

CITY OF GUNNISON

REQUEST FOR PROPOSALS TYPE I AERIAL FIRE APPARATUS



NOVEMBER 6, 2017

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I. GENERAL INFORMATION

A. INTENT OF REQUEST FOR PROPOSAL

This Request for Proposals and accompanying specifications are to provide instructions and assistance to vendors in submitting a proposal for the above noted equipment for the City of Gunnison, Colorado. Technical specifications are included in Section III.

B. GENERAL CONDITIONS

1. Proposals shall be firm for a period of 90 days commencing January 1, 2018.
2. Any person or agency that has been included on the U.S. General Services Administration or the City of Gunnison debarment list will not be considered.
3. The company and equipment awarded this contract or purchase order shall be required to comply with all local, state and federal requirements related to the contract.
4. The submitted proposal will become a part of any contract issued for this project.
5. The intent of the City is to issue a contract within 60 days of proposal deadline.
6. The City of Gunnison reserves the right to withdraw this Request for Proposals should the City Council of the City of Gunnison fail to appropriate funds for this project.
7. The City of Gunnison reserves the right to reject any or all bids and proposals; to waive informalities or irregularities in the proposals received; to reject non-conforming, non-responsive, conditional or qualified proposals; and to accept the bid/proposal which, in the City's judgment, best serves the interests of the City of Gunnison and its citizens.

C. PROPOSAL REQUIREMENTS

1. Mail, email or hand deliver proposal to:

City of Gunnison
201 W. Virginia Ave.
P.O. Box 239
Gunnison, CO 81230
Email: dspritzer@gunnisonco.gov

Mark Envelope:

2. Deadline for Submittal: It is the responsibility of the vendor to ensure that the proposal arrives at the above captioned address **prior to 4:00 pm, December 29, 2017.**

3. All prospective bidders shall notify dspritzer@gunnisonco.gov in order to receive any subsequent Addenda to this Request for Proposals, if applicable.
4. **The proposal shall include, as a minimum, the following.**
 - a. Cover sheet listing:
 - i. Vendor name,
 - ii. Contact name(s),
 - iii. Phone and fax numbers, and
 - iv. Email address.
 - b. References from other customers who have received similar equipment and services. Include name, business or agency affiliation, phone number and email address.
 - c. Cost Proposal Form
 - d. Exceptions to Attachment A – Requirements and Specifications (if applicable)
 - e. Attachment B – Questionnaire
 - f. Two drawings of the proposed Apparatus.
 - g. Two sets of shop specifications that include any alternate items proposed.
 - h. Detailed description of all components of the equipment and their operating characteristics.
 - i. Warranty. A copy of all warranties shall be provided with the Proposal.
 - j. A demonstration may be requested after the proposals are submitted, at the sole option of the City. If such a request is made, please indicate on the Cost Proposal Form how much notice you will require from notification to demonstration.
 - k. Prices for all options not listed in specifications. Specifically list and describe with a separate price breakdown any recommended attachments, alternatives, or options available that the vendor feels would enhance the operation, value, etc. of the unit for the City of Gunnison.
 - l. Availability of parts and maintenance service, including time frame for parts delivery and availability of loaner equipment, if necessary.
 - m. Financing terms for a 5-year capital lease (if available).

D. INQUIRIES

Questions regarding the specifications and general requirements shall be submitted in writing to, Fire Chief Dennis Spritzer (dspritzer@gunnisonco.gov) no later than December 8, 2017. Responses to all questions shall be issued in the form of an Addendum to all bidders of record no later than December 15, 2017. Vendors are cautioned not to contact other City of Gunnison staff or elected officials with questions regarding the solicitation. Failure to comply may result in vendor disqualification.

E. PROJECT TIMELINE

1. Deadline for Submittal: It is the responsibility of the vendor to ensure that the proposal arrives at the below captioned address **prior to 4:00 p.m. MST, December 29, 2017.**

City of Gunnison
201 W. Virginia Ave.
P.O. Box 239
Gunnison, CO 81230
Email: dspritzer@gunnisonco.gov

Mark Envelope: “**Fire Truck Proposal**”

2. Submittals will be opened publicly and read aloud at **4:01 a.m. MST, December 29, 2017** at:

City of Gunnison
201 W. Virginia Ave.
Gunnison, CO 81230

3. Award shall be made to the responsive offeror whose proposal conforms to the selection and is determined in writing to be the most advantageous to the City of Gunnison, taking into consideration not only cost/price but also build time and the evaluation factors in the request for proposal. **Award to the offeror shall be on or before March 2, 2018**, giving the evaluation team substantial time for review.

F. EVALUATION AND SELECTION

The award of the contract shall be made to the responsible vendor whose proposal is determined to be the lowest evaluated offer resulting from negotiation, taking into consideration the relative importance of price and other evaluation factors set forth in the RFP.

Initially, the proposals will be reviewed by the evaluation team to determine if they are administratively responsive to the RFP. Those proposals that are administratively responsive will be distributed to the evaluation team.

First, the team will determine if the proposal meets all of the minimum requirements (if applicable) set forth in Section I.C. above. This is a pass/fail evaluation.

Second, those proposals that pass the minimum requirement evaluation, will then be evaluated based on the evaluation criteria described below.

1. Product quality/appropriateness
2. Vendor’s qualifications/experience

3. Vendor's total proposed price
4. Vendor's support/service
5. Vendor's warranty/maintenance
6. Is the equipment and compatibility requirements addressed in the proposal?
7. Is the proposed equipment, accessories and services responsive to the City of Gunnison's needs?
8. What is the estimated cost to maintain the equipment proposed for an estimated 20-year life?
9. Is Vendor's participation and responsibility clearly defined?
10. Is the City's participation and responsibility clearly defined?
11. Are high quality services, warranty and maintenance available?
12. What are Vendor's service hours?
13. Has requested information been supplied?
14. Has all necessary equipment been addressed?
15. Has cost, both total and itemized, been addressed?
16. What comparable Colorado municipalities, or contractors, have used the proposed equipment?

II. SUBMITTAL

Submitted information may be discussed and clarified with Vendors, and the City may schedule interviews or meetings.

A. CONFIDENTIAL MATERIAL

Any material that is to be considered as confidential in nature must be clearly submitted in writing as such and will be treated as confidential by the City to the extent allowable by the Colorado Open Records Act (CORA). Pricing cannot be considered confidential.

B. CONTRACT NEGOTIATIONS

The City will evaluate responsive proposals and may select two or more vendors to be fully qualified and best suited among those submitting proposals, based on the factors listed above. Further information, clarifications and negotiations may be requested from all the vendors so selected. Costs and compensation will generally be considered, but is not the sole determining factor. In many cases, other factors, including but not limited to experience, financial and professional capacity, references, service, warranties, proposed approach, life cycle costs, etc. are more important than the initial cost.

After the evaluation, information gathering, and further negotiation is completed, the City shall select the vendor who, in its opinion, best meets the need of the City, and shall award the contract to that vendor. Should the City determine, in its sole discretion that only one

vendor is fully qualified, or is clearly more qualified than the others under consideration a contract may be negotiated and awarded to that vendor.

C. CONTRACTUAL OBLIGATIONS

This proposal, submitted documents and any negotiations, when properly accepted by City on a City Purchase Order, shall constitute a contract equally binding between the successful Vendor and City. The selected Vendor will be considered as prime contractor and shall assume total responsibility for the quality of the services provided. Failure to meet obligations may result in cancellation of any contracts.

D. SUPPLEMENTAL/SUPPORTING MATERIALS

Please include in the proposal descriptive literature/brochures, if available, for the proposed equipment. All user/owner/technical reference manuals shall be included with each type of equipment and submitted upon delivery of equipment.

E. WARRANTY

Vendor shall specify warranty terms and conditions and supply supporting documentation regarding warranty, if available. Specify location of closest provider for warranty repairs and service for proposed equipment.

F. DELIVERY

Delivery shall be FOB Gunnison, Colorado. State delivery date from date of order on the Cost Proposal Form.

G. VENDOR'S OPTIONS/ALTERNATIVES/SUGGESTIONS

Please provide your suggested alternatives, options, enhancements, accessories, etc. which, in your opinion, would provide a better value, service, product, life, etc. to the City and may not be specified in the technical specifications. Please list on the Cost Proposal Form your suggestions/options and indicate the reasoning or justification for your suggestions and state the price or costs associated, if any. Submit brochures/literature explaining the reason for the suggested enhancement, option, etc.

III. SPECIFICATIONS

A. GENERAL

The City of Gunnison is soliciting proposals from qualified vendors to supply and deliver, FOB Gunnison, Colorado, one (1) new custom Aerial Fire Apparatus capable of pumping 2,000 GPM rated capacity. The Fire Pumping Aerial Apparatus shall be manufactured and equipped in accordance with the specifications identified in this Request for Proposals or an approved accepted equal. The apparatus must also comply with (as a minimum) the current specifications as outlined in the most recent edition of National Fire Protection Association (NFPA) standard 1901 and all State and Federal standards at the time of delivery. In the event of a conflict between these specifications those of NFPA 1901 shall prevail. The preferred unit shall generally meet the specifications listed below:

The unit shall meet or exceed the following specifications. All alternatives shall be listed, and shall meet minimum specifications.

Please note the following technical and minimum specifications identified in Section B below. Include any major or minor items not specified but which would normally and reasonably be necessary for proper, safe, efficient and beneficial use and ownership by the City of Gunnison. Vendors are encouraged to submit suggested alternatives, options or additions to the specified equipment that they feel may be beneficial to the City of Gunnison. These items shall be described, indicating the additional benefits, and any associated costs shall be specified separately.

B. SPECIFICATIONS

Complete requirements and specifications are outlined in Attachment A. Responses to required specifications are on the Questionnaire, Attachment B.

IV. EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED

During the performance of a contract awarded pursuant to this advertised "Request for Proposal", the contractor agrees as follows:

- A. Vendor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. Vendor, in all solicitations or advertisements for employees placed by or on behalf of the vendor, will state that such contractor is an equal opportunity employer.
- C. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purposes of meeting the requirements of this section.
- D. Contractor shall follow the applicable provisions of the Americans with Disabilities Act of 1990 as enacted and from time to time amended and any other applicable federal,

state, or local laws and regulations. A signed, written certificate stating compliance with the Americans with Disabilities Act may be requested at any time during the life of this Agreement or any renewal thereof.

V. ILLEGAL ALIEN ADDENDUM

This provision is required in all public contracts by C.R.S section 8-17.5-101(5)

- A. Contractor shall not knowingly employ or contract with an illegal alien to perform Work under this Contract or enter into a contract with a Subcontractor that fails to certify to Contractor that the Subcontractor shall not knowingly employ or contract with an illegal alien to perform Work under the Contract;
- B. Contractor has confirmed the employment eligibility of all employees who are newly hired for employment to perform Work under this Contract through participation in either the e-verify program or the department program;
- C. Contractor certifies that it will use either the e-verify program or the department program procedures to undertake pre-employment screening of job applicants while this Contract is being performed;
- D. If Contractor obtains actual knowledge that a Subcontractor performing Work under this Contract knowingly employs or contracts with an illegal alien, Contractor shall be required to: (1) notify the Subcontractor and the Owner within three days that Contractor has actual knowledge that the Subcontractor is employing or contracting with an illegal alien; and (2) terminate the subcontract with the Subcontractor if within three days of receiving the notice required pursuant to subsection (1), the Subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the contract with the Subcontractor if during such three days the Subcontractor provides information to establish that the Subcontractor has not knowingly employed or contracted with an illegal alien;
- E. Contractor shall comply with any reasonable request by the department made in the course of an investigation that the department is undertaking pursuant to the authority established in Section 8-17.5-102(5).
- F. If Contractor violates a provision of this Contract regarding requirements under Section 8-17.5-102(2), C.R.S., the Owner may terminate this Contract for a breach of the Contract. If the Contract is so terminated, Contractor shall be liable for actual and consequential damages to the Owner. In the event of termination under this provision, the Owner is required to notify the Secretary of State.

VI. INSURANCE REQUIREMENTS

- A. Vendor shall provide, at its own expense, the following insurance for the contractors and its employees relating to work under this project:
 - 1. Worker's Compensation: Statutory
 - 2. General Liability: \$1,000,000 each occurrence and aggregate
 - 3. Auto Liability Insurance: \$150,000 each occurrence and \$600,000 aggregate

- B. The vendor/contractor shall indemnify and hold harmless the City against and from all liability, claims, damages, demands and cost, including attorney fees of every kind and nature and attributable to bodily injury, sickness, disease or death or to damage or destruction of property resulting from or in any manner arising out of or relating to the project and the performance of the work under this contract.

COST PROPOSAL FORM
CITY OF GUNNISON, COLORADO
TYPE I AERIAL FIRE APPARATUS

The undersigned, agrees to furnish and deliver the above-titled items in accordance with the specifications issued for same, and subject to all terms, conditions and requirements provided therein, and in the various bid documents, at the following prices:

Make of Equipment: _____

Model: _____ Year: _____

Engine Manufacturer and Model: _____

Purchase Price (FOB Gunnison) \$ _____

REQUESTED OPTIONS:

VENDOR RECOMMENDED OPTIONS (Include Additional Cost):

Please list any other options, guarantees, etc. that add value or decrease costs of ownership and operation:

DELIVERY TIME FROM DATE OF AWARD: _____(DAYS)

If not specified below, the City of Gunnison assumes no charge for mileage or travel charges while apparatus is under warranty.

Mileage Charges: _____ From: _____

Travel Time Charges: _____ From: _____

Specify any mileage or travel time charges applicable to regular labor charges when apparatus equipment is not under warranty.

Mileage Charges: _____ From: _____

Travel Time Charges: _____ From: _____

Persons signing the proposal must initial any alterations in figures on this form in ink. The City of Gunnison is exempt from all local, state and federal taxes, and prices stipulated by the bidder are considered maximum, and are not subject to any increase due to any taxes, or any other cause or reason.

ATTACHMENT A
CITY OF GUNNISON, COLORADO
TYPE I AERIAL FIRE APPARATUS
REQUIREMENTS AND SPECIFICATIONS

Offers may be submitted on ALTERNATIVE MODELS (equipment), provided they meet the requirements and specifications.

1.0 GENERAL REQUIREMENTS

- 1.1** The work to be undertaken and completed by the contractor shall be the fabrication, assembly, painting, and delivery of one (1) new custom Aerial Platform Pumping Apparatus with a 2,000 GPM rated capacity at 7,800 feet to the City of Gunnison. The Aerial ladder and platform shall have reach of at least 100 feet with a dry tip load rating of a minimum 1,200 pounds. If possible, ladders that articulate will be given preference. The Fire Apparatus shall be manufactured and equipped in accordance with these specifications or an approved accepted equal. The apparatus must also comply with (as a minimum) the current specifications as outlined in the most recent edition of National Fire Protection Association (NFPA) standard 1901 and all State and Federal standards at the time of delivery. In the event of a conflict between these specifications those of NFPA 1901 shall prevail.
- 1.2** Any error, omission or inconsistency that is identified by the Proposer shall be listed as such in the exceptions and a proposal to meet the intent of the specifications shall be listed.
- 1.3** The contractor shall furnish City of Gunnison (“CITY”) at time of delivery the following information per NFPA 1901 Chapter 2:
- A. Two (2) electronic copies of the operation and service manual
 - B. Two (2) parts books
 - C. Two (2) copies of the completed pumper data form (as outlined in NFPA 1901)
 - D. Two (2) copies of the factory four-hour run-in test (as outlined in NFPA 1901), certified by a responsible representative of the contractor
 - E. Two (2) copies of electric schematics as wired
 - F. One (1) copy of pump performance curve showing discharge and pressure relative to pump R.P.M.
 - G. One (1) copy of the certified SAE form showing the horse power and torque curves of the engine used
 - H. Two (2) complete sets of as built line drawing blueprints.
 - I. In addition, all information shall be provided in electronic copy as well.
- 1.4** It is specifically required that the supplier of the equipment shall maintain in the State of Colorado, a technically qualified mechanic or engineer, who may be a direct employee or

subcontractor of the supplier for the purpose of giving complete technical service and guidance in the operation, repair, and maintenance of the new equipment included in this proposal. It is also required that the supplier of the equipment shall maintain in the State of Colorado, a sufficient stock of replacement parts that can reasonably be expected to properly maintain and repair the equipment included in this proposal. The repair parts must be available to CITY for a period of 20 years.

- 1.5** The manufacturer shall unconditionally guarantee the entire apparatus and all component parts, for a period of not less than 3 years after date of delivery and acceptance. The guarantee shall be unconditional for all parts and workmanship.
- 1.6** In all cases, responsibility for the apparatus and equipment remains with the manufacturer until the satisfactory completion of acceptance tests and formal acceptance by the purchaser.
- 1.7** The apparatus shall be constructed with due consideration to the nature and distribution of the load to be sustained and to the general characteristics of the service. Frame, springs, transmission, differential, axles, shafts and gears, and all other parts of the apparatus shall be strong enough to withstand the road speed, practical tests and general service under full load. Wheelbase dimensions to be determined by manufacturer for proper weight distribution of fully loaded vehicle plus 10% of the total GVW. Manufacturer shall specify wheelbase and turning radius left and right. The apparatus shall be so designed that the various parts are readily accessible for inspection, adjustment and repair. Custom chassis shall be so designed for Fire Department use; a commercial chassis is not acceptable.
- 1.8** The apparatus shall be designed and the equipment so mounted with due consideration to distribution of the load between front and rear axles, that all NFPA 1901 and ISO specified equipment, including filled water tank, 6 fully equipped firefighters, 200' 1 3/4" double jacket hose, 200' 2 1/2" double jacket hose, 600' 4" double jacketed hose, and 4,500 pounds extra equipment be carried without damage to the apparatus.
- 1.9** The apparatus delivered must be Underwriter's Laboratories certified and proof of such certification must accompany the apparatus delivered.
- 1.10** The engine and pump shall have the ability to deliver full rated capacity of 2,000 G.P.M. @ 150 P.S.I. from draft of 10 feet at an altitude of 7,800 feet at not over 90% certified governed engine R.P.M.
- 1.11** Attached to the pump panel there shall be a permanently stamped plate stating the rated discharges and pressures as determined by the manufacturer's performance tests at the factory.
- 1.12** All hose connections shall be (NH) National Standard Thread or Storz if 5". All hose connections will be Higbee cut threads, unless otherwise noted. All caps, valve controls and fittings shall be copper-nickel or chrome plated, pump panel and miscellaneous exposed metal parts shall be copper-nickel or chrome plated or polished stainless steel or colored per spec.

2.0 ENGINE AND TRANSMISSION PERFORMANCE SPECIFICATIONS

- 2.1** The Cummins ISX diesel engine powering the chassis shall be at least 500 horsepower. Fully laden apparatus shall have a top speed of 60-67 mph and be able to climb a sustained 7% grade at an average speed of 45 mph at altitudes between 7000' and 9500'. Engine shall have an auxiliary engine braking system as to allow descent of fully laden apparatus on 7% grade and snow-covered roads at a sustained speed of approximately 20mph without use of foot brake.
- 2.2** The transmission for this apparatus shall be the appropriately matched transmission for the size of the diesel engine and the performance specifications desired.
- 2.3** The chassis must be equipped with an Electronic Idle Control (EIC) for the electronic engine. Preset speed is adjustable. The fast-idle provision will only function when the parking brake is set and the transmission is in neutral. Control of the fast idle is by a cab-mounted switch within the reach of the driver.

Cooling system

- 2.4** The cooling system shall have sufficient capacity to meet extended periods of full load operation in local ambient temperatures (from -40°F to 90°F) and maintain the engine at a temperature not to exceed maximum or minimum operating temperature as recommended by the engine manufacturer. High temperature and low coolant alarms shall be provided in the cab and at the pump panel.
- 2.5** The entire chassis cooling system shall have silicone hoses, and hoses shall be protected from rubbing or chaffing at wear points. This shall include all hoses that encounter engine coolant.
- 2.6** A radiator fluid level glass site indicator shall be located where it can be readily viewed for daily pre-trip inspection.

Alternator

- 2.7** A Leece-Neville or similar alternator shall be installed on the engine. The alternator shall be able to adequately supply all power equipment, including a 3KW power inverter, while any emergency lighting systems are activated.

Batteries and Conditioner

- 2.8** A single battery bank system shall be provided. This system shall be capable of engine start after a continuous 150-amp load for ten minutes with the engine off, according to the current NFPA 1901 standard. The batteries shall be fully enclosed and easily accessible for maintenance and inspection.
- 2.9** A Kussmaul Auto Charger and "auto eject outlet" shall be required. Location of charger shall be in the body area and the "auto eject outlet" shall be located near the driver side door. A Kussmaul Auto Charge Status Center Meter shall be required. The plug adapter shall be

provided with bid. The exact location for an “auto eject outlet” and digital readout meter shall be determined at time of pre-construction meeting.

Air Brake System

- 2.10 In compliance with NFPA standards a rapid air build-up airbrake system shall be provided. A parking brake on the spring actuated chambers on the rear axle brakes with a push-pull valve on the instrument panel shall be installed.
- 2.11 An air dryer system with an automatic heated moisture ejector shall be installed in the air brake system.
- 2.12 Manual drains shall be installed on all air reservoirs.
- 2.13 An additional 1200 cubic inch air reservoir shall be installed. It shall be isolated and be plumbed with a pressure protection valve on the reservoir supply side.

Air Compressor

- 2.14 The air compressor on the engine shall be capable of producing a minimum of 16.5 CFM, it shall be gear driven, engine oil pressure lubricated and cooled by the engine cooling system.

Engine Protection Alarms

- 2.15 The engine shall be equipped with an audible alarm system and warning light, for low oil pressure, high coolant temperature, and/or low coolant level. The system shall warn the driver or pump operator of a potentially damaging engine operating condition. This warning system shall not shut down the engine or reduce power under any conditions.

3.0 CHASSIS SPECIFICATIONS

The City of Gunnison Fire Department is a smaller sized department located in a mountain town that requires apparatus to perform many functions. This apparatus will not only be tasked with responding to structure fires, but will also be responding to MVA's and technical rescues. The apparatus will need to navigate narrow roads with switchbacks and steep inclines. CITY will be paying very close attention to overall vehicle length and maneuverability. Innovative ways to shorten the apparatus and lower the turning radius without sacrificing compartment space will be looked at very closely.

- 3.1 The cab and chassis shall be a low-profile medium size, four-door cab built specifically for the fire service, with seating for six (6) firefighters. Commercial chassis are not acceptable. Maximum overall height from ground to top will be no more than 12 feet (12'). Maximum overall length of apparatus to be no longer than 42 feet 2 inches (42'2")

Apparatus Safety Systems

3.2 The apparatus shall meet all safety requirements outlined in NFPA 1901. The following shall be added as options;

- A. Cab front and side air bags.
- B. Side roll protection system.
- C. Automatic traction control (ATC) with switch located on dash.
- D. Blind spot alert system for use when switching lanes

Paint

3.3 Cab and Body parts shall be properly prepared and primed to prevent rust forming between panels and body part joints.

3.4 The entire portion of apparatus and cab shall be finish painted with acrylic urethane Black over Red. Final paint color and design shall be determined at pre-construction conference.

3.5 Aluminum tread-plate and roll up doors are NOT to be painted.

Lettering and Striping

3.6 All lettering shall be simulated gold leaf paint with reflective black shadow. “GUNNISON VOLUNTEER FIRE DEPARTMENT” will be sized to fit on the front cab doors, and to match existing apparatus. Simulated gold leaf with reflective black shadow apparatus numbers will be placed below the center window, both the left and right sides of the cab, sized to fit properly. A 1”-6”-1” simulated gold leaf with reflective black shadow above and below will be installed to circumvent entire apparatus near to middle of cab, resembling other Gunnison apparatus. The rear of the apparatus body and the front extended bumper will have red and yellow chevron striping in accordance with NFPA 1901. Final design will be determined at pre-construction conference.

Exhaust System

3.7 The exit location for the exhaust system for the engine shall be determined at the pre-construction meeting.

Axle/Suspension

3.8 The apparatus front axle and suspension are to be either an independent suspension or a tapered leaf spring. An appropriately sized axle shall be used, that meets the necessary GVW of the apparatus fully loaded with a 10% factor. The final axle capacity shall be determined by engineering at pre-construction conference.

3.9 The manufacturer shall provide an axle and suspension capacity, for both front and rear axles, that will be commensurate with the in-service loaded weight of the apparatus including tools, equipment, hose, water, and personnel.

- 3.10** The rear axle must meet the necessary GVW of the apparatus fully loaded with a 10% factor. The gear ratio shall produce a maximum road speed of 65-67 mph and be electronically governed to 60mph. The final axle capacity shall be determined by engineering at pre-construction conference. If two rear axles are specified an inter-axle differential lock shall be installed so both axles will function as drive axles when engaged.
- 3.11** The rear axle will have tapered leaf springs and shock absorbers.
- 3.12 Add Alternate** – The proposal shall have a price option for an on board automatic lubrication system.

Fuel Tank

- 3.13** The fuel tank shall have a minimum capacity of 50 gallons. Fuel tank must be I.C.C. approved with certification plate attached. Tank shall be mounted as high as possible and no lower than compartment floor. Fill opening to be on the left side of the apparatus. Tank shall have vent port to facilitate rapid filling without “blow-back.” A 1/2" NPT drain plug shall be centered in the bottom of the tank.

Fuel Fill

- 3.14** One cast aluminum fuel fill housing complete with a spring loaded hinged door and a polished trim ring shall be provided low in the rear wheel well area on the left side of the apparatus body with large engraved identification label green in color to read DIESEL FUEL ONLY.

Tires and Wheels

- 3.15** Rear tires shall have Michelin XDN-2 with polished aluminum wheels. Front tires shall have similar tread. Tires and wheels shall be rated at or above axle rating. Final tire selection shall be determined at pre-construction meeting.

Frame

- 3.16** The frame rails shall only have holes for mounting of the engine, cab, pump, or body of apparatus.
- 3.17** Two (2) steel tow eyes shall be welded to the frame on the rear under the bumper. The tow eyes shall be designed and positioned to tow the apparatus weight. All tow eyes shall be rounded and have no sharp edges.
- 3.18** Two (2) steel tow hooks shall be welded to the frame on the front under the bumper. The tow hooks shall be designed and positioned to tow the apparatus weight. All tow hooks shall be rounded and have no sharp edges.
- 3.19** There shall be two (2) 2” hitch receivers mounted to the frame. One (1) hitch shall be located on or below the front and rear bumper. Hitch receivers shall be designed for over the

side low-angle rescues. The final design and location of receiver hitches to be determined at pre-construction conference.

3.20 The 2-inch hitch receivers shall be constructed of heavy steel tubing and reinforced to the truck framework, for the receiving portion. The hitch receivers shall be a Class III/IV trailer hitch.

3.21 There shall be one (1) male eye hook 2-inch receivers supplied.

3.22 Frame shall be finished in manner to combat corrosion.

Multiplexing

3.23 Multiplexing shall be installed in the apparatus wherever possible for the reduction of wiring and ease of maintenance. Switching that is described in the following specification shall conform to multiplexing layout as necessary. Consult with the CITY at the pre-construction conference for specific layout of switching systems that will be multiplexed.

3.24 All chassis wiring shall be type "GXL" in accordance with S.A.E. J1128 and NFPA 1901. All wiring shall be color coded and continuously marked with the circuit number and function.

3.25 All wiring to be covered in nylon heat resistant "HTZL" loom rated at a minimum of 300 degrees F exceeding the heat requirements of NFPA 1901.

EMI/RFI protection

3.26 The apparatus shall incorporate the latest designs in the electrical system with state of the art components to ensure that radiated and conducted electromagnetic interference (EMI) and radio frequency interference (RFI) emissions are suppressed at the source.

3.27 The apparatus proposed shall have the ability to operate in the environment typically found in fire ground operations with no adverse effects from EMI/RFI.

Angle of Approach and Departure

3.28 The angle of approach and departure shall be a minimum of 15 degrees from the lowest hanging appendage on the front and rear of the apparatus.

Front Bumper

3.29 The front bumper shall be heavy duty 3/8" steel wrap-around, and extended no more than 24" ahead of the cab for the full width of the cab. Final design will be determined at pre-construction conference.

Air Horns

3.30 Dual 24" air horns shall be recessed in the front bumper, one each on the left and right-hand sides. A 3/8" airline "teed" equal distance from each horn shall be installed. An additional 1200 cu.in. reservoir with a 90-psi protection valve shall be installed to prevent depletion of

brake air system. Actuation shall be actuated at the steering wheel and a rocker switch accessible to the officer and at the pump panel.

Speakers

3.31 One 100-watt speaker shall be recessed in the front bumper. Speaker shall be bolted to bumper by means of a polished aluminum trim ring on the front face of the bumper.

Electric Q siren

3.32 A 10" Federal Q coaster siren shall be mounted in (recessed) the front of the bumper extension. Siren shall be activated with rocker switches for the officer and by steering wheel horn for driver. A siren-brake switch shall be installed in the switch panel accessible by driver and officer.

Steering and Cramp Angle

3.33 A hydraulic power assist steering gear shall be provided. The hydraulic power steering pump shall be gear driven from the engine. Estimated cramp angle and turning radius will be provided with a minimum cramp angle of 42 degrees for both left and right turns with the tires specified.

Steering Column

3.34 The steering column shall be a tilt and telescopic type with an 18" minimum steering wheel. The steering wheel shall be covered with black absorbent padding. The steering wheel should have controls located on the top of the wheel that can control the headlights, exhaust brake level, and windshield wipers. The steering column shall contain a self-canceling turn signal switch, four-way hazard switch and headlamp dimmer switch on turn lever.

The driver compartment space will be free of any arm obstructions interfering with smooth steering.

ABS System

3.35 An anti-lock braking system with automatic traction control shall be installed on the axles. The system will be a category 1, 4-channel 4 sensor (4K-4S). The ABS will provide for safer vehicle control during braking and reduced stopping distance in all skid applications. The traction control shall apply brake on slipping wheel end of drive axle and drop electronic engine throttle back to prevent wheel spin while accelerating on a slippery surface.

Chains

3.36 On Spot automatic tire chains shall be mounted for rear duals, with a switch mounted on dash easily accessed by driver.

4.0 CAB AND SEATING AREA

4.1 The cab shall be a medium size, four-door, tilt cab engineered for the weight of 6 firefighters.

4.2 The cab front doors shall be flush, full length with a maximum 18" inner step. The front doors shall have a full roll down operated window. The rear side doors shall be flush with an enclosed two step entrance. The side rear door windows shall be full roll down operated. Fixed cab side windows shall be installed behind the front cab doors. All glass used in the cab shall be automotive tint and each window shall be the same height as the windshield to provide maximum visibility.

4.3 Exterior door latches, suitable for use with firefighter gloves, shall be provided on all cab side doors. All doors to have black "splatter" paint or polished stainless-steel panels, no molded door panels will be accepted. The rear cab wall shall be .125" thick aluminum and shall be covered with black padded vinyl to match the headliner.

4.4 Grab handles shall be installed for entering and exiting the front of the cab. The cab floor shall be heavy duty safety tread black rubber coating, or similar.

4.5 A dark tint shall be applied to jump seat windows and jump seat door windows to aide in cab cooling and to help protect passengers from radiant solar energy. Tint to provide 100% UV protection.

4.6 A full description including grade, thickness, and tensile strength of the proposed material for cab construction must be included with the bid.

4.7 A distance from ground to bottom of cab doors shall not exceed a height of 30".

Driver instrumentation and controls

4.8 To make the apparatus safe and for ease of use while driving or operating, the dash board shall be a "wrap around style" console. No buttons, switches, or controls shall be located in a manner, that obstructs the drivers or officers vision when the apparatus is in motion. All buttons, switches, gauges, controls, and screens shall comply with NFPA and federal safety regulations.

4.9 All controls, buttons, switches, and gauges shall be located in such a manner that the driver and/or officer can control, while in a seat belted position wearing firefighting turn out gear.

4.10 All controls, buttons, switches, and gauges shall be illuminated during night time operation of the apparatus, with a dimming switch controls, unless indicated.

4.11 The cab dashboard panel will have black textured anti-glare surface. Access panels shall be easily removable for access to the gauges and wiring without having to disconnect wiring or harnesses. The instrument panel will comply with the latest NFPA 1901 Standards. Final design and layout shall be confirmed with CITY at the pre-construction conference.

Seating

- 4.12** The four rear seat positions shall be SCBA type seats for the quick donning of air packs. Seat backs shall accept an MSA (H-45 SL) cylinder in an MSA FireHawk pack. Four “fold-up” style seats shall be provided in the rear of cab, inboard facing forward. The driver/officer seats shall not be air-ride equipped. All seats shall have extensions on the female end of seat belt. Final design shall be determined at pre-construction conference.
- 4.13** Seat belts for the firefighters seating positions shall be located to retract away from the direction of travel, to exit the apparatus. Seat belts shall be a “bright red” color.

Cab Accessories

- 4.14** A radio interface cable shall be required for CITY 800 MHz radio system. Cable shall be active when main battery power switch is on. Radio shall be provided by CITY for installation by manufacturer. Radio shall be wired to battery switch and not cut out when ignition switch is turned on. Type of cable shall be determined at time of pre-construction meeting. Location of radio head shall be determined at post paint inspection.

Heater, Defroster, Air-Conditioner

- 4.15** An appropriately sized heater and air conditioner shall be installed for climate of Gunnison.
- 4.16** An in-cab heating and defrost system shall be required, including multiple directional vents for defrost and heating. Controls shall have illustrations showing heat towards the cab, defrost, upper and lower forward vents, lower vents. Defrost shall be directed towards front windshield, driver’s window, and officers window.
- 4.17** The rear of the cab shall have an independent heat system to include multiple direction vents.

Multi-Plex Color Screen

- 4.18** Two color Multi-Plex monitor display screens shall be required. One on the right side of the dash, placed in a manner that does not reflect off the windshield and can be seen and operated from the officer’s seat. One on the left side of the dash placed in a manner that does not reflect off the windshield, can be seen from the driver’s seat and is not blocked by any part of the steering wheel. Screen shall be active when main battery switch is on.
- 4.19** Screen shall have multiple functions. Screen shall have the following functions; a daytime/nighttime brightness setting, off button, page button, home screen button, scroll button, camera button. The page screen(s) shall have the following indicators or functions:

Home Page Screen

- A. Time
- B. Outside temperature

- C. Date
- D. Engine RPM's
- E. Fuel Level
- F. Engine temperature
- G. Transmission Temperature
- H. Battery Level Screen shall notify driver of problem with an audible alert and flashing warning indicator.

Do Not Move Truck Screen

- I. Illustration showing cab and compartment doors open
- J. Person not seat belted Screen shall notify driver of problem with an audible alert and flashing warning indicator.

Diagnostics Screen

- K. Screen shall show diagnostics of the apparatus. Screen shall notify driver of problem with an audible alert and flashing warning indicator on area of apparatus

Seat Belt Screen

- L. Illustration showing person sitting in seat and seat belted
- M. Illustration indicating no person in seat. Screen shall notify driver of problem with an audible alert and flashing warning indicator of person not seat belted.

Video Screen

- N. Video screen shall display the rear of the apparatus. Camera shall be wired to the "Reverse" of apparatus and automatically turns display to video screen. Video screen shall display blind spot on sides of the apparatus. Cameras shall be wired to blinker switch and automatically turn display to video screen.

Additional Display Screens

- O. Any additional mode(s) that are offered by manufacturer shall be included with Multi-Plex package

Data Recording System

4.20 The chassis shall have a Road Safety, Class One Vehicle Data Recorder system installed. The system shall be designed to meet NFPA 1901. The following information shall be recorded:

- A. Vehicle Speed

- B. Two axis accelerometer
- C. Engine Speed
- D. Engine Throttle Position
- E. ABS Event
- F. Seat Occupied Status
- G. Seat Belt Status
- H. Master Optical Warning Device Switch Position
- I. Time
- J. Date

4.21 Each portion of the data shall be recorded at the specified intervals and stored for the specified length of time to meet NFPA 1901 guidelines and shall be retrievable by connecting a laptop computer to the VDR system. Cable and wireless transmitter for data transfer shall be provided to match current CITY software.

Cab Tilt Actuation

4.22 The entire cab shall tilt 45 degrees to allow for easy maintenance of the engine and transmission.

4.23 The cab tilt actuation shall be with an electric over hydraulic lift pump with a control box on a pennant for safe visual operation. A manual override shall be provided. The lift system shall have an ignition interlock and red lock down indicator lamp, which shall illuminate when holding "down" switch to indicate safe road operation.

4.24 Two (2) spring loaded hydraulic hold down hooks outboard of the frame shall be installed for holding the cab securely to the frame.

Interior Cab Trim

4.25 All cab interior vinyl surfaces, including seats, shall be black. The floor shall be black, skid resistant rubber or similar.

Heated Rear View Mirrors

4.26 Combination rear view mirrors, heated flat 16" x 6" head and 7 1/2" heated lower convex mirrors, drivers side to be mounted on a stainless-steel bow swing away-type arm, and passengers side to mounted on an arm attached to corner of cab in a manner that the driver can see through the windshield, shall be installed. Both mirrors shall be remotely operated by a switch located on dashboard and easily accessed by driver.

Wheel Well Liner

4.27 Durable wheel well liners shall be installed, and can be easily removed and replaced.

Lights and Equipment

- 4.28** Exterior lighting shall meet or exceed Federal Department of Transportation, Federal Vehicle Safety Standards and NFPA requirements. All lighting accessories shall be LED unless otherwise noted.
- 4.29** The emergency lighting package shall meet or exceed current Federal DOT, Federal Vehicle Safety Standards and NFPA requirements. The emergency lighting system will consist of all LED lighting. All emergency lighting (light bar, flashers) on the front and sides of the apparatus will illuminate red and white. The rear will have two (2) flashing lights (red & blue) installed high on the apparatus body along with two flashing lights located low. All white emergency lighting will shut off when the parking brake is applied. Two flashing lights on the front grill shall consist of one blue and one red light. Final design of all emergency lights shall be determined at the pre-construction conference.
- 4.30** Two (2) high intensity work lights mounted under running boards. One (1) each left and right mid-ship and rear with switches at operator's panel.
- 4.31** For ground lighting there shall be at least five (5) 4" round LED clear lensed lights placed under the body of the apparatus near the outer edge of body, two (2) driver side, two (2) officer side, one (1) rear, all shall be activated by the parking brake.
- 4.32** One Federal Signal PA300 (model 690002) electric siren with priority tone. Control location in the cab shall be reviewed and decided at pre-con meeting.
- 4.33** Turn signals separate from brake lights with amber arrows.
- 4.34** A master switch/sequencer shall be installed and integrated into the multiplex system for emergency lights on the load manager.

5.0 APPARATUS BODY AND COMPARTMENTS

- 5.1** Apparatus body shall be constructed of 3/16-inch thickness aluminum, thoroughly reinforced and of modern design. The body shall have a minimum 10-year warranty.
- 5.2** The main body and the pump compartment shall be fabricated as individual units and all attachment points heavily reinforced.
- 5.3** Front and rear wheel outside fenders shall be replaceable chrome. Inner wheel wells to be easily replaced if damaged.

Body Compartments

All compartments, shelving, tool mounting boards, etc. shall be finalized with engineering at the pre-construction conference. Any dimensions or compartment configurations given are for guidance purposes only during initial design stage. Final design of compartments and components shall be completed at pre-construction conference.

- 5.4** Compartment doors shall be ROM roll up style doors where applicable. Compartment floors, where appropriate, to be sweep out design. Polished stainless drip moldings shall be installed above all door openings. All compartments will be connected to door open warning light in

the cab. All compartments shall have bar strip lighting. Compartment shall be properly vented in a manner that will reduce the amount of water and dirt that may enter the compartment.

5.5 Compartment sides and walls shall be welded to the superstructure. Seams shall be sealed using an engineered grade polyurethane adhesive sealant.

5.6 Each compartment on the apparatus is to be designed to accommodate tools and equipment designated at pre-con. All tools and equipment shall be mounted at the factory. All compartment shelving and sizes to be finalized at pre-construction meeting.

Body Wiring Raceways

5.7 The body shall be designed to provide easily accessible recessed raceways to fully protect all wiring. Bolted on access panels shall be provided for all wiring routed through the body.

Extra SCBA bottle compartments

5.8 At least four SCBA bottle storage compartments shall be provided and located at the wheel wells of the apparatus body just below long shallow compartment. Compartments shall be constructed entirely of aluminum, or stainless steel, complete with a spring loaded hinged style door (polished stainless steel) and an exterior polished trim ring. Details for specific location and layout for design shall be worked out at the pre-construction conference.

Main Hose-bed

5.9 The apparatus hose body is to be of the streamlined style, properly reinforced without the use of angles or structural shapes, and free from all projections which might injure the fire hose. The bottom of hose-bed shall preferably be no more than 80" above road surface. Refer to hose layout details for more information on hose-bed layout. Floors of the hose beds are to be provided with removable slat style extruded aluminum hose-bed gratings, spaced 1/2" apart for proper hose ventilation. Final design shall be determined at preconstruction meeting.

Hose-Bed Cover

5.10 Covers shall be provided over the hose beds. Contractor shall consult with CITY at pre-construction conference for exact hose bed layout.

6.0 LADDERS AND HOOKS:

6.1 Apparatus shall be able to accommodate the following compliment of ladders and hooks

- A. Duo safety 35' series 1200-A two-section ladder (series 1225-A 35' three-section may be substituted)
- B. Duo Safety 28' series 1200-A two-section ladders (series 900-A 24' two-section may be substituted)

- C. Duo Safety 16' series 875-A Roof ladder
- D. Duo Safety Folding ladder 1275 FR
- E. 12' Fire Hooks Unlimited New York Hook with all steel shaft
- F. 8' Fire Hooks Unlimited New York Hook with all steel shaft
- G. (2) 6' Fire Hooks Unlimited New York Hook with all steel shaft

All ladders and hooks to be provided by apparatus manufacturer.

7.0 FIRE PUMP, PRE-CONNECTED LINES, DISCHARGES, INLETS, AND HOSELOADS

Fire Pump

- 7.1** The fire pump shall be a minimum 2,000 GPM mid-ship or rear mount pump designed for the fire service. The pump shall be tested and certified by Underwriters Laboratories as outlined in NFPA 1901. The pump shall be single stage and shall include the latest design of impellers, flame plated impeller hubs, mechanical seals, impeller wear rings, and pump casing.
- 7.2** Anodes shall be installed in the pump and all plumbing shall be stainless.
- 7.3** There will be a manual override system in case of electrical failure. The pump transmission shall be of the latest design. The pump and transmission shall be easily separated for repair. All drive lines shall have equal torque ratings.
- 7.4** The pump shift will be air operated from a switch mounted in the cab. There will be a manual system in case of electrical failure. There will be two green indicator lights in the cab and one green light on the pump panel indicating that the pump is engaged and a second stating safe to pump. In addition, a switch will be added to open the tank to pump valve.
- 7.5** The chassis shall have a supplementary cooling system that uses water from the discharge side of the pump to cool the engine using a closed heat exchanger. A valve on the pump panel shall control this cooling system. There shall be a 3/8" pump cooling line from the pump tank fill line which is connected into the booster tank and operated with a quarter turn ball valve marked "PUMP COOLER ON/OFF."
- 7.6** The pump shall have an Elkhart 40-41, or similar intake relief valve installed on the intake side of the pump. The discharge shall be away from the pump operator and labeled DO NOT CAP. There shall be a manifold drain valve assembly to drain the entire pump by pulling a single control and labeled PUMP DRAIN.
- 7.7** There shall be two pump manuals from the pump manufacturer covering pump operation, maintenance, and parts.
- 7.8** A complete "cold weather" package shall be installed to prevent pump, all associated water lines, gauges and any other pump equipment from freezing in temperatures as low as -40 degrees F. Equipment shall include but not be limited to Belly pan for heat retention, engine hot water heater in pump compartment, electric heater installed in pump housing. Final design and layout shall be confirmed with the owner at the pre-construction conference.

Engine minder controls

7.9 An FRC In Control governor system shall be utilized to set and adjust pressure and RPM of pump.

7.10 The engine shall be equipped with a PSG (Pressure Sensor Governor) system, with a programmed ECU (Electronic Control Unit) and a 1/4" NPTF pressure transducer suitable for vertical installation in the discharge manifold of the fire pump. The PSG shall be controlled by the FRC, for the pump panel providing switches for psi or rpm functions and for increasing or decreasing pressure or rpm. An FRC unit operates the PSG and displays all vital engine operating parameters such as oil pressure psi, engine oil temperature (degree F), and engine RPM, voltage, and fuel level. A check engine and stop engine light shall be integral in the Fire Commander.

Pump Operators Panel

7.11 Pump operators panel shall consist of all gauges, valve controls and switches needed for the efficient operations of the pumping and auxiliary operations. Adequate LED lighting for night operations shall be provided. Final design of the pump operator's panel shall be approved by the owner prior to construction, at the pre-construction conference.

7.12 All outlets to be controlled from operator's panel. Pump to have one central drain to completely drain pump and all water lines. Pump shift to be a remote-control type from inside cab and shall have manual override at pump operator's panel. All connections must have proper clearance for the use of spanner wrenches. All inlets & outlets to be capped with color coded caps and chains provided. The one-piece panel around all inlets shall be bolted in place and removable with easy access for drain valves.

7.13 Provide on the pump panel near the pressure governor an air horn activation button. Below the button provide a label with the wording "Air-Horn"

NOTE: The speedometer and odometer shall be deactivated while in pumping mode.

Operating Controls and Devices

7.14 Pump Controls: All discharge valve controls shall be electronically controlled. All fire flow valves to be brass, swing out style, and 1/4 turn ball valves that are easily replaced, located behind the pump panel. All intakes and discharges shall be Akron except where noted.

7.15 All pump controls shall be permanently marked as to their functions. The discharges will be color coded with the associated valve; color coding design shall be approved by the owner at the pre-construction conference. Gauges and valves must be intuitively aligned for a clean and easy to operate pump panel.

Manifold Drains

- 7.16** A Class 1 manifold drain valve shall be furnished with all pump drains connected to it so that the entire pump system may be drained by one control.
- 7.17** A chrome plated "T" handle control is to be provided and located at the pump operator's panel properly identified "PUMP DRAIN".
- 7.18** All discharges and intakes shall have individual manually operated drains.

Priming System

- 7.19** A high capacity, electrically driven oil-less rotary vane priming pump shall be provided which is rigidly attached to the pump transmission and operated by a lever on the pump panel. The priming pump, priming valve, and piping assembly shall be included in the pump assembly.
- 7.20** The pump shall be capable of taking suction and discharging water with a lift of 10 feet in not more than 45 seconds with the pump dry, through 20 feet of suction hose of appropriate size. It shall be capable of developing a vacuum of 22" at an altitude of 8,000 feet.

Gauges

- 7.21** All discharge connections will be individually gauged and to be of liquid filled type. There shall be two (2) plugged 1/4" standard pipe thread connections for test gauges; one on the suction side and one on the pressure side of the pump and shall be accessible from the pump panel. All gauges, instruments, and controls will be permanently labeled (riveted or screw attached) at the base of the levers.
- 7.22** One water tank water level gauge shall be visible from operators' panel, tank level gauge to be electric with light indicators. Two additional color-coded tank level indicator lights shall be mounted high on both sides of rear cab. Lights shall be visible from at least 50' distance.

Intakes

- 7.23** There shall be two 6" intakes on apparatus; one on each side of the apparatus. The intakes shall terminate with 6" NH male connected to TFT AX1ST-NX 4.5" female gate valves.
- 7.24** There shall be one-2 1/2" gated intake on the left side of the apparatus with 2 1/2" NH female chrome swivel. 2 1/2" chrome plated plugs shall be supplied and attached to the bezels by means of a chain. All intakes shall have a removable strainer and each intake and discharge shall be equipped with a 3/4" quarter turn bleeder valve with lever handles.

Discharges

- 7.25** Pre- Connected hose lines
- A. Cross-lays: 1@200' 1.75" and 1@200' 2.5" in a flat, minuteman or similar type load. Final location to be determined at pre-construction conference.

- 7.26** There shall be three 2 ½" discharges with 30-degree chrome plated elbows to 2 ½" NH male with cap and chain.
- 7.27** There shall be a master discharge with a 4" Akron valve or similar. The discharge shall have a 30-degree pipe elbow and adapter to a 5" Storz and 4.5" male with cap and chain.
- 7.28** There shall be one discharge to supply aerial master stream.

Water

- 7.29** The apparatus will be equipped with no less than a 200-gallon poly water tank to be installed with the lowest possible profile and proper weight distribution. Water tank shall be easily removable from body if necessary.
- 7.30** Tank to have forward filler stack of at least 12" square with hinged cover and vent. Tank interior provided with ample baffle plates for proper driving stability. Sump in bottom of the tank shall have a 3" clean-out plug, the tank overflow to terminate behind rear wheels.
- 7.31** Tank shall have a removable top to provide access to all interior compartments; water tank to be covered by a lifetime warranty, parts and labor.
- 7.32** A pipe 4" diameter (minimum) to be used to connect the tank to the suction side of the pump with a ¼ turn electric driven 4" valve with manual override, controlled at the pump panel. Tank to pump line shall have a one-way check valve. The fill line from the pump to the tank will be 1 1/2" with valve control at the operator's panel.

Hose-load

- 7.33** Hose bed shall have enough room for 600 feet of All-American Hose Triple Duty 4in supply hose in a flat lay configuration.

8.0 AERIAL LADDER

- 8.1** Specifications All components of ladder shall meet or exceed NFPA 1901 Preference will be given to apparatus with articulating ladders

In addition:

- A. Ladder shall have a minimum of 1,200-pound dry tip rating
- B. Ladder shall have a minimum of a 100-foot reach
- C. There shall be a platform or rescue cage attached to ladder
- D. Minimum of one 1500 gpm nozzle mounted on platform
- E. Pre-Piped waterway to supply aerial master stream
- F. Connections in platform for both 1.75 and 2.5 in hand lines
- G. Mount in platform for ventilation chainsaw
- H. All components responsible for moving aerial ladder shall have appropriate redundant systems that can move and stow the ladder if malfunction occurs.

I. Platform or cage shall have a secure way to mount stokes basket

8.2 Add Alternate – Manufacturer shall add price for ladder mounted breathing system.

9.0 CONSTRUCTION CONFERENCES AND SERVICE

Builder shall have four construction and inspection conferences as follows.

Pre-Construction Conference

9.1 Manufacturer shall provide flight and housing for four CITY representatives to meet with apparatus representatives at the apparatus manufacturer's location. No work shall be done on the apparatus until after the pre-construction conference has occurred.

Torque Box Mounting Conference

9.2 Immediately following the mounting of the torque box to the chassis, the apparatus manufacturer shall supply flights and housing for two CITY representatives to attend a Torque Box Mounting Conference. Conference shall be at the apparatus manufacture location.

Mid-Construction Conference

9.3 Midway through the construction of the apparatus, manufacturer shall supply flights and housing for four CITY representatives to attend a Mid-construction conference. Equipment mounting locations will be finalized at this conference. Conference shall be at the apparatus manufactures location.

Final Inspection Conference

9.4 Manufacturer shall supply flights and housing for four CITY representatives to do a final inspection of the apparatus at the builder's plant. Inspection shall occur after the builder has run the apparatus through and passed all U.L. and NFPA requirement for the apparatus.

Builder shall at this time make any final adjustments and fixes to the apparatus to match the specifications determined. Builder shall supply all test results at the time of inspection.

Service Center

9.5 Builder shall indicate a regional service center in the area to provide CITY a location for major repairs. CITY shall not be required to take apparatus to service for warranty work that can be done in shop by the department's designated EVT.

Accessory Equipment to be supplied with Apparatus

- 9.6** The following basic equipment specified in NFPA 1901 shall be provided with the completed apparatus; all ladders, and pike poles as outlined previously.
- 9.7** Set of two wheel chocks, mounted under running board or similar near rear wheel, meeting or exceeding SAE J348 standard for wheel diameter on apparatus with final location to be determined at mid-construction conference.
- 9.8** Manufacturer shall supply one (1) quart touch up paint for each color on apparatus. Safety equipment as required by the U.S. Department of Transportation. Spare fuses and two (2) reflective warning triangles shall also be provided.

Acceptance Test

- 9.9** After Delivery to City of Gunnison (CITY), CITY shall do a second UL pumping test as well as all NFPA acceptance tests to ensure apparatus is in proper working order, paid for by the manufacture. Any problems found at this time shall be corrected by manufacturer before apparatus is placed in service as a first line apparatus by CITY. CITY reserves the right to perform other tests as outlined in NFPA 1901, failure of which may be cause for rejection of the apparatus. All tests shall be made with all power consuming devices operating.

Apparatus Delivery

- 9.10** Apparatus manufacturer is responsible for delivery of the apparatus. Apparatus shall be delivered to 217 W. New York Ave., Gunnison, CO under its own power. Manufacturer shall contact CITY's designee prior to delivery for drop off arrangements. Builder is responsible for all associated delivery costs.
- 9.11** In the event the apparatus fails to meet the test requirements on first trials, second trials may be made at the option of the contractor within 20 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to make such changes as CITY may consider necessary to conform to any clause of the specifications within 20 days after notice is given to the contractor to make such changes shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by CITY or its use by CITY during the above specified period with the permission of the contractor shall not constitute acceptance of the same.
- 9.12** In the event of rejection by CITY, all sums previously paid by the City of Gunnison shall be refunded to CITY by the contractor.
- 9.13** A competent instructor shall be furnished at the factory by contractor for a reasonable period to demonstrate said apparatus to the CITY representatives, and to give its employees necessary instructions in the operation and handling of apparatus. Such demonstration shall be made solely by and under the authority and direction of the contractor.

ATTACHMENT B
CITY OF GUNNISON, COLORADO
TYPE I AERIAL FIRE APPARATUS
QUESTIONNAIRE

No proposal will be received or considered unless the Proposer has furnished with their proposal the following questionnaire fully completed. Any questions ending with a question mark shall be answered "yes" or "no" only, with a full explanation given on the required "Exceptions to Specifications" page.

Name, address, email address and telephone number of person submitting proposal:

Name and address of apparatus manufacturer's factory where truck will be built:

Name, email address and telephone number of a contact person at apparatus manufacturers factory:

Number of year's apparatus manufacturer has been in business:

Has the apparatus manufacturing company or any of its subsidiaries filed bankruptcy within the past ten years?

1. Type of apparatus:
2. Model number:
3. Unconditional 3-year guarantee provided?
4. Overall length:
5. Overall width:
6. Overall height:
7. Type of chassis:
8. Chassis model number:
9. Engine manufacturer:
10. Engine Model number:
 - a. Size:
11. Silicone coolant hoses provided as specified?
12. Jacobs engine brake provided as specified?
13. Transmission: Manufacturer:
 - a. Model number:
 - b. Transmission retarder provided as specified?
14. Will apparatus meet speed performance specifications?
 - a. Top Speed:
 - b. Speed up 7% grade:
 - c. Maintain speed in four-wheel drive?
15. Front Axle Capacity:
16. Front springs Capacity:
17. Cramp Angle:
18. Rear Axle Capacity:
19. Rear Axle Gear Ratio:
20. Rear Springs Capacity:
21. Suspension Type:
22. Are auxiliary rear springs provided?

23. Air compressor Size:
24. Air dryer provided as specified?
25. Chassis wheelbase:
 - a. Chassis cab to axle:
26. Frame Dimensions:
27. Bumper material and size:
28. Wheel Size and Type:
29. Tire Size and Type, Front:
30. Tire size and Type, Rear:
31. Fuel Tank capacity and location:
32. Alternator provided:
33. Batteries:
 - a. Manufacturer:
 - b. Amp Hour rating:
 - c. Number of Batteries
34. Multiplexing provided?
35. Electrical console provided as specified?
36. Angle of approach:
37. Angle of departure:
38. On Spot chains provided as specified?
39. Cab window tint as specified?
40. Heater / AC provided as specified?
 - a. Heater BTU:
 - b. AC size:
41. SCBA release brackets provided in SCBA seats as specified?
 - a. SCBA bracket manufacturer and model number:
42. Seating and belt restraints provided as specified?
43. Heated mirrors provided as specified?

44. Water Tank
 - a. Capacity:
 - b. Is tank poly constructed as specified?
 - c. Tank suction with sump clean out provided as specified?
45. All emergency lighting and equipment provided as specified?
46. All body lighting provided and mounted as specified?
47. All scene / work lighting provided and mounted as specified?
48. Are all brand names of lighting and equipment provided?
49. Bolts used in construction of the body "hardened"?
50. Polishes aluminum drip moldings provided as specified?
51. Rear tow hook(s) attached directly to the chassis frame rails?
52. Side mount racks for ladders and suctions provided as specified?
53. Hard suction storage trays provided and mounted as specified?
54. Compartment sizes and configuration as specified?
55. Compartment shelving provided as specified?
56. Compartment Sizes:
57. Left Side Front:
58. Left Side Rear:
59. Left Side Center:
60. Right Side Front:
61. Right Side Center:
62. Right Side Rear:
63. Rear:
64. Over Pump Panel:
65. Are the ladders, trash hook, and pike pole provided and mounted as specified?
66. Fuel fill location provided as specified?
67. Hose bed layout and capacity as specified?
68. Hose bed cover provided as specified?

69. Hose bed dividers and compartment provided as specified?
70. Fire Pump:
 - a. Manufacturer:
 - b. Model:
 - c. Type:
 - d. Capacity:
71. Flame Plated Impeller Hubs provided as specified?
72. Mechanical Pump Seals provided as specified?
73. Are all pump components, such as the transfer valve, pump shift, priming system, and the manifold drain manufactured as specified?
74. Rotary Vane priming pump provided as specified?
75. Pump panels constructed and provided as specified?
76. Main Pump Drain with individual Relief Valve Drains provided?
77. Is a Ball Type Electric Transfer Valve provided as specified?
78. Are all pump suction and plumbing provided as specified?
79. Suction dump relief valve and plumbing provided as specified?
80. 90-degree ball valve style drain valves and bleeders provided?
81. Cold weather package provided?
 - a. What does package include?
82. Pump panels bolted in place and removable?
83. Individual pressure gauges provided as specified?
 - a. Flow meters provided on pre-connected lines?
84. Size, brand and style of gauges provided:
85. Engine gauges and warning devices provided as specified?
86. Are all painting procedures used as specified?
87. Is brand and color of paint provided as specified?
88. Wheel wells undercoated as specified?
89. Reflective stripping provided as specified?
90. Lettering provided?

- 91. Is all accessory equipment provided as specified?
- 92. Touch-up paint provided as specified?
- 93. Will the truck comply with all current NFPA 1901 requirements?
- 94. Are all brand names proposed where specified?

Provide five (5) locations where this type of apparatus has been delivered, and in service, along with the name and telephone number of a contact person for each location listed:

- 1)

- 2)

- 3)

- 4)

- 5)

As stated at front of this Questionnaire, all answers shall be made in a "yes" or "no" format, where question marks appear. A separate page marked "Exceptions to Specifications" shall be included and attached to the Proposal, fully explaining any exceptions you have taken to the advertised specifications. All exceptions shall be listed as to page number and paragraph.

NOTE: Failure to complete and return this form in its entirety will be grounds for rejection of proposal.

Authorized Signature