw his bid at any time before the time set for the opening of the bids. No bid may be withdrawn in the thirty- (30) day period after bids are opened.

32. It is mutually understood and agreed that if at any time the Purchasing Department or designee shall be of the opinion that the contract or any part thereof is unnecessarily delayed or that the rate of progress or delivery is unsatisfactory, or that the contractor is willfully violating any of the conditions or covenants of the agreement, or executing the same in bad faith, the Purchasing Department or his designee shall have the power to notify the aforesaid contractor of the nature of the complaint. Notification shall constitute delivery of notice, or letter to address given in the proposal. If after three (3) working days of notification the conditions are not corrected to the satisfaction of the Purchasing Director, he shall thereupon have the power to take whatever action he may deem necessary to complete the work or delivery herein described, or any part thereof, and the expense thereof, so charged, shall be deducted from any paid by the County out of such monies as may become due to the said contractor, under and by virtue of this agreement. In case such expense shall exceed the last said sum, then and in that event, the bondsman or the contractor, his executors, administrators, successors, or assigns, shall pay the amounts of such excess to the County on notice made by the Purchasing Department or his designee of the excess due.

33. If the bidder proposes to furnish any item of foreign make or product, he shall write "foreign" together with the name of the originating country opposite such item on a proposal.

34. Any complaint from bidders relative to the invitation to bid or attached specifications shall be made prior to the time of opening bids; otherwise, the bidder waives any such complaint.

35. Contracts may be cancelled by the County with or without cause on thirty- (30) days advance written notice.

36. All contractors submitting bids for road projects in excess of \$150,000 must be pre-qualified with the Florida Department of Transportation and shall provide proof of such qualification upon request.

37. Any bidder affected adversely by an intended decision with respect to the award of any bid, shall file with the Purchasing Department for Columbia County, a written notice of intent to file a protest not later than seventy-two (72) hours (excluding Saturdays, Sundays and legal holidays), after the posting of the bid tabulation. Protest procedures may be obtained in the Purchasing Department.

38. A person or affiliate who has been placed on the convicted vendor's list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to Columbia County, may not submit a bid on a contract with Columbia County for the construction or repair of a public building or public work, may not submit bids on leases of real property to Columbia County, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with Columbia County, and may not transact business with Columbia County for a period of 36 months from the date of being placed on the convicted vendor list.

39. Vendor/Contractor shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of;

A. all persons employed by the Vendor/Contractor during the term of the Contract to perform employment duties within Florida; and

B. all persons, including subcontractors, assigned by the Vendor/Contractor to perform work pursuant to the contract with the County.

## **SPECIFICATIONS**

### **PROPRIETARY PARTS**

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

### **WARRANTY**

The following warranties shall be provided:

#### **ONE YEAR APPARATUS WARRANTY**

The complete apparatus detailed herein shall be warranted against defects in materials and workmanship for a period of twelve (12) months, effective upon pick up or delivery of the completed apparatus to the purchaser, as detailed in the respective warranty documents. Any unauthorized alterations or modifications to the apparatus shall void this warranty.

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

#### **APPARATUS BODY WARRANTY, TEN YEAR**

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

#### **PLUMBING WARRANTY, TEN YEAR**

A Stainless Steel Plumbing/Piping warranty shall be provided by the apparatus manufacturer for products of its manufacture to be free from defects in material and workmanship, under normal use and service, for a period of ten (10) years effective upon final payment in full by the Purchaser, and pick up or delivery of the completed apparatus to the Purchaser. Any unauthorized alterations or modifications to the plumbing shall void this warranty.

#### **APPARATUS ELECTRICAL WARRANTY, TWO YEAR**

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

### **NFPA 1906 COMPLIANCE**

The National Fire Protection Association standard #1906 (most recent edition) is hereby adopted and made a part of these specifications, the same as if they were written out in full detail, insofar as they apply with the exception of any sections dealing with "Equipment Recommended for Various Types of Apparatus". Bidders are to provide only the equipment requested herein and the Department will supply the rest before the apparatus is put into service. The unit shall comply with all federal, state, ICC, and DOT motor vehicle regulations, standards, and laws relating to commercial vehicles as well as to fire apparatus on the date of the bid.

### **ROAD TEST CERTIFICATION**

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

- A). The apparatus must be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed RPM of the engine.
- B). The apparatus must be capable of accelerating from a steady speed of 15 mph to a true speed of 35 mph within 30 seconds. This shall be accomplished without moving the gear selector.
- C). The fully loaded apparatus shall be capable of obtaining a speed of 50 to 55 mph on a level concrete highway.
- D). The manufacturer shall furnish copies of the engine installation approvals signed by the appropriate engine company upon delivery of the chassis to the Fire Department.

- E). The manufacturer shall furnish copies of the transmission approval signed by the transmission manufacturer upon delivery of the chassis to the Fire Department.
- F). The manufacturer shall furnish copies of the front and rear axle approvals upon delivery of the apparatus to the Fire Department.

### **ROAD TEST FAILURE**

In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the manufacturer within thirty (30) days of the first trials. Such trials shall be final and conclusive and failure to comply with changes, as the purchaser may consider necessary to conform to any clause of the specifications within thirty (30) days after notice is given to the manufacturer of such changes, shall be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser, or its use by the purchaser during the above-specified period with permission of the manufacturer, shall not constitute acceptance.

### **CAB SAFETY SIGNS**

The following safety signs shall be provided in the cab:

- A label displaying the maximum number of personnel the vehicle is designed to carry shall be visible to the driver.
- "Occupants shall be seated and belted when apparatus is in motion" signs shall be visible from each seat.
- "Do Not Move Apparatus When Light Is On" sign adjacent to the warning light indicating a hazard if the apparatus is moved (as described in subsequent section).
- A label displaying the height, length, and GVWR of the vehicle shall be visible to driver.

### **CHASSIS DATA LABELS**

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

#### Fluid Data:

- Engine oil

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

Chassis Data:

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

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

**"NO RIDE" LABEL**

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

**DO NOT WEAR HELMET LABEL**

One (1) label shall be provided stating "DO NOT WEAR HELMET WHILE SEATED", and shall be visible from each seated position.

**APPARATUS DIMENSIONS**

These dimensions are only for the apparatus as specified. Changes in configuration or additional options may affect these dimensions. The contract specification shall contain the exact dimensions.

**OVERALL HEIGHT**

The overall height shall be less than 96".

## **OVERALL LENGTH**

The overall length shall be no longer than 26 feet.

## **OVERALL WIDTH**

The overall width of the body shall be no more than 96.00" inches wide. The chassis mirrors will extend out past this width, but no more than 110.00".

## **ANGLE OF APPROACH**

The angle of approach for the apparatus shall not be less than eight (8) degrees as specified by the current edition of NFPA 1901/ 1906.

## **ANGLE OF DEPARTURE**

The angle of departure for the apparatus shall not be less than eight (8) degrees as specified by the current edition of NFPA 1901/ 1906.

## **COMMERCIAL CHASSIS SPECIFICATION**

### **CHASSIS PROVIDER**

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

### **CHASSIS**

One (1) new 2019 FORD F-450 rear axle drive 4x4, dual rear wheels (DRW), two door XL cab and chassis.

Wheelbase: 145"

Cab to Axle: 60"

GVWR: 16,000 pounds

Steering: Hydraulic power-assist re-circulating ball

Driving Front Axle and Suspension: HD front package, firm ride suspension package, mono-beam non-independent front suspension, anti-roll bar, HD front shocks, HD front coil springs

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

Braking System: four (4) wheel disc brake system with front and rear vented discs and Anti-Lock (ABS)

Transfer Case: cab controlled high and low range HD front package, stabilizer bar, front shocks, and manual hubs.

## **POWERTRAIN**

6.8L 3-valve SOHC EFI Triton V-10

Rated Brake Horsepower: 362 hp @ 4750 rpm

Rated Torque- 457 @3250 rpm

Battery: 750 CCA, 78 AH

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

## **TRANSMISSION**

Automatic 5-Speed TorqShift w/OD

Alternator: 157 Amp

Fuel Tank: 40 Gallon, Aft of Axle

## **REAR AXLE RATIO**

The ratio of the rear axle shall be 4.88.

## **CAB TYPE**

Conventional, engine forward, two (2) door regular cab

Construction: Welded steel

Accessories:

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

- Black Fender Moldings

Headlamps: dual beam jewel effect

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

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

Instrumentation:

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

## **CAB SEATING**

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

## **AUDIO**

AM/FM stereo, w/digital clock & 2-speakers

## **GRILLE**

Black painted

## **BUMPER**

Chrome Steel with grained MIC top cover.

## **WHEELS**

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

## **TIRES**

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

## FORD SUPERDUTY WARRANTY

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

## CHASSIS PAINT COLOR

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

**Color:** Ford Race Red

**Paint Number:** PQ

## CHASSIS MODIFICATIONS

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

### STEP BARS

One (1) set of black powder coated steel step bars shall be mounted to each side of the chassis. There shall be a slip resistant step pad located bellow each chassis door.

### FRONT MOUNTED WINCH

A WARN model M12000 electric winch with 12,000 pound (5,440 kg) rated line pull shall be installed in the brush guard. The winch shall be equipped with 125.00' of 3/8" diameter wire rope, clevis hook and a 4-way roller fairlead. The winch shall be operated through a 12.00' pendant with a hand held control. The winch shall include an automatic mechanical cone brake. It shall feature an easy to use free-spooling rotating ring gear clutch.

The installation shall maintain access to the winch controls.

### GRILLE GUARD - STAINLESS STEEL

A Warn model 98205 Trans4mer Gen II grille guard shall be provided. The grille guard kit shall be provided with a stainless steel finish.

## **HEADLAMP GUARD - STAINLESS STEEL**

A Warn model 98210 Trans4mer Gen II headlamp guard kit shall be provided and installed. The headlamp guard kit shall attach to the grille guard. The headlamp guard kit shall be provided with a stainless steel finish.

## **WINCH CARRIER - LARGE FRAME - BLACK FINISH**

A Warn model 90110 large frame winch carrier shall be installed in grille guard. It shall be capable of carrying Warn winch models 16.5ti, M15, M12, and M8274-50.

The winch carrier shall have a powder coated black finish.

## **TOWING HITCH RECEIVER**

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

The hitch receiver shall be constructed of heavy steel tubing and reinforced to the apparatus framework. The hitch receiver shall have a Class V rating of 16,000 pounds towing and 1,600 pounds tongue weight when used with a weight distributing hitch assembly.

The receiver shall accept a 2.00" hitch.

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

## **TIRE PRESSURE MONITORING**

The apparatus shall be provided with tire pressure indicating valve stem caps. The indicators shall be installed on each tire and be a heavy duty design manufactured specifically for trucks. When tire is properly inflated, the indicator inside the cap shall be green, and when the tire is underinflated by 10%, the indicator inside the cap shall be red.

## **WHEEL COVERS**

Each wheel shall have one (1) stainless steel wheel cover installed.

## **REAR TOW EYES**

Two (2) heavy duty steel tow eyes, approximately 3/4" thick, shall be provided beneath the rear tailboard.

## **REAR MUD FLAPS**

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

## **HIGH IDLE SYSTEM**

There shall be a high idle system furnished and installed on the apparatus to allow an increase in the engine speed when the apparatus is parked. (NFPA 1906, 5.2.1.4 requirement).

An interlock shall prevent the operation of this engine speed control device unless the parking brake is fully engaged and the transmission is in neutral or park, or unless the engine speed control device is used with chassis engine driven components, in which case it shall be interlocked with the engagement of those components.

## **MASTER BODY DISCONNECT SWITCH**

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

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

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

## **BACK-UP ALARM**

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

## **PUMP AND RELATED ITEMS**

### **REAR PUMP "DROP IN"**

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

## **PORTABLE PUMP, GASOLINE**

The pump shall be a CET model PFP-20HPHND-MR single stage centrifugal pump, bolted directly to the engine, with a 2.5" NPT suction inlet, and a 1.5" NPT discharge outlet. The volute and pump head shall be a lightweight, high strength, seawater resistant, aluminum alloy. The impeller shall be a bronze enclosed type for maximum efficiency, fully machined and balanced. The engine crankshaft shall serve as the pump shaft, with the impeller mounted directly on the crankshaft. The shaft seal shall be self-adjusting, self-lubricating, mechanical type.

Pump Ratings:       45 GPM @ 200 PSI  
                          190 GPM @ 100 PSI  
                          300 GPM @ 10 PSI

## **PUMP ENGINE**

The engine shall be a four cycle air cooled 20 HP Honda V-twin engine, with integral fuel pump, 12-volt electric start, and manual start. The pump engine shall be connected to the battery system on chassis.

The pump primer shall be a combination vacuum type exhaust primer and a spark-arresting muffler.

## **PUMP FUEL SOURCE**

A 6 gallon fuel tank shall be installed near the pump engine. The tank shall have a label that reads "Gasoline Only".

## **EXHAUST SYSTEM**

The pump engine shall have a vertical exhaust pipe. The exhaust pipe shall be directed upward and away from the pump operator. An additional guard or wrapping around the exhaust pipe shall be installed where the pipe is exposed to touch by an operator.

## **PUMP CONTROLS**

A pump control panel shall be provided and attached to the pump unit. The pump control panel shall include a ignition switch, starter button, stop button, engine throttle, and pressure gauge.

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

## **PLUMBING SYSTEM**

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

The stainless steel plumbing shall remain unpainted.

## **HOSE THREADS**

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

## **LABELS**

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

## **TANK TO PUMP**

There shall be one (1) 2.50" tank to pump line shall be provided between the water tank and the pump system. Flexible connections shall be used between the pump and the water tank to allow for component movement.

The valve shall be a 2.50" bronze, quarter turn ball type, and shall be operated using a direct manual actuator, attached directly to the valve body. This valve shall remain open to pump from the tank.

The pipe shall have a tee into the suction side of the pump, and shall continue to the rear of the truck for the 2.50" suction/ direct tank fill.

## **SUCTION/ DIRECT TANK FILL**

There shall be one (1) gated 2.50" suction/ direct tank fill inlet shall be installed to supply the fire pump from an external water supply.

The valve shall be a 2.50" bronze, quarter turn ball type, and shall be operated using a direct manual actuator, attached directly to the valve body.

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

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

### **REAR DISCHARGE**

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

The valve shall be a 1.50" bronze, quarter turn ball type, and shall be operated using a direct manual actuator, attached directly to the valve body.

A rigid 1.50" female NPT x 1.50" male NST chrome plated adapter shall be provided for the discharge outlet.

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

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

### **TANK REFILL**

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

The valve shall be a 1.00" bronze, quarter turn ball type, and shall be operated using a direct manual actuator, attached directly to the valve body.

### **HOSE REEL VALVE(S)**

There shall be One (1) 1.00" valve for the hose reel(s) provided. Each discharge shall be plumbed to the reel with a 1.00" valve and flexible, reinforced wire-braid, hydraulic hose.

The valve shall be a 1.00" bronze, quarter turn ball type, and shall be operated using a direct manual actuator, attached directly to the valve body.

## **BOOSTER REEL**

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

The reel shall have a 1.00" Female NPT inlet connection with a 90 degree ball bearing swivel joint. The reel shall have a 1.00" Male NST outlet.

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

Color shall be graphite.

## **REEL LOCATION**

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

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

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

## **BOOSTER REEL HOSE**

The booster reel shall be supplied with 150' of 1.00" NST red Reel-Lite booster lightweight woven TPU forestry reel hose. The hose shall have a minimum proof test pressure of 600 PSIG.

## **BOOSTER TANK**

The tank shall have a capacity of 300 US gallons / 249 Imperial gallons / 1136 liters.

The tank shall be a UPF model Defender 3E

## **TANK CONSTRUCTION**

The tank shall be constructed of PT3™ polypropylene material. This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on the

application and may range from 0.50" to 1.00" as required. Internal baffles are generally 0.375" in thickness.

## **ISO CERTIFICATION**

The tank must be designed and fabricated by a tank manufacturer that is ISO 9001:2008 certified in each of its locations. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank.

## **BOOSTER TANK CONSTRUCTION**

The booster tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include PolyProSeal™ technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 0.375" PT3™ polypropylene.

All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1906. The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design™. Tolerances in design allow for a maximum variation of 0.125" on all dimensions.

## **WATER FILL TOWER AND COVER**

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 0.50" PT3™ polypropylene and shall be a minimum dimension of 8.00" x 8.00" outer perimeter. The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower shall be located in the left front corner of the tank. The tower shall have a 0.25" thick removable polypropylene screen and a PT3™ polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the fill tower there shall be a combination vent/overflow pipe.

The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of 3.00" that is designed to run through the tank, and shall be piped to discharge water at the rear of the tank.

The tank cover shall be constructed of 0.50" thick PT3™ polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank cover(s) shall be flush or recessed 0.375" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2.00" minimum polypropylene dowels spaced a maximum of 40.00" apart. These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions. A minimum of two (2) lifting dowels shall accommodate the necessary lifting hardware.

### **TANK MOUNTING BLOCKS**

The cover shall incorporate two (2) mounting blocks that shall be slotted to accommodate two (2) each 0.375" - 16 threading sliding fasteners. These mounting blocks shall be welded to the covers running from the rear edge of the tank forward.

### **SUMP**

There shall be one (1), sump standard per tank. The sump shall be constructed of a minimum of 0.50" PT3™ polypropylene and be located in the rear of the tank, unless specified otherwise. A schedule 40 polypropylene pipe shall be installed that will incorporate a dip tube from the back of the tank to the sump location.

### **TANK OUTLETS**

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

### **TANK DRAIN**

There shall be a 1.00" tank drain to the front left side of the tank with a nylon plug.

## **TANK LEVEL GAUGE**

An external sight gauge with guard shall be installed on the front of the tank. The level indicator shall be located to provide maximum visibility to the operator.

## **PUMP PLATFORM**

The pump platform shall be constructed of UPF polypropylene and shall be attached to the booster tank.

## **WATER TANK WARRANTY**

The water tank manufacturer shall warrant the water tank to be free from manufacturing defects in material and workmanship for the service life of the vehicle. The tank must be installed in accordance with the tank manufacturer's installation instructions.

## **ALUMINUM FLATBED**

### **BODY LENGTH**

The apparatus body shall be 120.00" long with 116.00" of useable deck space.

### **BODY WIDTH**

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

### **DECK THICKNESS**

The deck shall be constructed of 1.25" high extrusions x 6.00" wide x 0.109" material thickness, with center tee stiffening rib, of 6061-T6 alloy.

### **OUTER RAILS**

The outer rails shall be 6.50" high extruded rails, with a 1.50" lower flange. There shall be centered 3.875" (side & rear) high x 0.313" deep clearance light recess for the DOT lights.

### **FLOOR CROSS MEMBERS**

The floor cross members shall be 5.00" high Zee sections with a 0.1875" web x 0.25" flanges.

## **LONGITUDINAL MEMBERS**

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

## **BODY CONSTRUCTION AND FEATURES**

The all-aluminum flatbed body construction shall be mechanically fastened together using Huck rivets at ALL structural connections. (No Exceptions) The 1.25" high aluminum extruded deck boards shall be Huck riveted to the 5.00" zee cross-members, that are Huck riveted to the side rail extrusion that is stainless steel Huck riveted to the 6.50" high side rail extrusions. This mechanically connected design shall allow the heat-treated aluminum to retain maximum strength. The only welding is for appearance purposes in non-structural areas of the body.

## **INSTALLATION**

The body shall be attached to the truck chassis using a 0.25" steel angle bracket with end gussets. The brackets are to be bolted to body cross members with four (4) each 0.375" grade 5 bolts and locking nuts. Two (2) 0.625" diameter bolts shall vertically straddle each side of the truck frame rails and extend through 0.50" x 2.00" flat bar brackets which shall be positioned below the lower truck rail flanges. Tightening the nuts on the 0.625" bolts shall generate a clamping force against the truck frame rail. Shear plates shall be bolted to a body member and to the truck frame rails to eliminate possible longitudinal movement of the body.

## **CABGAURD**

The cab guard shall be constructed of a 2.50" x 3.00" x 0.140" thick perimeter tube framing. The panel shall consist of a lower 0.125" thick aluminum diamond plate and an upper full-width window constructed of 0.25" thick aluminum mesh with 2.00" high x 3.00" wide diamond shaped staggered array openings. Additional support shall be provided by the over-the-truck frame rail positioned upright vertical channel members. The upright channel members shall be 0.1875" thick 5052 alloy aluminum with a tapered web, 4.00" o.d. at the bottom to 1.50" at the top perimeter attachment. The side tubes shall have a 20 degree taper that begins approximately 15.00" above the deck.

The height of the cab guard shall be approximately even with the top of the cab roof.

## **INTERIOR COMPARTMENT VENTILATION LOUVERS**

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

## **SIDE COMPARTMENTATION**

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

### **SIDE BODY COMPARTMENTS -- LEFT HAND SIDE FRONT**

One (1) body equipment storage compartment shall be installed on the forward portion of the left hand side of the flatbed surface. The dimensions shall be approximately: 36.00" long, 18.00" high, and 20.00" deep. The compartment shall be constructed of .125" smooth aluminum.

The compartment shall be equipped with a horizontally hinged drop down door constructed of .105" diamond plate aluminum. The door shall be fully gasketed with closed cell neoprene sponge and be held with at ninety degree's with a lanyard.

The door shall have two (2) stainless steel T-handle latches with keyed locks.

The compartments shall be equipped with the following:

#### **COMPARTMENT LIGHT(S)**

One (1) surface mount LED light(s) shall be installed in the compartment. The light(s) shall have a clear lens and shall a minimum effective output of 810 lumens.

The lights shall function independently of other compartments by an automatic "On-Off" switch located on each compartment door.

### **SIDE BODY COMPARTMENTS -- LEFT HAND SIDE REAR**

One (1) body equipment storage compartment shall be installed on the rear portion of the left hand side of the flatbed surface. The dimensions shall be approximately: 36.00" long, 18.00" high, and 20.00" deep. The compartment shall be constructed of .125" smooth aluminum.

The compartment shall be equipped with a horizontally hinged drop down door constructed of .105" diamond plate aluminum. The door shall be fully gasketed with closed cell neoprene sponge and be held with at ninety degree's with a lanyard.

The door shall have two (2) stainless steel T-handle latches with keyed locks.

The compartments shall be equipped with the following:

#### COMPARTMENT LIGHT(S)

One (1) surface mount LED light(s) shall be installed in the compartment. The light(s) shall have a clear lens and shall a minimum effective output of 810 lumens.

The lights shall function independently of other compartments by an automatic "On-Off" switch located on each compartment door.

#### HOSE TRAY

One (1) hose tray approx 18.00" W x 8.00" T x 72.00" D shall be installed on top of the left side compartment(s). The tray shall be made of diamond plate aluminum and shall be open at the rear for quick hose access.

#### **SIDE BODY COMPARTMENTS -- RIGHT HAND SIDE FRONT**

One (1) body equipment storage compartment shall be installed on the forward portion of the right hand side of the flatbed surface. The dimensions shall be approximately: 36.00" long, 18.00" high, and 20.00" deep. The compartment shall be constructed of .125" smooth aluminum.

The compartment shall be equipped with a horizontally hinged drop down door constructed of .105" diamond plate aluminum. The door shall be fully gasketed with closed cell neoprene sponge and be held with at ninety degree's with a lanyard.

The door shall have two (2) stainless steel T-handle latches with keyed locks.

The compartments shall be equipped with the following:

#### COMPARTMENT LIGHT(S)

One (1) surface mount LED light(s) shall be installed in the compartment. The light(s) shall have a clear lens and shall a minimum effective output of 810 lumens.

The lights shall function independently of other compartments by an automatic "On-Off" switch located on each compartment door.

## **SIDE BODY COMPARTMENTS -- RIGHT HAND SIDE REAR**

One (1) body equipment storage compartment shall be installed on the rear portion of the right hand side of the flatbed surface. The dimensions shall be approximately: 36.00" long, 18.00" high, and 20.00" deep. The compartment shall be constructed of .125" smooth aluminum.

The compartment shall be equipped with a horizontally hinged drop down door constructed of .105" diamond plate aluminum. The door shall be fully gasketed with closed cell neoprene sponge and be held with at ninety degree's with a lanyard.

The door shall have two (2) stainless steel T-handle latches with keyed locks.

The compartments shall be equipped with the following:

### **COMPARTMENT LIGHT(S)**

One (1) surface mount LED light(s) shall be installed in the compartment. The light(s) shall have a clear lens and shall a minimum effective output of 810 lumens.

The lights shall function independently of other compartments by an automatic "On-Off" switch located on each compartment door.

### **HOSE TRAY**

One (1) hose tray approx 18.00" W x 8.00" T x 72.00" D shall be installed on top of the right side compartment(s). The tray shall be made of diamond plate aluminum and shall be open at the rear for quick hose access.

### **FUEL PIPING AND FILL CAP**

There shall be a fuel fill cap provided in the recessed area of the left side rear wheel well clearly marked, "**GASOLINE** FUEL ONLY". The fill shall be piped to the fuel tank.

### **REAR LIGHT APRON**

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

## **ICC UNDER RIDE BUMPER**

An ICC under ride bumper shall be installed at the rear of the apparatus body. It shall be constructed out of 3.00" aluminum channel.

## **12 VOLT ELECTRICAL SYSTEM**

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

## **ELECTRICAL SYSTEM (CHASSIS OEM)**

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

## **ELECTROMAGNETIC INTERFERENCE PROTECTION**

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

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

## **NFPA 1906 CERTIFIED 12 VOLT ELECTRICAL SYSTEM**

The 12-volt apparatus body electrical system shall be provided and shall be in compliance with NFPA 1906 testing and certification procedures as follows:

### **NFPA MINIMUM ELECTRICAL LOAD DEFINITION**

The NFPA 1906 defined minimum electrical load shall consist of the total amperage required to simultaneously operate the following in a stationary mode:

1. Propulsion engine and transmission.
2. The clearance and marker lights.
3. Communication equipment. 5 amp default.
4. Illumination of all walking surfaces, the ground at all egress points, control and instrumentation panels and 50% of total compartment lighting.
5. Minimum warning lights required for "blocking right of way" mode.
6. The current to simultaneously operate and fire pump and all specified electrical devices.
7. Anything defined by the purchaser, in the advertised specifications, to be critical to the mission of the apparatus.

### **RESERVE CAPACITY TEST**

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

### **ALTERNATOR PERFORMANCE TEST AT IDLE**

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

## **TEST CONDITIONS**

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

## **LOW VOLTAGE ALARM**

One (1) Kussmaul 091-85-12 Low Voltage alarm system shall be supplied and installed with a Cole Hersee 4112-RC light/buzzer located in the cab. The system shall detect when the battery voltage drops below 11.8 volts and remains low for 120 seconds.

## **CHASSIS GROUND LIGHTS**

LED ground lights with outward facing angle brackets shall be installed, one (1) under each chassis door.

## **FRONT OF BODY GROUND LIGHTS**

Two (2) LED ground lights with outward facing angle brackets shall be installed under the front of the body. One (1) light shall be located on the left hand side and one (1) light located on the right hand side of the apparatus.

## **REAR STEP GROUND LIGHTS**

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

## **GROUND LIGHT SWITCHING**

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

## **HAZARD LIGHT**

A Whelen model 0SR00FCR flashing red LED light, located in the driving compartment, shall be illuminated automatically whenever any compartment door is ajar.

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

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

## **LICENSE PLATE LIGHT**

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

## **REAR ROAD LIGHTING**

Two (2) sets of 4.00" round LED stop, turn and back-up lights shall be provided, one (1) set on each side of the rear of the truck.

## **MARKER LIGHTS**

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

## **WORK LIGHT, PUMP AREA, 12V**

One (1) 12V adjustable LED work light shall be mounted at the rear of the skid unit to provide light during nighttime operations. The light(s) shall have a black housing with a black rear cover. The light(s) shall have six (6) ultra-bright white LEDs, and shall operate at 12 volts DC.

## **WORK LIGHT SWITCH**

The pump area work light shall be wired to the electric start on the pump.

## **NFPA AUDIBLE AND LIGHTING WARNING PACKAGE**

The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1906. The lighting as specified shall meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode.

## **WARNING LIGHT FLASH PATTERN**

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

## **WARNING PACKAGE ACTUATION CONTROLS**

The warning light package shall be actuated with two (2) warning light switches located on the cab switch panel. One (1) switch for the lightbar, and one (1) switch for the warning lights.

The wiring for the warning light package shall engage all of the lights required for "Clearing Right of Way" mode when the vehicle parking brake is not engaged. An automatic control system shall be provided to switch the warning lights to the "Blocking Right of Way" mode when the vehicle parking brake is engaged.

## **LIGHTBAR**

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

- Four (4) RED Linear LED modules, two (2) on each corner.

- Two (2) RED Linear LED modules, across the front

- Two (2) WHITE Linear LED modules, on the front

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

## **LIGHT BAR ACTUATION**

The light bar shall be controlled by a switch in the cab.

## **LIGHT BAR MOUNTING**

The light bar shall be mounted to the headache rack on the body.

## **LOWER FRONT WARNING LIGHTS**

One (1) pair of Whelen model M6R LED warning lights shall be installed, one (1) each side on the front of the chassis cab.

The lights shall be red in color with red lens.

The light(s) shall be supplied and installed with a chrome bezel.

## **INTERSECTION WARNING LIGHTS**

One (1) pair of Whelen model M4R Super LED warning lights shall be installed, one (1) each side of the chassis cab.

The lights shall be red in color with red lens.

The light(s) shall be supplied and installed with a chrome bezel.

### **LOWER MID-BODY WARNING LIGHTS**

One (1) pair of Whelen model M4R LED warning lights shall be installed, one (1) each side of the apparatus, mid-body.

The lights shall be red in color with red lens.

The light(s) shall be supplied and installed with a chrome bezel.

### **LOWER REAR WARNING LIGHTS**

One (1) pair of Whelen model M6R LED warning lights shall be installed, one (1) each side on the lower rear of the apparatus body.

The lights shall be red in color with red lens.

The light(s) shall be supplied and installed with a chrome bezel.

### **LOWER WARNING LIGHT ACTIVATION**

The lights shall be controlled by a switch in the cab.

### **ELECTRIC SIREN AND CONTROL**

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

### **ELECTRONIC SIREN SPEAKER**

One (1) Whelen model SA315FIP 100 watt speaker shall be provided. The speaker shall have a nylon composite black housing with front loaded, powder coated speaker driver. The speaker shall produce a minimum sound output of 120 dB at 10 feet to meet current NFPA 1901/1906 requirements. The speaker shall be wired to the electric siren located in the cab.

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

### **REFLECTIVE STRIPING**

Reflective striping shall be applied to the perimeter of the truck. Size and design shall be determined by the department.

## **CHEVRON STRIPING**

There shall be alternating chevron striping located on the rear skirt of the apparatus. The striping shall consist of Red and Yellow alternating 6" stripe in an inverted Chevron pattern.

## **LETTERING**

Reflective lettering shall be applied to the cab doors at the direction of the purchaser.

Photos or drawings of the lettering and striping layout shall be provided by the purchaser prior to construction.

## **EQUIPMENT SECTION**

The following equipment (if listed below) shall be supplied with the apparatus by the manufacturer. It shall be shipped loose unless detailed below or otherwise in these specifications.

**BID FORM 2019-E**  
**BRUSH TRUCK FABRICATION**  
**COLUMBIA COUNTY BOARD OF**  
**COUNTY COMMISSIONERS**

Bids must be received in the Office of the Board of County Commissioners, Columbia County, 135 NE Hernando Avenue, Room 203, Lake City, FL, 32055 no later than 2:00 P.M., on April 25, 2019.

Columbia County reserves the right to reject any and/or all bids and to accept the bid in the county's best interest, bid F.O.B., Columbia County, Florida.

**Lump Sum \$** \_\_\_\_\_

I certify that this bid meets or exceeds the County specifications and that the undersigned bidder declares that I have carefully examined the specifications, term and conditions of this bid and I am thoroughly familiar with its provisions. The undersigned bidder further declares that he/she has not divulged, discussed or compared his bid with any other bidders and has not colluded with any other bidders or parties to a bid whatsoever for any fraudulent purpose.

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE NO: \_\_\_\_\_

EMAIL: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

PRINT NAME/TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_