

County of Otero Purchasing
1101 New York Ave., Room 118
Alamogordo, NM 88310
(575) 434-0710
FAX (575) 443-2914



Sealed Bid 14-014
Fire Apparatus for High Rolls VFD
Bid Deadline: Thursday, February 20, 2014
@ 3:30 PM

Procurement Agent: Ginger Herndon

INVITATION FOR BIDS

THE COUNTY OF OTERO IS REQUESTING COMPETITIVE SEALED BIDS FOR THE FOLLOWING GOODS OR SERVICES:

TITLE: HIGH ROLLS APPARATUS
BID NO.: 14-014
OPEN: THURSDAY, February 20, 2014 @ 3:30 P.M. local time

FOR ADDITIONAL INFORMATION CONTACT:

GINGER HERNDON PURCHASING AGENT
PHONE: (575) 434-0710

THE OFFICE OF THE PURCHASING AGENT, COUNTY OF OTERO WILL RECEIVE COMPETITIVE SEALED BIDS FOR THE GOODS OR SERVICES DESCRIBED IN THIS BID AT:

VIA MAIL

OTERO COUNTY PURCHASING
1101 NEW YORK AVE. ROOM 118
ALAMOGORDO, NM 88310

HAND CARRIED

OFFICE OF THE PURCHASING AGENT
1101 NEW YORK AVE. ROOM 118
ALAMOGORDO, NM 88310

ANY BIDS RECEIVED AFTER BID OPENING DATE/TIME WILL BE RETURNED UNOPENED. PLEASE USE THE ENCLOSED MAIL LABEL ON THE OUTSIDE OF YOUR ENVELOPE.

NOTE: USE OF THE MAIL SERVICE IS AT YOUR OWN RISK FOR PROPER DELIVERY.

DUE DATE, Thursday, February 20 2014 @ 3:30 PM

Having carefully examined the notice to bidders, general instructions to bidders, terms and conditions, supplemental terms and conditions, and project specifications, addenda(s), the site of the work, the work on the above-named project, the undersigned hereby proposes to furnish all materials, labor, equipment, tools, transportation, services, licenses, fees, permits, etc. (not including New Mexico Gross Receipt Taxes or any additive alternates) required by said documents and to complete all divisions of the work stipulated. The Board reserves the right to reject any or all bids and waive any/all formalities.

SEE ATTACHED SPECIFICATIONS FOR COMPLIANCE

COMPANY NAME: _____

ADDRESS: _____

PHONE# _____

FAX# _____

EMAIL: _____

PRINT NAME: _____

SIGNATURE: _____

RECEIVED ADDENDA NUMBERS: _____, _____, _____, WHEN ISSUED.

IN STATE PREFERENCE NO: _____

SUPPLEMENTAL TERMS AND CONDITIONS

THESE SUPPLEMENTAL TERMS AND CONDITIONS ARE IN ADDITION TO THE GENERAL INSTRUCTIONS, TERMS AND CONDITIONS AND, IN THE EVENT OF A CONFLICT BETWEEN THE PROVISIONS OF THE GENERAL INSTRUCTIONS, TERMS AND CONDITIONS AND THESE SUPPLEMENTAL TERMS AND CONDITIONS, THE PROVISIONS OF THESE SUPPLEMENTAL TERMS AND CONDITIONS SHALL CONTROL.

GUARANTEED PERFORMANCE:

THE BIDDER, IF AWARDED A CONTRACT AS A RESULT OF THIS BID, GUARANTEES THAT THE MATERIALS SUPPLIED ARE CAPABLE OF THE PERFORMANCE REQUIRED IN THE SPECIFICATIONS IN THIS BID, AND AGREES TO MAKE SUCH CHANGES, ADJUSTMENTS OR REPLACEMENTS AS ARE IMMEDIATELY NECESSARY IN ORDER FOR THE MATERIALS TO MEET THE PURCHASING REQUIREMENTS AT NO COST TO THE COUNTY. IF DEFECTS OR SPECIFICATION FAILURES ARE DISCOVERED, THE PURCHASING OFFICER SHALL HAVE THE RIGHT, NOTWITHSTANDING ACCEPTANCE AND PAYMENT TO REQUIRE THE UNIT/ITEM TO BE PROPERLY FURNISHED IN ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS AT THE COST AND EXPENSE OF THE BIDDER OR THE BIDDER'S SURETY.

INSPECTION OF MATERIALS:

THE COUNTY RESERVES THE RIGHT TO INSPECT MATERIALS PROVIDED BY THE BIDDER THROUGH A CONTRACT RESULTING FROM THIS BID TO DETERMINE THEIR QUALITY, FITNESS AND SUITABILITY. INSPECTION OF THESE MATERIALS MAY BE CONDUCTED WHENEVER THE COUNTY CONSIDERS NECESSARY.

MANUFACTURER'S INFORMATION:

ANY BID MADE IN RESPONSE TO THIS INVITATION MUST INCLUDE THE MANUFACTURER'S MAKE AND MODEL NUMBER (AS APPLICABLE) OF EACH ITEM AND LITERATURE CLEARLY DESCRIBING THE ITEM. FAILURE TO PROVIDE THIS INFORMATION MY RESULT IN REJECTION OF THE BID.

MATERIALS AND WORKMANSHIP:

ALL MATERIALS FURNISHED BY THE BIDDER SHALL BE FREE FROM DEFECTS AND IMPERFECTIONS. WORKMANSHIP SHALL BE IN ACCORD WITH THE BEST INDUSTRY STANDARDS AND PRACTICES. BOTH MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY.

BRIBES, GRATUITIES, AND KICKBACKS:

PURSUANT TO 13-1-191 NMSA 1978, REFERENCE TO HEREBY MADE TO THE CRIMINAL LAWS OF NEW MEXICO (INCLUDING 30-14-1, 30-24-2 AND 30-4-1 THROUGH 30-41-3 NMSA 1978), WHICH PROHIBIT BRIBES, KICKBACKS AND GRATUITIES, VIOLATION OF WHICH CONSTITUTES A FELONY. FURTHER, THE PROCUREMENT CODE (13-1-28 THROUGH 13-1-199 NMSA 1978) IMPOSES CIVIL AND CRIMINAL PENALTIES FOR CODE VIOLATIONS.

COLLUSION

NO PROPOSER SHALL BE INTERESTED IN MORE THAN ONE PROPOSAL. COLLUSION AMONG PROPOSERS OR THE SUBMISSION OF MORE THAN ONE PROPOSAL UNDER DIFFERENT NAMES BY ANY FIRM OR INDIVIDUAL SHALL BE CAUSE FOR REJECTION OF ALL PROPOSALS WITHOUT CONSIDERATION.

COUNTY OF OTERO INVITATION FOR BIDS

GENERAL INSTRUCTIONS, TERMS AND CONDITIONS

IMPORTANT: READ CAREFULLY BEFORE SUBMITTING BIDS. FAILURE TO DO SO SHALL NOT ABSOLVE THE BIDDER FROM RESPONSIBILITY TO PERFORM OR DELIVER AS SPECIFIED.

1. **APPLICABILITY:** Except as otherwise specifically provided in this bid, these General Instructions, Terms and Conditions shall govern the procurement of the items specified in this bid. In the event of a conflict between these General Instructions, Terms and Conditions, Supplemental Conditions or the specifications of this bid, the order of application shall be the Specifications, Supplemental Conditions and the General Instructions, Terms and Conditions. In addition, the Public Purchases Ordinance and promulgated Rules and Regulations shall apply.

2. **DEFINITIONS:** As used in this bid, the definitions of the Public Purchases Ordinance apply including the following.
 - A. **"Bid"** means all documents, including those attached or incorporated by reference, issued by the Purchasing Department for soliciting offers to provide goods, services or construction.

 - B. **"Contract"** means any agreement for the procurement of goods, services, construction or concessions. A Purchase Order issued in response to an offer constitutes a contract.

 - C. **"Contractor"** means an offerer who has been awarded a contract.

 - D. **"County"** means the County of Otero, New Mexico.

 - E. **"Purchase Order"** means a document issued by the Purchasing Office directing the Contractor to deliver goods, services or construction.

 - F. **"Purchasing Office"** means the Purchasing Department of Otero County.

 - G. **"Purchasing Agent"** means the person charged with the responsibility of administering the Department.

 - H. **"Bidder"** means a business that submits a response to a competitive solicitation.

- I. **"Responsible Bidder"** means a business which has the capability in all respects to perform fully the contract requirements set out in the competitive solicitation, and the integrity and reliability which will assure good faith performance, and who has not violated or attempted to violate any provision of law or ethical conduct. Factors which may be considered in determining the offeror's capability to perform, among others, are its financial resources, production or service facilities, service reputation and experience.
- J. **"Responsive Bid"** means a written offer to furnish goods, services or construction in conformity with standards, specifications, delivery terms and conditions, and all other requirements established in a competitive solicitation.
- K. **"Successful Bidder"** means the lowest Responsible Bidder to whom Otero County, on the basis of the County's evaluation, makes an award. A Successful Bidder does not become a contractor until a purchase order is signed by the County.

3. **INSTRUCTIONS TO THE BIDDER**

Sealed Bids are desired from reputable manufacturers of automotive fire apparatus in accordance with the specifications for the apparatus as per attached. These specifications are assumed to be compliant with all current NFPA standards. ***If the vendor knows otherwise, the vendor will notify Otero County Purchasing immediately.***

The apparatus shall meet the detailed requirements of the most current and applicable NFPA Standard and these specifications and any special provision that may be attached.

Pursuant to Sec 13-1-188 NMSA, 1984 Comp., any state agency shall only purchase cars and trucks assembled in North America.

Any exceptions to the bid shall be listed separately and specifications attached are minimum requirements. The specifications submitted herein are all that were available to the Purchaser at the time of this mailing. Minor deviations to the specifications as listed, may be considered.

The apparatus shall be designed to meet the specified rating at 8,000 feet altitude and shall be subjected to off road use; thus engineering, design, and fabrication must allow for the additional stress and strain.

- A. **Submission:** All Bids must be submitted on the Invitation for Bids form enclosed. Failure to do so may disqualify your offer. It is the responsibility of the bidder to submit sufficient additional information to allow for a thorough evaluation of the bid submitted.
- B. **Preparation Method:** All information required in this Bid must be typewritten or handwritten in ink and must be legible. Erasures or other

changes must be initialed by the person signing the offer. Each bid must be signed on the appropriate pages by an individual authorized to bind the bidder submitting the bid.

- C. Unit Prices: The unit price for each item offered shall be shown unless otherwise specified. In the case of a discrepancy between the unit price and the extended price, the unit price will govern in determining the price used for evaluation. Unit prices offered should be for the units specified.
- D. Delivery Time: Delivery time stated in the specifications shall apply. Deviations by the bidder shall be stated. Time, if stated in number of days, will be consecutive calendar days.
- E. Payment Terms: The Invitation for Bids form provides space for the bidder to identify the payment terms that the bidder is offering. Terms of less than twenty (30) days will not be considered. The discount term shall not begin until the goods, services or construction have been delivered and accepted and the correct invoice received in the County Accounts Payable Office.
- F. Freight Policy: Freight will be F.O.B. Destination (As indicated on the Invitation for Bids form), Freight Prepaid, unless otherwise specified in this Bid.
- G. Taxes: Bidders shall not include any applicable gross receipts taxes in its offered price, unless specified otherwise in this bid, and such offer will be construed in the manner. The County will, under appropriate circumstances, furnish a non-taxable transaction certificate. Determination of whether the tax is due and payment of the tax is the responsibility of the bidder. Applicable taxes are to be included in each invoice due and may not be billed more than sixty (60) days after providing the services to which the taxes apply.
- H. New Material, Etc.: All materials, supplies, equipment, and vehicles specified in this Bid shall be new, the latest in production and manufactured within the last twelve (12) months (computed from the date and time of offer opening) unless otherwise indicated. This does not apply to materials, supplies, equipment or vehicles used by the Contractor to provide the required items of tangible personal property, services or construction.
- I. Warranty: The bidder agrees that the items of tangible personal property, services or construction furnished under any contract resulting from this bid shall be covered by the most favorable commercial warranties the bidder gives to any customer for such items. Further, the bidder agrees that the rights and remedies provided in such warranties extend to the County and are in addition to and do not limit any rights afforded to the County by any other clause of this bid. The bidder agrees not to

disclaim warranties of fitness for a particular purpose of merchantability. Warranties shall become effective at the time of acceptance.

- J. Equivalent Bids: Where a product is characteristic of a sole manufacturer, or where a brand name is indicated in the specifications, it shall be defined to mean "minimum acceptable level" or "minimum quality required" by the County unless the specifications state that no substitutions or equivalents will be allowed. If the bidder offers an item other than the one specified, which the bidder considers comparable, the manufacture's name and model number of that item must be specified in the bid and sufficient performance specification and descriptive data provided to permit a thorough evaluation. Failure to provide the appropriate information may result in disqualification of the bid.
- K. **Exception to Specifications:** Bidders are to state any exceptions taken to this bid the bidder is required to furnish the items exactly as specified and to comply with all other requirements of this bid. The bidder shall clearly note the variances and provide adequate documentation of proof that the alternate meets or exceeds specifications.
- L. **Indemnity:** The bidder to whom an award has been made as a result of this bid expressly agrees to defend, indemnify and save harmless the County and its officer, agents and employees from and against any and all claims, suits, demands, actions, or proceedings of every nature and description brought because of any injury or damage received or sustained by any person, persons, or property arising out of the bidder's providing the goods, services for construction pursuant to the bid or by reason of any act or omission, neglect or misconduct of the bidder, the agents, employees or subcontractors of the bidder or the agents or employees of any subcontractor of the bidder. The indemnity required herein shall not be limited by reason of the specification of any particular insurance coverage.
- M. **Patent Indemnity:** If any item furnished pursuant to any contract resulting from this bid shall be covered by any patent, copyright, or application for patent or copyright, the bidder shall defend, indemnify and save harmless the County from any and all loss, cost or expense or any and all claims suits, or judgments as a result of the use of such item in violation of rights under such patent, copyright, or application for patent or copyright.
- N. **Public Inspection:** Each bid shall be open to public inspection, except to the extent the bidder designates trade secrets or other proprietary data to be confidential. Material so designated shall accompany the bid and each page shall be clearly marked and readily separable from the bid in order to facilitate public inspection of the non-confidential portion of the bid. Prices and makes and models or catalog numbers of the items offered, deliveries and terms of payment shall be publicly available at the time of the opening of the bid regardless of any designation to the

contrary. The County shall endeavor to restrict distribution of the material designated as confidential to only those individuals involved in the review and analysis of the bids. Bidders are cautioned that materials designated confidential may nevertheless be subject to disclosure to any New Mexico citizen under the Inspection of Public Records Act (Sections 14-2-1 through 14-2-3 N.M.S.A. 1978)

- O. Material Safety Data Sheets: To comply with the Occupational Health and Safety Regulation 1910.1200 for general standards on handling hazardous materials, material safety data sheets may be required for all or part of the products included on this bid. It is the responsibility of the bidder to make this determination and, if required, a copy of the MSDS must accompany the product when delivered to the end user. Failure to comply with this requirement may cause the delivery of products to be rejected and all costs related to such action to be borne by the bidder.
- P. Pursuant to Sec 13-1-131 NMSA, 1984 Comp., as amended, Otero County reserves the right to reject any and all bids, whole or in part, submitted hereunder, provided that such rejections shall be accompanied by a written statement declaring the reason for the rejections.
- Q. Each bidder shall supply a blueprint drawing of the apparatus being proposed.
- R. If the awarded company fails to deliver the apparatus and equipment within the time specified, it is understood and the company agrees to the amount of one hundred dollars (\$100.00) per unit, per day for each calendar day any work remains incomplete, to a maximum of the contract price may be deducted from the moneys due the contractor, not as a penalty, but as liquidated damages.
- S. Bid proposal shall be accompanied by a certified check, Cashier check, or surety bond in the amount of ten (10) percent of the total price of the bid. The bid surety shall be made payable to this agency and conditioned upon the successful bidder accepting award and submitting an acceptable performance bond. In the event of failure of refusal to comply, the bid surety may be forfeited as liquidated damages because of such failure of default.
- T. Within fourteen (14) calendar days after the official notification of award, the successful bidder shall furnish a performance bond, which is equal to 100% of contract price. The successful bidder and surety shall agree to bind themselves their successors, executors, administrators and assigns, jointly and severally to deliver the fire apparatus to the specifications, general conditions and to the purchase order. This bond shall remain in force until vehicle and equipment have been delivered and accepted. Failure to deliver any part of the order to terms above may be considered by the purchaser as a breach of contract, in which case the fire apparatus and equipment may be rejected and the purchaser has the right to require forfeiture of the full amount of the performance bond as liquidated damages. The attorney's-in-fact, who signs the bonds, must file with the bonds a certificate copy of their power of attorney to sign such bonds.

- U. The awarded vendor is responsible for reporting all test results to the New Mexico State Fire Marshal's Office.
- V. A minimum of \$1,000,000.00 product liability insurance shall be provided and shall show the breakdown of:
 - General Aggregate (other than products, completed operations)
 - Products/completed operation aggregate
 - Personal and Advertising injury
 - Each Occurrence per Location
 - Umbrella/Excess Liability
- W. Please be advised, this contract is null and void if the apparatus does not meet all the requirements stated in the current applicable NFPA Standard.
- X. All purchases are governed by the statutes of the State of New Mexico and the regulations of Otero County.
- Y. The awarded bidder shall guarantee for the minimum of period of one (1) year that all new equipment furnished under these specifications shall be free from defects. The vendor shall repair or replace all such defective equipment F.O.B., fire station site. Each bidder must furnish satisfactory evidence of his ability to have warranty work done and where work is to be done.
- Z. Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus as specified and shall state the number of years the company has been actively engaged construction like or equal apparatus's. The location of the factory shall be disclosed.

You signature on the completed bid form will serve as a warranty that your bid is genuine and you agree with all contract provisions. A performance bond may be requested; no charge will be assessed to the County.

- 4. ETHICAL CONDUCT: By submitting its bid in response to this invitation, the bidder certifies that:
 - A. It has not offered, given or agreed to give to any County employee or former employee, a gratuity or offer of employment to influence the preparation of or recommendation of award of this bid;
 - B. It has not retained a person or solicited or secured a County Contract for a contingent fee;
 - C. It has not taken any action in restraint of free competitive bidding in connection with this bid;

D. It has not in any way violated the ethical conduct or other provisions of the County's Public Purchases Ordinance; and

E. It currently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with its performance of any contract resulting from this bid.

5. REQUESTS FOR EXPLANATIONS BY BIDDERS:

A. Requests for Explanation: Any explanation desired by the bidder regarding the meaning or interpretation of specifications or any part of this bid must be requested in writing and received in the Purchasing Department not less than five (5) working days before the bid opening date.

B. Response to Bids: Oral explanations or instructions given prior to the opening of the offer shall not be binding. The Purchasing Department must issue any official explanations, in writing.

6. ADDENDA:

Addenda: Changes or amendments to specifications, conditions or provisions herein may be initiated ONLY through the Purchasing Department in the form of a written addendum.

Any addenda shall become a part of this bid and should be acknowledged either by being signed and returned with the bid or through letter or telegram that arrives prior to the opening of the bid. Failure to do so may result in disqualification of the bid.

It is the responsibility of all vendors considering making a bid in response to this invitation to ensure that they have received all addenda prior to making a bid. Bidders may contact the Purchasing Department to obtain information regarding any addenda issued. Failure to obtain an addendum shall not be grounds for overturning a recommendation of award.

7. CLARIFICATION OF BIDS:

The County may, in the evaluation of bids, request clarification from bidders regarding their bid, obtain additional material or literature, and pursue other avenues of research as necessary to insure that a thorough evaluation is conducted.

8. SUBMISSION OF BID:

A. Time: Bids not received by the time and date indicated on the Invitation for Bids will not be accepted, and will be returned unopened.

B. Hand Carried: Bids may be hand carried to the Purchasing Department at 1101 New York Ave., Room 118, Alamogordo, New Mexico.

- C. Mailed: Bids may be mailed to the attention of the Purchasing Department, County of Otero, 1101 New York Ave., Room 118, Alamogordo, New Mexico 88310. The County shall not be responsible for bids that are mailed and not received by the opening date and time specified in the solicitation.
- D. Envelope Preparation: The envelope/package containing a bid must be sealed and the following identifying information legibly written or typed on the outside.
- 1). Name of Bidder
 - 2). Bid Number assigned by the County to the Invitation for Bids
 - 3). Opening date as identified on the bid or subsequent addenda
- E. **No Other Methods of Bid Delivery: Neither telephone, telegraphic, nor facsimile bid shall be accepted.**

9. EQUAL OPPORTUNITY COMPLIANCE/WORKERS' COMPENSATION:

Otero County does not discriminate on the basis of race, color, national origin, sex, religion, age, or disability in the employment or the provisions of services. The "Contractor" agrees to comply strictly with the policies of "County", as well as all Federal and State Laws pertaining to Equal Employment Opportunity, including the Americans with Disabilities Act, and will not discriminate against any person or deny any person participation or benefit from the performance of this Agreement as a result of any discriminatory action. The "Contractor" agrees to comply with State Laws and rules applicable to workers' compensation benefits for its employees. If the "Contractor" fails to comply with the Workers' Compensation Act and applicable rules when required to do so, the "County" may terminate this agreement.

10. OSHA REQUIREMENTS IN EMPLOYMENT:

Otero County shall contract with Companies or Firms whose operators and equipment meet OSHA (Occupational Safety and Health Administration) standards in their field of expertise.

11. WITHDRAWAL OF BIDS:

A bid may be withdrawn in person at any time BEFORE the scheduled opening of bids, provided a receipt for the withdrawn bids is signed by the bidder or the bidder's authorized representative. The County reserves the right to request proof of authorization to withdraw a bid.

12. OPENING OF BIDS:

Time and Place: Bids will be opened by the Purchasing Department at the time and place identified in this Bid. Openings are open to the public. Bidders are encouraged to attend.

13. DISQUALIFICATION OF BID:

The County reserves the right to reject a bid for, including but not limited to, any one or more of the following circumstances:

- A. In the past the bidder has failed to comply with previous contractual commitments or bids to the County.
- B. In the opinion of the County the bidder is not capable of providing the offered goods, services, or construction as offered or required by the bid or is otherwise not a responsible bidder.
- C. The bidder has not provided sufficient or detailed information which allows for the evaluation of the bid.
- D. In the opinion of the County the offered prices are higher than the prices for which the specified items or services can be purchased on the open market.
- E. The bidder failed to properly fill in any space on the Invitation for Bids form and attached documents where information or a signature is required.
- F. The bidder did not; at the time the bid is made, have an appropriate New Mexico Contractor's License or Certification when one is required by law, regulation or this Bid.
- G. The bidder failed to submit with their bid, bid bonds or other material requirements of the Bid or has otherwise submitted a non-responsive bid.
- H. There are unauthorized additions, conditions, alternate proposals or other irregularities of any kind which might make the bid incomplete, indefinite or ambiguous in meaning.
- I. Bid was not submitted in ink or typewritten or there is any erasure or alteration of words or figures relating to pricing which is not initialed in ink by the bidder.
- J. The County determines that a bid contains any misrepresentations whatsoever.

14. REJECTION/CANCELLATION OF BIDS:

Any solicitation, prior to opening or after opening, may be canceled or any or all bids may be rejected in whole or in part when it is in the best interest of the County.

15. MINOR OR TECHNICAL IRREGULARITIES:

Minor or technical irregularities in a bid, when there is no effect on price, quality or quantity may be waived and clerical errors in a bid may be corrected, if permitted by the Purchasing Officer and are in the best interest of the County.

16. NONCONFORMING/CONDITIONAL, OR COUNTER BIDS:

A bid which is nonconforming or conditional, whether in part or in whole will be rejected.

17. BID ANALYSIS:

The County reserves the right to analyze, examine and interpret any bid for a minimum period of sixty (60) consecutive calendar days, after the scheduled time for the opening of bids. Bids may not be rescinded during this period except for good cause and with the written approval of the Purchasing Officer. In those situations where the analysis/evaluation exceeds the sixty (60) calendar days, bidders may withdraw their bids from consideration.

18. AWARD OF CONTRACT:

- A. When Award Occurs: The award of a contract occurs when a Purchase Order is issued or other evidence of acceptance by the County is provided to the bidder. A Recommendation of Award does not constitute award of contract.
- B. Award: If a contract is awarded, it shall be awarded to the responsive and responsible bidder whose bid is lowest in total price and is the most advantageous to the County, specifications and other factors considered.
- C. Basis of Award: The County reserves the right to award a contract based on this Bid in total or by group of items, on the basis of individual items, or any combination of these, which in the judgment of the Purchasing Officer, best serves the interests of the County, unless otherwise stated in this Bid.
- D. Contract Changes: In no case shall a contract be changed without the prior written approval of the Purchasing Officer.
- E. To qualify for the five percent (5%) in state Resident Preference, the bidder must provide their assigned Resident Certification Number with their bid (an appropriate place is designated in the Bid Form). If a bidder does not provide their assigned Resident Certification Number with their bid, the bid shall not be considered as made by a resident business or a resident manufacturer and no preference shall be applied during the analysis of that bid.

NOTE: Your State Tax Number is NOT your Resident Certification Number.

19. PROTEST PROCESS:

- A. Any bidder who is aggrieved in connection with a solicitation or award of an Agreement may protest to the County of Otero Purchasing Agent in accordance with the requirements of the County of Otero's Procurement Regulations and the State Procurement Code. The protest should be made in writing within 24 hours after the facts or occurrences giving rise thereto, but in no case later than 15 calendar days after the facts or occurrences giving rise thereto.
- B. In the event of a timely protest under this section, the Purchasing Agent and the County of Otero shall not proceed further with the procurement unless the Purchasing Agent makes a determination that the award of Agreement is necessary to protect substantial interests of the County of Otero (13-1-173 NMSA 1978).
- C. The Purchasing Agent or his designee shall have the authority to take any action reasonably necessary to resolve a protest of an aggrieved bidder concerning procurement. This authority shall be exercised in accordance with adopted regulations, but shall not include the authority to award money damages or attorney's fees (13-1-174 NMSA 1978).
- D. The Purchasing Agent or his designee shall promptly issue a determination relating to the protest. The determination shall:
 - 1) State the reasons for the action taken; and
 - 2) Inform the Protestant of the right to judicial review of the determination pursuant to 13-1-183 NMSA 1978.
- E. A copy of the determination issued under 13-1-175 NMSA 1978 shall immediately be mailed to the Protestant and other bidders involved in the procurement (13-1-176 NMSA 1978).

20. DELIVERY, ACCEPTANCE AND GUARANTEE:

- A. No Delivery Before Purchase Order is Issued: No bidder, including the bidder to whom an award is made shall deliver any item of tangible personal property, commence services or construction prior to the Issuance of a Purchase Order or Notice to Proceed issued by the County Purchasing Department.
- B. Cancellation for Non-Delivery: The County reserves the right to cancel any order not delivered by a guaranteed date stipulated in this bid or any contract resulting from this invitation without liability on the County's part.

- C. Acceptance of Delivery: Acceptance by the County of any delivery shall not relieve the Contractor of any guarantee or warranty, expressed or implied. Such acceptance of delivery shall not be considered an acceptance of services or materials not in accordance with the specifications. Such acceptance of delivery shall not waive the County's right to require replacement of defective material or inadequate service.

21. INSPECTIONS:

- A. Prior To Acceptance of Delivery: All items of tangible personal property, services or construction shall be provided exactly as offered, and may be inspected prior to acceptance of delivery by the County.
- B. Inferior Materials, Etc.: All items of tangible personal property, services or construction found inferior to the quality specified in this Bid, deficient or incorrect in weight, measurement, workmanship, handicraft or otherwise, may be rejected as a whole or in part and then shall be removed by the Contractor at the Contractor's own risk and expense promptly after notice of rejection. The Contractor shall assume responsibility for taking the necessary action to correct or replace the rejected items, within the time frame specified in the notice of rejection.

22. INVOICE AND PAYMENTS:

The Contractor shall submit an accurate invoice, in duplicate, for each purchase. Invoices shall refer to the Purchase Order Number, the Release Form Number if applicable, and shall be itemized unless otherwise specified in this Bid. Invoices are to be mailed to: Otero County Accounts Payable, 1101 New York Ave., Alamogordo, New Mexico 88310. Invoices mailed or provided to any other entity will result in a delay in making payment. Offerors are encouraged to inquire if payments due are not received within thirty (30) days after delivery of goods/services and submittal of invoice by contracting the Accounts Payable at (575) 437-7427

23. DEFAULT/TERMINATION FOR CAUSE:

If, through any cause, the Contractor fails to fulfill the Contractor's obligations under any contract resulting from this Bid in a timely and proper manner, or if the Contractor violates any of the covenants, agreements or stipulations of such contract, the County shall notify the Contractor of such violations in writing and allow the Contractor a reasonable time, set out in the notice, to correct the default. If the default is not corrected within the specified time period the County shall have the right to cancel the contract and any or all other current contracts with the Contractor, and, if applicable, to purchase the required goods or services from another source or sources. The County shall provide written notice to the Contractor specifying the effective date of cancellation. The notice of cancellation may be contained in the notice of default.

If a contract resulting from this Bid is canceled, the Contractor shall not be relieved of liability to the County for damages caused by its breach of the

contract. The County reserves the right to recover such damages, including but not limited to any excess cost incurred in having to purchase contract goods/services from other sources by a deduction from an unpaid balance due to the Contractor, collection against a performance or labor and materials payment bond, a combination of these remedies, or any other legal method available. In addition, the Contractor may be removed from the Purchasing Office Vendor List or determined to be ineligible to respond to future solicitations, as being not responsible.

24. TERMINATION FOR THE CONVENIENCE OF THE COUNTY:

The County may terminate any contract resulting from this Bid at any time by giving at least thirty (30) days' notice in writing of such termination to the Contractor. In such event, the Contractor shall be paid under the terms of the contract for all goods/services provided to and accepted by the County, if ordered or accepted by the County prior to the effective date of termination.

25. TERMINATION FOR LACK OF APPROPRIATIONS:

Funding for the contract resulting from this Bid has been appropriated by the County Commission for the County's current fiscal year. Notwithstanding any other provisions in the contract resulting from this Bid, its continuation beyond the end of the any fiscal year is contingent on the County Commission making the appropriations necessary to fund the contract. If sufficient appropriations are not made the contract may be terminated at the end of the County's then current fiscal year upon written notice given by the County to the Contractor. Such termination shall not constitute a default. All payment obligations of the County and all of its interest in the contract will cease upon the date of termination. The County's decision as to whether sufficient appropriations are available shall be accepted by the Contractor and shall be final.

26. CAMPAIGN CONTRIBUTION FORM

In accordance with Appendix C, Offerors must comply with 13-1-191.1 pertaining to the disclosure of campaign contributions to an applicable public official of a local public body.

Offeror(s) shall submit the "Campaign Contribution Disclosure Form" with their proposal submittal. Any Offeror who fails to comply with this requirement will be disqualified, no exceptions. (MUST BE SIGNED)

27. **UTILIZE BD**

In accordance with NMSA 13-1-129 of the procurement code, offerors are hereby notified that other government entities within the State of New Mexico, or as otherwise allowed by their respective governing directives, may contract for the goods or services included in this procurement document with the awarded contractor. Contractual engagements accomplished under this provision shall be solely between the awarded vendor and the contracting government entity with no obligation by Qtero County.

Sealed Bid #14-014

Opening Date: 2/20/14
Time: 3:30 PM

**B I D F O R M
F I R E A P P A R A T U S
H I G H R O L L S
V O L U N T E E R F I R E D E P A R T M E N T**

**SEE ATTACHED SPECIFICATIONS---

YEAR: _____

MAKE: _____

MODEL: _____

WARRANTY: _____

DELIVERY DATE: _____

SERVICE: _____
LOCATION OF AVAILABLE SERVICE

THIS OFFER IS GOOD FOR A PERIOD OF: (MINIMUM 60 DAYS) _____

TOTAL PRICE: \$ _____

PRINT NAME OF AUTHORIZED REPRESENTATIVE

SIGNATURE OF AUTHORIZED REPRESENTATIVE/DATE

**OTERO COUNTY PURCHASING
TERMS & CONDITIONS
UNLESS OTHERWISE SPECIFIED.**

1. **BIDS ARE TO COMPLY WITH ALL INSTRUCTIONS AND PROVIDE THE INFORMATION REQUESTED. FAILURE TO DO SO MAY DISQUALIFY YOUR BID.** All bid items are to be NEW and of most current production, unless otherwise specified.
2. Samples of items, when required, must be furnished free of expense prior to the opening of bids and if not destroyed, will, upon request, be returned at the bidders expense.
3. Prices should be stated in units or quantity specified, with packing included. All deliveries will be F.O.B. Alamogordo, NM unless otherwise specified.
4. Time or proposed delivery must be stated in definite terms. If time varies for different items, the bidder should so state.
5. Time of delivery shall be stated as the number of calendar days following receipt of the order either verbally or in writing, whichever is received first by the vendor, to receipt of the goods or services by Otero County.
6. Time of delivery may be a consideration in the award.
7. **Envelopes containing bids must be sealed and marked with name, address of the bidder, due date, and bid number.**
8. **IMPORTANT:** Bids not received in the office of the Purchasing Agent at the time of opening are disqualified and will be returned unopened.
9. Corrections and/or modifications received after the opening time specified will not be accepted.
10. Where an item is specified by brand name and numbers these are used in these specifications as a matter of convenience to indicate quality, type, and features desired. Accordingly demonstrably equal merchandise will be given full consideration and the bidder is invited to offer such, except where it is clearly stated that such brand names and/or models are specified for the purpose of standardization. Any "or equal" items offered must be substantially equal to the appearance, design, dimensions, approximate cost of the item specified, and must be of equivalent materials, function, and sturdiness of construction of the item specified. Any deviation from specifications must be clearly itemized by the bidder.
When offering substitutions, please specify, and include descriptive literature.
11. When brand, number, or level of quality is not stated by the bidder, it is understood the offer is exactly as specified.
12. Otero County is exempt from paying sales tax for materials and federal excise taxes. Do not include those taxes in bid. A nontaxable transaction certificate will be provide when payment is made. Services and tax on labor only are not exempt.
13. If your bid is accepted, you will receive notification either verbally or in writing by an issuance of a Purchase Order Number authorizing you to make delivery. Only the accepted bidder will be notified of awards.
14. **ATTENTION BOOKKEEPING & AUDITING DEPARTMENTS:** Complete payment will be made only when entire order is filled, with the exception of "Open Order Purchases", unless otherwise stated on purchase order. **EXCEPTION: Partial payments will be allowed upon written notification and approval if order cannot be completed in a single shipment.** Payment terms are Net 30 days unless otherwise stated.
15. All addenda so issued shall become part of the bid documents.
16. Pricing shall remain effective for a minimum of thirty
(30) days after bid opening date.

CONDITIONS

1. The Purchasing Agent reserves the right to reject any and all bids, to waive any informality in bids, and **unless** otherwise specified to the bidder, to accept any item on the bid.
2. In case of error in the extension of prices in the bid, the unit price will govern.
3. Prompt payment discounts will not be considered in computing the low bid. Otero County will take advantage of cash discounts offered wherever possible.
4. Time in connection with discount offered will be computed from date of delivery or from date correct invoice is received, whichever is later.
5. Final inspection and acceptance will be made at the destination. Supplies rejected at the destination for non-conformance with specifications shall be removed at the vendor's risk and expense, promptly after notice of rejection.
6. Otero County requires vendor certification be the New Mexico State Purchasing Agent before the 5% in-state bidding preference can be extended. Bidders claiming this preference must show certification number on bid and must be prepared to show evidence of certification for the commodity being bid. In-state vendors: failure to secure above will result in non-considerations of any preference for in-state bidders. This will not apply when Federal funds are used, Chapter 13-1-21.
7. Otero County reserves the right to award by item, group of items, or total bids; to reject any and all bids in whole or in part if, in the judgment of the Purchasing Agent, the best interests of Otero County will be served.
8. The Otero County Purchase Order Number shall be shown on all packing, delivery tickets, and other correspondence in connection with the shipment. The user's count will be accepted by the Vendor as final and conclusive on all shipments not accompanied by a packing ticket.

The Vendor's invoice shall be submitted and contain the following information: order number, description of supplies or services, quantities, unit prices, and extended totals. Separate invoices shall be rendered for each and every complete shipment.

9. Otero County reserves the right to cancel all or any part of this order without cost to the County, if the Vendor fails to meet the provisions of this order and, except as otherwise provided herein, to hold the Vendor liable for any excess cost occasioned by the County due to the Vendor's default. The Vendor shall not be liable for any excess costs if failure to perform the order arises out of cause beyond the control and without the fault or negligence of the Vendor, such causes include, but are not restricted to, acts of God or of the public enemy, acts of the State or of the Federal Government, fires, goods, epidemics, quarantine restrictions, strikes, freight embargo's, unusually severe weather, and defaults of subcontractors due to any of the above, unless Otero County shall determine that the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the Vendor to meet the required delivery scheduled. The rights and remedies of the county provided in this paragraph shall not be exclusive and are in addition to any other rights now being provided by law or under this order.
10. In signing this bid or accepting Purchase Order, the Vendor certifies he/she has not, either directly or indirectly, entered into action in restraint of free competitive bidding in connection with this proposal submitted to Otero County Purchasing Agent.
11. Sections 13-1-28 through 13-1-199 NMSA 1978, imposes civil and criminal penalties for its violation. The New Mexico criminal statutes impose felony penalties for bribes, gratuities, and kickbacks.
12. **THIS BID/AWARD IS CONTINGENT UPON AVAILABLE FUNDING.**

(terms)

rev 05/96

CAMPAIGN CONTRIBUTION DISCLOSURE FORM

Pursuant to the Procurement Code, Sections 13-1-28, et seq., NMSA 1978 and NMSA 1978, § 13-1-191.1 (2006), as amended by Laws of 2007, Chapter 234, any prospective contractor seeking to enter into a contract with any state agency or local public body **for professional services, a design and build project delivery system, or the design and installation of measures the primary purpose of which is to conserve natural resources** must file this form with that state agency or local public body. This form must be filed even if the contract qualifies as a small purchase or a sole source contract. The prospective contractor must disclose whether they, a family member or a representative of the prospective contractor has made a campaign contribution to an applicable public official of the state or a local public body during the two years prior to the date on which the contractor submits a proposal or, in the case of a sole source or small purchase contract, the two years prior to the date the contractor signs the contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contractor to the public official exceeds two hundred and fifty dollars (\$250) over the two year period.

Furthermore, the state agency or local public body may cancel a solicitation or proposed award for a proposed contract pursuant to Section 13-1-181 NMSA 1978 or a contract that is executed may be ratified or terminated pursuant to Section 13-1-182 NMSA 1978 of the Procurement Code if: 1) a prospective contractor, a family member of the prospective contractor, or a representative of the prospective contractor gives a campaign contribution or other thing of value to an applicable public official or the applicable public official's employees during the pendency of the procurement process or 2) a prospective contractor fails to submit a fully completed disclosure statement pursuant to the law.

The state agency or local public body that procures the services or items of tangible personal property shall indicate on the form the name or names of every applicable public official, if any, for which disclosure is required by a prospective contractor.

THIS FORM MUST BE INCLUDED IN THE REQUEST FOR PROPOSALS AND MUST BE FILED BY ANY PROSPECTIVE CONTRACTOR WHETHER OR NOT THEY, THEIR FAMILY MEMBER, OR THEIR REPRESENTATIVE HAS MADE ANY CONTRIBUTIONS SUBJECT TO DISCLOSURE.

The following definitions apply:

“Applicable public official” means a person elected to an office or a person appointed to complete a term of an elected office, who has the authority to award or influence the award of the contract for which the prospective contractor is submitting a competitive sealed proposal or who has the authority to negotiate a sole source or small purchase contract that may be awarded without submission of a sealed competitive proposal.

“Campaign Contribution” means a gift, subscription, loan, advance or deposit of money or other thing of value, including the estimated value of an in-kind contribution, that is made to or received by an applicable public official or any person authorized to raise, collect or expend contributions on that official's behalf for the purpose of electing the official to statewide or local office. “Campaign Contribution” includes the payment of a debt incurred in an election campaign, but does not include the value of services provided without compensation or unreimbursed travel or other personal expenses of individuals who volunteer a portion or all of their time on behalf of a candidate or political committee, nor does it include the administrative or solicitation expenses of a political committee that are paid by an organization that sponsors the committee.

“Family member” means spouse, father, mother, child, father-in-law, mother-in-law, daughter-in-law or son-in-law of (a) a prospective contractor, if the prospective contractor is a natural person; or (b) an owner of a prospective contractor.

“Pendency of the procurement process” means the time period commencing with the public notice of the request for proposals and ending with the award of the contract or the cancellation of the request for proposals.

“Prospective contractor” means a person or business that is subject to the competitive sealed proposal process set forth in the Procurement Code or is not required to submit a competitive sealed proposal because that person or business qualifies for a sole source or a small purchase contract.

“Representative of a prospective contractor” means an officer or director of a corporation, a member or manager of a limited liability corporation, a partner of a partnership or a trustee of a trust of the prospective contractor.

Name(s) of Applicable Public Official(s) if any: _____
(Completed by State Agency or Local Public Body)

DISCLOSURE OF CONTRIBUTIONS BY PROSPECTIVE CONTRACTOR:

Contribution Made By: _____

Relation to Prospective Contractor: _____

Date Contribution(s) Made: _____

Amount(s) of Contribution(s) _____

Nature of Contribution(s) _____

Purpose of Contribution(s) _____

(Attach extra pages if necessary)

Signature Date

Title (position)

-OR-
NO CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250) WERE MADE to an applicable public official by me, a family member or representative.

Signature Date

Title (Position)

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p style="text-align: center;">Fire Apparatus Specifications for 3000 gallon Water Tender/Tanker Request for Proposals</p> <p>The following are the minimum specifications required for a 3000-gallon capacity tanker/water tender type fire apparatus with a minimum 750-gpm pump. This apparatus, while required to carry a large amount of water, needs to be compact enough to maintain maneuverability while also being capable of performing water relay operations and basic structure and brush-fire support operations.</p> <p>High Rolls is a rural mountain community covering an elevation change from 5500' to 8500' above sea level. The main road is US Highway 82 and consists of a 6% grade with many sharp curves. It is one of the most dangerous roads in the state. Most homes are located on narrow improved or unimproved dirt and gravel roads with 10-15% grades, and the entire community is located within the boundaries of the Lincoln National Forest. Multiple winter snow falls of 4-8 "are not uncommon. Expected low temperature: 5 deg F, Expected high temperature: 95 deg F. This apparatus will be used as the primary water supply and secondary structural firefighting apparatus for the High Rolls / Mountain Park community (ISO Class 6), as well as be used for structure protection during the frequent forest fires in the district and surrounding areas. Length of vehicle shall not exceed 31'. Height shall not exceed 11'.</p> <p>The details of the community this apparatus will be working in have a tremendous bearing on its specification and design, and standard designs will not function satisfactorily in this role.</p>			
General Requirements			
<p>Definitions</p> <p>Proposal shall also mean quotation, bid, offer, qualification/experience statement, and services. Proposers shall also mean vendors, offers, proposers, contractors or any person or firm responding to a Request for Proposals.</p>			
<p>Intent of Specifications</p> <p>It is the intent of these specifications to cover the furnishing and delivery to the Purchaser of a complete vehicle equipped as hereinafter specified. With a view to obtaining the best results and the most acceptable apparatus, these specifications cover minimum requirements as to the type of construction, finish, and test to which the apparatus must conform, together with certain details as to equipment and appliances to be furnished. Minor details of construction and materials, where not otherwise specified, are left to the discretion of the contractor, who shall be solely responsible for the design and construction. The apparatus shall conform to the requirements of the current NFPA Standard for Tanker Fire Apparatus to the extent specified herein.</p>			
<p>Qualification of Bidders</p> <p>Bids will only be considered on vehicles constructed in the continental United States, whose manufacturers have an established reputation of permanency and reliability in the field of fire apparatus construction. Each manufacturer shall furnish satisfactory evidence of their ability to construct the apparatus as specified, and shall state the location of the</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>factory where the complete apparatus will be built.</p> <p>Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified and shall state the location of the factory where the apparatus is to be built. The bidder shall also show that the company is in position to render prompt service and to furnish replacement parts. Each bid shall be accompanied by a detailed set of Contractor's Specifications consisting of a detailed description of the apparatus and equipment proposed, and to which the apparatus furnished under contract shall conform. These specifications shall indicate size, type, model and make of all component parts and equipment.</p> <p>To assist the purchaser in determining the ability of the bidder to fulfill the requirements of these specifications, the bidder shall submit the names and telephone numbers of fire departments to demonstrate that the bidder has constructed a minimum of 15 (15) pieces of fire apparatus in the last three (3) years.</p> <p>Additionally, each bidder shall be required to submit certification of that the bidder is a member in good standing of the National Fire Protection Association (NFPA) and the Fire Apparatus Manufacturer's Association (FAMA)</p> <p>In order to ensure fair, ethical, and legal competition, neither original equipment manufacturer (OEM) nor parent company of the OEM shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market. (No Exceptions)</p>			
<p>Adherence to Specifications</p> <p>In order to closely evaluate all bids and determine responsiveness to the customer request, each proposal must be submitted in the same order as the customer specification for ease of comparison. Each item must have a check mark in the appropriate column indicating compliance. Those items that are different by brand, model number, (when applicable), and operational performance must be clearly defined and listed separately on a document clearly identified as "Clarifications and substitutions". Any exception or clarification shall be clearly defined with details as to the proposed alternative. A general exception or clarification cannot be taken for any paragraph. This specification package, along with any herein listed exceptions and clarifications, shall be submitted as a part of the bidder's entire bid proposal. Do not detach or omit these sheets.</p> <p>Vendors failing to comply with this request are subject to immediate rejection without further cause. Any deviation from the specifications shall be agreed upon by the bidder and the purchaser. (NO EXCEPTIONS).</p>			
<p>Purchaser's Rights</p> <p>The Purchaser reserves the right to accept or reject any or all bids as it deems to be of their best interest to do so.</p> <p>These specifications are based upon design and performance criteria, which have been developed by the purchaser as a result of extensive research and analysis of the [purchaser's needs. Proposals taking total exception to the bid specifications shall</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>considered by the purchaser. Further, major exceptions to the specification shall not be accepted. Failure to comply with sections of the bid labeled "No Exceptions" may result in the immediate rejection of the bid. Certain other exceptions may be accepted if they are equal or superior to that which is specified. It is the responsibility of the bidder to prove such comparison with the bid submittal. Bids with no exceptions may be given preference over those with exceptions. The purchaser shall determine which (if any) exceptions, other than those for items labeled "No Exceptions," are acceptable. This determination shall be final.</p>			
<p>Cancellation of Award High Rolls Fire Department reserves the right to cancel the award without liability to the Proposer at any time before a contract has been fully executed by all parties and is approved by Otero County.</p>			
<p>Inspection and Evaluation The purchaser reserves the right to visit the place of apparatus manufacture and inspect the fire apparatus and facilities during operating hours, at no cost to the bidder. The cost of travel, lodging, and per diem shall not be included on the bid proposal. The conditions and operations of the facility may be taken into consideration in making the award of this contract.</p>			
<p>Safety Requirements The unit specified shall meet all State and Federal safety standards and laws that are in effect on the date of the bid for the item(s) that are being specified and the particular use for which they are meant. Documentation provided at the time of delivery shall also include an apparatus safety video, in DVD format. This video shall address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus. Safety procedures for the following shall be included: vehicle pre-trip inspection, chassis operation, pump operation, and maintenance.</p>			
<p>Delivery and Terms The successful bidder shall agree to furnish the apparatus within 120 calendar days after receipt of the order. To insure proper break in of all components while still under warranty, shall be delivered under its own power - rail or truck freight shall not be acceptable. Delivery shall be to High Rolls, New Mexico. A qualified delivery engineer representing the contractor shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in the proper operation, care and maintenance of the equipment delivered. All delivery costs shall be the responsibility of the bidder/dealer.</p>			
<p>Post-Delivery Training On One (1) mutually agreeable date after delivery, a certified manufacturer delivery engineer shall familiarize High Rolls Fire Department personnel in the basic operation of the apparatus and its components. Such training must be coordinated by a fire department officer or official designee. This shall be a full instructional program including both classroom and practical or "hands on" training. Limited programs or "drop-off" type deliveries are unacceptable.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Electronic Manuals</p> <p>Two (2) copies of all operator, service, and parts manuals MUST be supplied at the time of delivery in electronic format (CD-ROMs).</p> <p>The electronic manuals shall include the following information:</p> <p>Operating Instructions, descriptions, specifications, and ratings of the cab, chassis, body, installed components, and auxiliary systems</p> <p>Warnings and cautions pertaining to the operation and maintenance of the fire apparatus and firefighting systems</p> <p>Charts, tables, checklists, and illustrations relating to lubrication, cleaning, troubleshooting, diagnostics, and inspections</p> <p>Instructions regarding the frequency and procedure for recommended maintenance.</p> <p>Maintenance instructions for the repair and replacement of installed components.</p> <p>Parts Manual CD-ROM shall contain the following:</p> <p>Complete exploded view part drawings for every assemble specific to the truck. All repair components of the assembly shall be illustrated with part number assigned. This is NOT a generic parts manual.</p> <p>Mounting hardware listed on all exploded view drawings.</p> <p>Service kits and service parts listed where available.</p> <p>Recommended spare parts list.</p> <p>Reference drawings with easy to locate sub assemble page numbering.</p> <p>Warranty descriptions and coverage.</p> <p>The CD-ROM shall incorporate a navigation page with electronic links to the operator’s manual, service manual, parts manual, and warranty information, as well as instructions on how to use the manual. Each copy shall include a table of contents with links to the specified documents or illustrations.</p> <p>The CD must be formatted in such a manner as to allow not only the printing of the entire manual, but to also the cutting, pasting, or copying of individual documents to other electronic media, such as electronic mail, memos, and the like.</p> <p>A find feature shall be included to allow for searches by text or by part number.</p> <p>These electronic manuals shall be accessible from any computer operating system capable of supporting portable document format (PDF). Permanent copies of all pertinent data shall be kept file at both the local dealership and at the manufacturer's location.</p> <p><i>NOTE: Engine overhaul, engine parts, transmission overhaul, and transmission parts manuals are not included</i></p>			
<p>Weekly Progress Updates</p> <p>The Vendor shall provide weekly construction reports and photos. Reports shall include a brief summary of work completed and the next steps in construction. Photos shall provide details of the Water Tender during the build cycle. All reports shall be sent by email to the ordering Member representative.</p>			
<p>Quality and Workmanship</p> <p>The design of the apparatus shall embody the latest approved automotive engineering</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>practices, experimental designs and methods shall not be acceptable. The workmanship shall be of the highest quality in its respective field. Special consideration is given to the following points: accessibility of the various units that require periodic maintenance, ease of operation (including both pumping and driving) and symmetrical proportions. Construction shall be rugged and ample safety factors shall be provided to carry loads as specified and to meet both on and off road requirements and speed conditions as set forth under Performance Tests and Requirements. Welding shall not be employed in the assembly of the apparatus in a manner that shall prevent the ready removal of any component part for service or repair. All steel welding shall follow American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding shall follow American Welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal. Flux core arc welding to use alloy rods, type 7000, American Welding Society standards A5.20-E70T1. Employees classified as welders are tested and certified to meet American Welding Society codes upon hire and every three (3) years thereafter.</p> <p>General Construction</p> <p>The complete apparatus, assemblies, subassemblies, component parts and so on, will be designed and constructed with due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subjected when placed in service. All parts of the apparatus will be strong enough to withstand the general service under full load. The apparatus will be so designed that the various parts are readily accessible for lubrication, inspection, adjustment, and repair.</p> <p>The apparatus will be designed and constructed, and the equipment so mounted with due consideration to the distribution of the load between the front and rear axles, that all specified equipment, including a full complement of ground ladders, full water tank, loose equipment, and firefighters; will be carried without overloading or injuring the apparatus.</p> <p>Details of construction and material not otherwise specified herein are left to the discretion of the bidder. No deviations from these specifications shall be allowed unless agreed to by the bidder and purchaser.</p> <p>The apparatus shall be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association. A certified weight ticket with all equipment specified in the bid and a full 3000-gallon load of water shall be provided at the time of delivery and acceptance by High Rolls, NM Fire Department.</p> <p>This apparatus must conform to all applicable NFPA standards and requirements except where deviations are outlined in the specifications. (NO EXCEPTIONS).</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Items Required with the Bid</p> <p>Each bidder shall supply the following items in the bid package to the purchaser:</p> <ol style="list-style-type: none"> 1. An engineering "C" size drawing of the completed unit showing the following: <ol style="list-style-type: none"> a. A driver's side view of the completed unit b. A passenger side view of the completed unit c. A rear view of the completed unit d. All principle dimensions (i.e. height, width, and length) 2. A copy of the warranty supplied with the completed apparatus 3. The bidder's forms used to record the following upon completion of the apparatus: <ol style="list-style-type: none"> a. Record of construction details b. Electrical system load analysis c. Electrical system performance tests per NFPA standards d. Pump and piping hydrostatic testing per NFPA standards e. Water tank capacity certification per NFPA standards 4. Chassis turning radius 5. Projected weight distribution for the completed apparatus 6. Chassis angle of departure 7. Chassis angle of approach 8. Minimum ground clearance 9. Projected weight with full water, and fuel 10. Projected operating weight as % of GVWR 11. Lease Purchase terms and % APR. 12. Detail design specifications including structural material call-outs 13. Any exceptions to the bid specifications herein. 14. Front bumper and tailboard design 15. Apparatus body, and compartmentation design and construction information 16. Theoretical performance values — Top speed, top speed on 6% grade, acceleration stopping distance, and roll over angle vs curve radius and speed. 17. This bidder shall supply data on the estimated and actual dump rate of the apparatus as built. 			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>NFPA 1901 Compliance</p> <p>A certificate certifying the finished apparatus complies with all required current NFPA 1901 standards shall be provided by the seller.</p> <p>Reference Drawing</p> <p>A drawing of the proposed apparatus shall be provided for review. This drawing shall be standard "C" sized engineering drawing. This drawing shall indicate the major components such as the chassis make and model, body configuration and door style, location of the lights, siren, horns, compartments, major components, etc.</p> <p>Operation and Service Documentation</p> <p>As a minimum, the manufacturer shall supply at time of delivery, complete operation and maintenance manuals covering the completed apparatus as delivered. A permanent plate shall be mounted in the driver's compartment which specifies the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.</p> <p>The documentation will address at least the inspection, service, and operation of the fire apparatus and all major components thereof. The manufacturer shall also provide documentation on the following items for the entire apparatus and each major operating system or each major component of the apparatus.</p> <ol style="list-style-type: none"> 1. Manufacturer's name and address. 2. Country of manufacture. 3. Source of service and technical information. 4. Parts and replacement information. 5. Descriptions, specifications, and ratings of the chassis, pump, and aerial device. 6. Wiring diagrams for low voltage and line voltage systems to include the following information: representations of the circuit logic for all electrical components and wiring, circuit identification, connector pin identification, zone location of electrical components, safety interlocks, alternator — battery power distribution circuits, and input/output assignment sheets or equivalent circuit logic implemented in multiplexing systems. 7. Lubrication charts. 8. Operating instructions for the chassis, any major components such as a pump or aerial device, and any auxiliary systems. 9. Precautions related to multiple configurations of aerial devices, if applicable. 10. Instructions regarding the frequency and procedure of recommended maintenance. 11. Overall apparatus operating instructions. 12. Safety considerations. 13. Limitations of use. 14. Inspection procedures. 15. Recommended service procedures. 16. Troubleshooting guide. 17. Apparatus body, chassis, and other component manufacturers warranties. 18. Special data required by this standard. 19. Copies of all manufacturers test data or reports, manufacturer certifications, and independent third party certifications of test results (Pump testing). 			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Manufacturing Labels</p> <p>As a minimum, a permanent plate shall be mounted in the Driver's compartment specifying the quantity and type of the following fluids that may be used in the apparatus for normal maintenance. Where a fluid is not applicable to the unit, the plate shall be marked N/A to inform the service technician who may not be familiar with the apparatus.</p> <ol style="list-style-type: none"> 1. Engine oil 2. Engine coolant. 3. Transmission fluid. 4. Pump transmission fluid. 5. Pump primer fluid. 6. Drive axle fluid 7. Air conditioning refrigerant. 8. Power steering fluid. 9. Cab tilt mechanism fluid. 10. Transfer case fluid. 11. Equipment rack fluid. 12. Engine exhaust fluid. 13. Air compressor system lubricant. 14. Generator system lubricant. 15. Front tires air pressure. 16. Rear Tires air pressure. 17. Water tank capacity and type. 18. Seating capacity of enclosed cab. 19. Model, make, date and location of manufacture of apparatus. <p>Required Labels</p> <p>The following labels shall be provided as a minimum:</p> <p>Seat Belt Sign: an accident prevention sign stating “Danger Personnel Must Be Seated and Seat Belts Must Be Fastened While Vehicle Is In Motion Or Death Or Serious Injury May Result”.</p> <p>Seating Capacity Sign: A permanent sign shall be installed in the drivers compartment specifying the maximum number of personnel the vehicle is designed to carry (seating capacity) per NFPA standards. It shall be located in an area visible to the driver and shall read “SEATING CAPACITY (2)”. This sign shall indicate the seating positions for firefighters. A weight allowance of 250 pounds for each shall be factored into the gross vehicle weight rating of the chassis.</p> <p>Accident Prevention Sign: An accident prevention sign stating “DANGER Do Not Ride On Rear Step While Vehicle Is In Motion, Death or Serious Injury May Result” shall be placed so it is visible from the rear step of the vehicle. A similar sign shall be placed on the top mount walkway if applicable.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>No Helmet Sign: One (1) label shall be installed in the cab, visible from each seating position. The label shall read "CAUTION: DO NOT WEAR HELMET WHILE SEATED." Helmets must be properly stowed while the vehicle is in motion according to the current edition of NFPA 1901.</p> <p>Suction Inlet Sign: If an inlet located at the pump operator's position is valved, it shall be provided with a permanent label that states "Warning Death Or Serious Injury Could Occur If Inlet Is Supplied By A Pressurized Source When The Valve Is Closed".</p> <p>Overall Travel Clearance Plate: There shall be a travel clearance-warning label located in the chassis cab. The travel clearance-warning label is to be located in easy view of the driver. The travel clearance-warning label shall include the following information: Overall travel clearance height and length in feet and inches.</p> <p>GVW Sign: The manufacturer shall supply the final manufacturer's furnished certification of GVWR and GAWR on a nameplate affixed to the vehicle.</p> <p>Type of Fuel Sign: A "Diesel Fuel Only" label shall be attached to the fuel fill access door or in plain sight above the fuel fill cap.</p> <p>Final Stage Label: A nameplate shall certify that the completed vehicle conforms to the motor vehicle safety standards previously certified by the chassis manufacturer and that the final stage manufacturer has not altered the certification. All nameplates and instruction plates shall be metal or plastic with the information permanently engraved, stamped, or etched thereon. Metal nameplates shall be installed with plated screws.</p> <p>All nameplates shall be mounted in a conspicuous place.</p> <p>Vehicle Top Speed The chassis shall be geared for a top speed at engine governed RPM as per NFPA.</p> <p>NFPA TOP SPEED STATEMENT NFPA-1901, 2009 Edition - 4.15.2 The maximum top speed of fire apparatus with a GVWR over 26,000 lb (11,800 kg) shall not exceed either 68 MPH (105 km/hr) or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower.</p> <p>NFPA-1901, 2009 Edition - 4.15.3 If the combined water tank and foam agent tank capacities on the fire apparatus exceed 1250 gal (4732 L), or the GVWR of the vehicle is over 50,000 lb (22,680 kg), the maximum top speed of the apparatus shall not exceed either 60 MPH (105 km/hr) or the manufacturer's maximum fire service speed rating for the tires installed on the apparatus, whichever is lower.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Performance Tests and Requirements</p> <p>A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (20) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters:</p> <ol style="list-style-type: none"> 1. The apparatus, when fully equipped and loaded, shall have not less than 25 percent nor more than 50 percent of the weight on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. 2. The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway at 4500' MSL elevation without exceeding the maximum governed rpm of the engine. 3. The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor Vehicle Safety Standards (FMVSS) 121. 4. The apparatus, fully loaded, shall be capable of obtaining a speed of 50 mph on a level concrete highway at 4500' MSL elevation with the engine not exceeding its governed rpm (full load). 5. The apparatus, fully loaded, shall be capable of obtaining and sustaining a speed of 50 mph in less than 20 seconds on a concrete highway consisting of a 6% grade at 7000-8000' MSL elevation with the engine not exceeding its governed rpm (full load). 6. The pump shall flow a minimum of 750gpm at 150 PSI at 7,500 ft MSL under draft. The pump shall be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, engine manufacturer's brake horsepower curve, and manufacturer's record of pump construction details shall be forwarded to the High Rolls Fire Department. 7. The dump rate of the rear gravity dump shall be a minimum of 2500 gallons per minute. 8. The bidder shall provide at the time of delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system. The following documentation shall be provided: electrical system performance tests, written load analysis, nameplate rating of the alternator, alternator ratings under conditions specified in current edition NFPA 1901 or 1906 standards, minimum continuous load of each component per applicable NFPA 1901 or 1906 standard, additional loads that determine total connected load, and each individual intermittent load. 			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Total Vehicle Assessment Certification by Third Party.</p> <p>The Water Tender shall be third-party, independent, audit-certified to the current edition of NFPA 1901 standards. The certification shall include: all design, production, operational and performance testing of the Water Tender (no exception). The test results shall be provided to the Member at the time of delivery.</p> <p>Failure to Meet Test</p> <p>In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 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 comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of 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 the purchaser or its use by the purchaser during the above-specified period with the permission of the bidder shall not constitute acceptance.</p> <p>High Altitude Operation</p> <p>The fire apparatus shall be designed to operate at high altitudes of 5,500' to 9,000' above sea level. The High Rolls, NM fire district response zone lies within this entire altitude range. High altitude performance is a primary consideration. All pumps and operating systems shall be capable reaching their full rated capacity at 8000' above sea level. (No Exceptions)</p> <p>Short Wheelbase and Overall Length for Increased Maneuverability</p> <p>This fire apparatus will be required to operate on steep, narrow, winding and unimproved roads in a rugged mountain environment. Every effort shall be made to ensure this fire apparatus has as short a wheelbase and overall length as possible, for increased maneuverability, without impairing the safety of the crew. (No Exceptions)</p> <p style="text-align: center;">Warranty</p> <p>General Warranty</p> <p>Each bidder shall submit a copy of the warranty to be supplied with the completed apparatus. The warranty will be reviewed for exceptions and limitations. It must meet or exceed the warranty specified below:</p> <p>The minimum initial warranty shall be a Bumper-to-Bumper type for a one (1) year period. The purchaser shall not be held liable for any repair, replacement, shipping, inspection, installation, or examination costs or fees due to defective parts, or systems during the period covered by the warranty. The purchaser shall not pay for repairs or parts, and invoice the sales agency or manufacturer. No expenses of any kind are to be incurred by the purchaser for any item included under this warranty. Costs for repair work performed at service centers deemed authorized by the warranty shall not be paid for by the purchaser.</p> <p>In the case of a commercial chassis being used, the warranty on the chassis, engine, transmission, tires, storage batteries, generators, electrical lamps and other devices subject to deterioration is limited to the warranty of the manufacturer thereof and adjustments for the same are to be made directly with the manufacturer by the customer.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Body and Sub-frame Warranty</p> <p>A warranty of five (5) or more years shall apply for the body and sub-frame. No expenses of any kind are to be incurred by the purchaser for any item included under this warranty. Costs for repair work performed at service centers deemed authorized by the warranty shall not be paid for by the purchaser. The purchaser shall not pay for repairs or parts, and invoice the sales agency or manufacturer.</p> <p>Pump Warranty</p> <p>The pump shall have a minimum of a five (5) year manufacturer's warranty. No expenses of any kind are to be incurred by the purchaser for any item included under this warranty. Costs for repair work performed at service centers deemed authorized by the warranty shall not be paid for by the purchaser. The purchaser shall not pay for repairs or parts, and invoice the sales agency or manufacturer.</p> <p>Tank Warranty</p> <p>A minimum of a "Lifetime" warranty shall be required for the water tank.</p> <p>Paint Warranty</p> <p>A minimum (5) year warranty on all painted body parts shall be required.</p> <p>Plumbing Warranty</p> <p>A minimum warranty of ten (10) years shall apply.</p> <p>Pressure Gauge Warranty</p> <p>The discharge pressure gauges shall have a lifetime non-yellowing and freeze warranty. The gauge shall also be warranted for 4 years for defects in materials and workmanship, including fluid leakage.</p> <p>Warranty will not cover labor costs and/or transportation costs.</p> <p style="text-align: center;">Apparatus Specifications</p> <p>Type of Apparatus</p> <p>The minimum specifications for this apparatus shall be a dual rear axle, elliptical Tanker/Water Tender type apparatus with a larger pump for secondary fire attack capabilities. It shall as a minimum have a stainless steel wrapped tank of 3000 gallon capacity, a pump capable of flowing 750 gpm or greater, at least two (2) standard compartments, hard suction hose, suction strainer, and a folding frame water tank capable of carrying greater than the full carrying capacity of the fire apparatus, and a powered portable tank carrier. It shall also have three stainless steel dump valves in the rear with manual and electric controls and telescoping dump chutes installed. It shall have pre-connected cross lays, powered portable tank mount, SCBA bottle storage in rear wheel wells, and dead lay storage.</p> <p>The preferred Chassis cab shall be a Peterbilt 382.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>PETERBILT 382 (2 Door Day cab) 6x4 CHASSIS</p> <p>The cab shall be new conventional style day cab with standard interior.</p> <p>The cab shall be aluminum with a 110" Melton hood, with bright finish crown. Includes view window RH door and convex mirror over RH door.</p> <p>The cab shall be mounted independently from the body and chassis on rubber mounting points to reduce cab vibrations and allow flexibility.</p> <p>All cab doors shall be made with inside NFPA compliant grab handles and flush paddle latches. All windows shall be tinted and free of imperfections. All cab doors shall be substantially hung by heavy-duty stainless steel piano automotive hinges. Doors shall have heavy-duty door checks to prevent them from opening against the cab. The door interior coverings shall have retro-reflective chevron material installed in accordance with NFPA 1901 standards.</p> <p>Cab lighting shall include a dual overhead utility light centered between the driver and passenger seats.</p> <p>Courtesy lighting shall be provided and installed in the lower interior panel of each cab door to light the step areas.</p> <p>The cab dash shall be illuminated with direct lighting in addition to indirect lighting to ensure proper gauge illumination at all times.</p> <p>The instrument panel shall be arranged for maximum driver visibility and efficiency. All gauges, lights, and switches shall be protected by appropriate sized circuit breakers. The instruments and controls shall be illuminated in such a manner as to provide maximum visibility.</p> <p>The following options shall be installed:</p> <ul style="list-style-type: none"> • Rugged charcoal instrument panels • Glare-resistant gray dash Black bezels on gauges • (2) power ports • Monochromatic molded door pads with durable in-mold color • Gray molded back wall • 18 inch 4-spoke soft-touch steering wheel • Soft-touch steering column cover • Power lift passenger window • Extruded rubber floor covering • Header-mounted dome light • Foot well lighting • (4) inside entry grab handles • (2) inside sun visors 			

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Description:	Yes	No	Exceptions
<ul style="list-style-type: none"> • Four position ignition switch, keyless. • Ignition and doors keyed alike • Single electric horn • Grover Stutterhom Air Horns (2) • Two-piece flat windshield • Adjustable telescopic tilt steering column • Electric windshield wipers 2-speed plus intermittent • Electric windshield washers • Glove-box door, with locking latch • Dash mounted cruise control with switches; • Turn signal-switch with column-mounted dimmer; • Gray/Black interior primary colors • Floor mats • Inside sun visor for driver and passenger • LH/RH; door courtesy lights • Standard Peterbilt instrumentation shall be provided. • Marker lights: Five (5) Aero LED • Air restriction indicator — Filter minder. Daytime running lights. <p>Seating</p> <p>Seating for a minimum of two (1) firefighter and one (1) driver shall be provided. A factor of 250 pounds shall be figured into the final estimated in-service weight rating, for each seating position.</p> <p>One (1) NFPA 1901 compliant driver's seat, air ride with dual armrest and suspension cover shall be provided. Seat belts shall meet all required NFPA standards.</p> <p>One (1) NFPA 1901 compliant passenger seat shall be provided. Seat belts shall meet all required NFPA standards.</p> <p>All seats shall be black in color.</p> <p>The seat cloth shall be made of an easily cleanable, wear resistant material.</p> <p>An NFPA compliant seat belt warning system shall be installed.</p> <p>Two (2) Ziamatic SCBA mounts shall be installed on the rear interior cab wall between the driver and passenger seats.</p> <p>All required NFPA 1901 warning placards shall be provided and installed.</p>			

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Description:	Yes	No	Exceptions
<p>Mirrors</p> <p>LH/RH West Coast style heated mirrors</p> <p>Convex mirrors shall be installed on the lower portion of the West Coast mirrors.</p> <p>An additional downward facing convex mirror shall be installed above the passenger side door in addition to standard mirrors, allowing the driver to see the right hand side step area.</p> <p>Air Conditioner/Heater/Defroster</p> <p>The cab shall have a factory installed heavy duty air conditioner/heater/defroster with controls within easy reach of the driver, capable of preventing the inside of the cab glass from fogging in damp or cold weather. There shall be adequate fresh air ventilation throughout the seating area provided by vents, air intakes, etc.</p> <p>Global Positioning System (GPS)</p> <p>One (1) Garmin Oregon 450 or equivalent mapping type GPS unit shall be supplied and installed in chassis cab on a dashboard bracket. This unit shall have a 12 volt rechargeable battery and will be wired to the chassis battery system or 12v DC cigar plug. Minimum screen display of 3.5".</p> <p>It shall be removable for handheld operation.</p> <p>Ember Guards</p> <p>The air inlet shall be equipped with a stainless steel mesh to separate water and burning embers from the air intake system such that particulate matter larger than 0.039" (1.0 mm) in diameter cannot reach the air filter element.</p> <p>This shall comply with NFPA 1901 and 1906 standards.</p> <p>Cab Controls</p> <p>As a minimum the following instrument package shall be installed:</p> <ul style="list-style-type: none"> • Speedometer with resettable trip-meter. • Tachometer with hour-meter. • Outside air temperature display. • Voltmeter. • Engine oil pressure. • Engine coolant temperature. • Fuel level. • Primary and secondary air pressure gauges. • The instrumentation shall include standard warning light package: high water temperature, low oil pressure, and low air pressure warning lights w/audible alarms, high beam, turn signal, low fuel, parking brake, and ice warning indicators; seat belt reminder. • Rocker switches with long-life LED indicators; • multi-function turn stalk with flash-to-pass feature (night mode flashes headlights and marker lights; day mode flashes headlights only), • Intermittent windshield wiper and headlamp beam control. • Turbo pressure (if applicable) 			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Power Steering A power steering system shall be provided and installed.</p> <p>Cab Integrity The cab shall comply with NFPA and Society of Automotive Engineers (SAE) cab strength requirements for the appropriate GVWR.</p> <p>Air Horns Two (2) chrome plated Grover Stutterhorn air horns shall be at the front of the vehicle. The air horns shall be mounted in full compliance with NFPA-1901. The supply lines shall be dual 1/4" lines with equal distance from each horn. Each air horn shall be mounted on the front chassis cab fenders, one (1) on the driver's side and one (1) on the officer's side. The air horns shall be controlled by a lanyard.</p> <p>Emergency Shutdown Switch One (1) emergency shutdown switch shall be provided and installed in the cab with flip-down anti activation shield. It shall shut down the engine by closing off the air supply in case of run-away conditions.</p> <p style="text-align: center;">Engine, Suspension, and Transmission</p> <p>Engine The engine shall be a Cummins Paccar PX-9 of 8.9L displacement or larger equivalent with a governed speed of 2200 rpm. Horsepower shall be a minimum of 450HP. This apparatus is to be operated in a rugged mountain environment with up to 6% grades and horsepower/torque is to be emphasized for performance. The engine shall be outfitted with an exhaust brake and an engine compression brake. The engine shall be equipped with a block heater. The engine shall be equipped with a full pressure lubrication system, dry air type cleaner, and a primary by-pass full flow oil filter system. Oil filters shall be of the spin-on type. The engine shall be equipped with a full blocking 180 degrees thermostat and a fuel/water separator. The engine shall be designed to operate efficiently with ultra-low sulfur diesel fuel. Fuel lines shall be located in a manner to protect them from engine or exhaust system heat and mechanical damage. The air cleaner shall be a heavy duty (dry type) located in the engine compartment adequately plumbed to the engine air intake. The air cleaner shall be protected from the weather, road splash, or dust kicked up by the front wheels. The air cleaner shall meet all requirements of the engine manufacturer.</p> <p>Exhaust System The exhaust system shall consist of a single vertical stack with a diesel particulate filter (DPF) and an SCR device to meet current EPA standards. The stack shall be located at the right rear side of the cab. A perforated stainless steel heat shield shall cover the stack along the cab door frame opening. A vertical handrail shall be mounted to the heat shield.</p>			

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Description:	Yes	No	Exceptions
<p>Cooling System Anti-freeze protection to —34 F Ethylene Glycol pre-charged SCA heavy-duty coolant or equivalent.</p> <p>A Horton "Drivemaster" fan drive with on/off switch or equivalent shall be provided and installed. Automatic fan control with dash switch and indicator light, non-engine mounted.</p> <p>Cooling system shall be pressurized and shall be equipped with a coolant recovery system.</p> <p>Gates Blue Stripe coolant hoses or equivalent shall be provided.</p> <p>A readily accessible drain cock shall be provided in the lowest portion of the cooling system. The radiator shall be satisfactorily mounted and insulated to prevent the engine torque or road shock from twisting, or metal-to-metal friction, which would cause damage to the radiator.</p> <p>Engine Brake</p> <p>An Engine Brake shall be supplied. The Driver's dash shall include an engine brake control switch wired to control the Engine Brake.</p> <p>Activation of the engine brake shall occur at zero throttle position. The transmission ECU shall be programmed to operate in the pre-select downshift mode to maximize the retarding power of the engine brake.</p> <p>The brake lights shall illuminate when the engine brake is in operation. The engine brake shall be inoperative when the chassis is in pump mode.</p> <p>Engine High Idle</p> <p>The chassis shall be equipped with an Electronic Idle Control (EIC) for the electronic engine</p> <p>The fast idle provision shall only function when the parking brake is set and the ' transmission is in neutral. Manual selection of the fast idle shall be controlled by a driver's momentary switch.</p> <p>Automatic activation of the fast idle shall occur when a low voltage condition exists, the truck is in neutral and the parking brakes are applied.</p> <p>Cancellation of the fast idle shall be achieved by resetting the manual switch or by depressing the service brake pedal.</p> <p>Corrosion Inhibitor</p> <p>Corrosion inhibitor shall be provided as an additive to the chassis cooling system.</p> <p>Transmission</p> <p>One (1) Allison 4000 EVS six speed automatic transmission with PTO provision and electronic pump mode lock-out shall be installed. It shall feature push button controls mounted on the cab dash within easy reach of the driver.</p> <p>One (1) Allison TC-531 torque convertor shall be provided and installed.</p>			

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Description:	Yes	No	Exceptions
<p>A Fabco transfer case or equivalent shall be provided and installed.</p> <p>This apparatus will be operating in a rugged mountain environment with steep grades of 6% over long distances. Particular emphasis on low gear ratios and hauling ability shall be emphasized. An apparatus designed and geared strictly for level ground operation shall not be deemed acceptable. All final gear ratios and performance operating on steep grades shall be approved by High Rolls Fire Department (No Exceptions).</p> <p>A push button electronic shift control shall be mounted on cab dash. The pump shift control shall have an indicator light located nearby and visible to the driver.</p> <p>A water to oil transmission oil cooler or equivalent shall be provided in radiator end tank.</p> <p>A transfer case oil cooler shall be provided and installed.</p> <p>An electronic transmission oil level check shall be provided and installed.</p> <p>An auto-neutral system shall be provided and installed. Driveline components shall comply with all road test specifications prescribed in the latest edition of NFPA Pumper Fire Apparatus.</p> <p>Class One Governor Class 1, pressure governor for electronic engines shall be furnished and installed on the apparatus. The system shall include an alpha/numeric display to show pump pressure and engine RPM. The control panel shall include a RPM/PSI mode switch, an on/off power switch, increase and decrease switches for throttle control, a preset switch to select preset pressure or RPM, and an idle switch to return to idle. The pressure governor shall be connected to the electronic engine and maintain the specified preset discharge pump pressure or a preset engine speed.</p> <p>The device will be furnished, installed and tested by the apparatus body builder.</p> <p>DOT Accessories A roadside safety triangle kit shall be provided. An NFPA compliant vehicle fire extinguisher will be provided and mounted in the cab.</p> <p>Length and Height of Apparatus The total length of the apparatus shall not exceed Thirty (31) feet.</p> <p>Wheelbase The wheelbase from center of front axle to first rear tandem axle shall be 181". The rear tandem axles shall be separated a distance of 52" from the center of each axle. Overall wheelbase is 233" front axle to rear axle.</p> <p>This fire apparatus is required to traverse narrow winding and steep mountain roads. Excess length reduces maneuverability. The wheelbase measurements reflect past experience of the High Rolls Fire Department, and shall not be changed unless the change is for improved maneuverability or specific engineering reasons. (No Exceptions)</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Frame The frame members shall be constructed as a minimum of heat-treated steel meeting or exceeding the requirements of the GVWR and Estimated In-Service Weight, designed for heavy-duty fire service use.</p> <p>Tow Hooks Two (2) frame mounted tow hooks shall be installed on the front. Two (2) frame mounted tow hooks shall be installed on the rear.</p> <p>Front Bumper The front bumper shall be chromed steel wrap-around. A flush mount siren speaker shall be integrated into the front bumper.</p> <p>Fuel Tank A stepped round saddle style fuel tank shall be provided. The tank shall be located on the driver's side under the door. The fuel tank and accessories such as the mounting straps and tank cover shall be polished to a bright finish.</p> <p>Diesel Exhaust Fluid Tank The Diesel Exhaust Fluid (DEF) tank shall be located near the fuel tank. This tank, straps, and cap shall be polished to a bright finish.</p> <p>DPF/SCR System The DPF/SCR system shall be provided and installed.</p> <p>Fuel Tank Step Tread Plate Fuel tank step areas shall be provided for access to the cab. Step areas shall be fabricated from aluminum tread plate.</p> <p>Battery Box The battery box shall be located for easy access and shall not interfere with maintenance access or firefighting operations. It shall hold three (3) Paccar 3000c.c.a. batteries.</p> <p>Battery Box Tread Plate The Battery Box shall be overlaid with polished aluminum tread plate. The cover of this box shall be easily removable.</p> <p>Front Axle, Non-driving: Dana Spicer D2000; Capacity to match the estimated GVWR for entire fire apparatus, firefighters, water, and equipment carried.</p> <p>Front Suspension, Single Front Taper-leaf; Capacity to match the estimated GVWR for entire fire apparatus, firefighters, water, and equipment carried.</p> <p>Rear Axles, Tandem: Dana Spicer D-170 Single Reduction; Capacity to match the estimated GVWR for entire fire apparatus, firefighters, water, and equipment carried.</p> <p>Rear Axle Final Gear Ratio The final gear ratio of the rear axle shall be 7.17:1 This truck must be capable of safely and easily operating at steep grades of 6% or more. Gearing shall be matched to provide performance with performance test requirements, with emphasis on lower gearing for performance on steep grades. Any gearing other than the specified 7.17:1 ratio shall be approved by the High Rolls Fire Department. (No Exceptions).</p>			

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Description:	Yes	No	Exceptions
<p>Rear Suspension, Tandem: Hendrickson HaulMaax HMX; tandem, with optional shock absorber kit. Capacity to match the estimated GVWR for entire fire apparatus, firefighters, water, and equipment carried.</p> <p>Front Wheels (Single) Front wheels shall be painted to match the chassis cab and apparatus body. They shall have chrome simulators.</p> <p>All terrain tires shall be provided that match the weight/and speed ratings. These tires shall be manufactured the same year this apparatus is manufactured.</p> <p>Rear Wheels (Tandem - Dual) Rear wheels shall be painted to match the chassis cab and apparatus body. They shall have chrome simulators on the outer wheels only.</p> <p>All terrain tires shall be provided that match the weight/and speed ratings. These tires shall be manufactured the same year this apparatus is manufactured.</p> <p>Eight (8) wheels and matching tires shall be provided.</p> <p>Calculated Axle Rating The axle ratings and suspension gear shall be rated to match Estimated In-Service Weight for chassis carrying a fully loaded 3000 gal water tank, firefighters, and firefighting equipment.</p> <p>The final calculated CG cannot be higher than 80 percent of the rear axle track width.</p> <p>Tire Pressure Indicator There shall be a tire pressure indicator at each tire's valve stem on the vehicle that shall indicate if there is insufficient pressure in the specific tire. Each cap shall have a visual LED indicator to show if the tire is correctly inflated.</p> <p>Brake System The brake system shall be full air brakes.</p> <p>The front brakes shall be Bendix ADB22X air disc</p> <p>brakes. The rear brakes shall be drum style brakes.</p> <p>A Bendix ABS-6 Advanced with ESP Stability System or newer Bendix equivalent shall be installed.</p> <p>As a <u>minimum</u>, all air brake lines shall be made of nylon.</p> <p>The service brakes shall be air over mechanical type. Each wheel shall be equipped with a separate integral brake chamber. A dual treadle valve shall split the braking power between the front and rear systems.</p> <p>A failure in either of these systems shall result in only a partial loss of braking power. Additionally, modulated spring brakes shall be available to the driver, should a rear brake system failure occur, through use of a spring brake control valve.</p> <p>All drum brakes shall have integral shoes.</p>			

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Description:	Yes	No	Exceptions
<p>All brakes shall be equipped with Haldex Dual AA1 standard automatic slack adjusters, accessible for ease of adjusting brakes.</p> <p>The braking system shall be capable of stopping the apparatus while fully loaded with water, foam, fuel, firefighters, and equipment within all required stopping distances as established in the performance test, New Mexico state, and federal standards.</p> <p>Brake performance shall comply with the Department of Transportation (DOT) stopping distance requirements and shall meet Federal Standard F.M.V.S. 121.</p> <p>Front Axle Brake Lock</p> <p>The vehicle shall be equipped with a Front Axle Brake lock. It shall have an interlock to it cannot be applied unless the parking brake is activated first. It shall have a red indicator light on the dash in clear view of the driver, and a push button or toggle on the dash to activate the front axle brake lock.</p> <p>Parking Brake</p> <p>Parking brakes shall be provided on all drive axles for optimal performance.</p> <p>Dust Shields</p> <p>The front and rear brakes shall be provided with dust shields.</p> <p>Drive Controlled Differential Lock</p> <p>The driver controlled differential lock { will/shall } be operated by an air actuated shift assembly that shall be mounted on the axle carrier and controlled by a switch in the dash. When the differential lock is disengaged, there is normal differential action between the wheels of the axle at all times. When the differential lock is engaged the axle shafts and differential assemblies are locked together, and there is no differential action between the wheels and the axle. Note, the DCDL should only be used under poor road conditions and not above speeds of 25 mph, or during downhill operation.</p> <p>Automatic Traction Control/ABS System</p> <p>To further improve vehicle drive characteristics, the chassis shall be fitted with automatic traction control (ATC) or ABS system. This system shall control drive wheel slip during acceleration from a resting point. The system shall be equipped with a dash-mounted light that shall come on when ATC is controlling drive wheel slip.</p> <p>A Bendix ABS-6 Advanced with ESP Stability System or newer Bendix equivalent shall be installed.</p> <p>Body and Chassis Undercoating</p> <p>The entire underside of the chassis frame and apparatus body shall be undercoated with a polyurethane material such as Rhino Liner, Line-x, or equivalent.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Air Compressor</p> <p>The air systems shall be a minimum 18.7 air compressor quick build-up type, equipped with a type "D" or equivalent governor. The governor shall be set to cut-out at 120 psi. The air system shall be compliant with NFPA 1901 and NFPA 1906, and shall feature a rapid build-up of air pressure.</p> <p>The air system shall be equipped with a low pressure warning buzzer and indicator light to indicate low air system pressure. Air system shall have all necessary gauges installed on the cab dash.</p> <p>The air system shall be a complete and accurately designed system with two (2) air receivers (all easily removable).</p> <p>A Bendix Air Dryer shall be installed.</p> <p>Bendix Air Dryer with Heater</p> <p>One (1) Bendix AD-IS Air Dryer with Heater shall be installed. It shall be an integrated system air dryer that incorporates the functions of the air dryer, purge reservoir (which increases the drying capacity), wet air tank, pressure relief valve, single check valves, and pressure protection valve for air suspension and other air accessories.</p> <p>It shall include an easy-to-service spin-on desiccant cartridge.</p> <p>Auxiliary Air Inlet</p> <p>A quick disconnect male auxiliary air inlet shall be provided at the driver's side door area. A mating quick disconnect female connector shall be shipped loose with the apparatus. This shall allow a High Rolls Fire Department furnished external air supply to be connected to the chassis air system.</p> <p>Auxiliary Air Outlet</p> <p>A quick disconnect female auxiliary air outlet shall be provided at the driver's side door area. A mating quick disconnect male connector shall be shipped loose with the apparatus. This shall allow utility functions of filling of tires, etc. from the chassis air system.</p> <p>Mud Flaps</p> <p>Mud flaps shall be provided on the front and rear fenders.</p> <p>Wheel Chocks</p> <p>There shall be one (1) pair of folding Ziamatic SAC-44-E aluminum alloy, Quick-Choc wheel blocks with easy grip handle provided.</p> <p>Wheel Chock Brackets</p> <p>There shall be one (1) pair of Ziamatic SQCH-44-H horizontal mounting wheel chock brackets provided for the Ziamatic SAC-44-E folding wheel chocks. The brackets shall be mounted under the rear compartments near the rear wheels in a location that does not interfere with ground clearance. Location must be approved by High Rolls Fire Department.</p> <p>Automatic Tire Chains</p> <p>On Spot automatic tire chains shall be installed on rear drive wheels.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p style="text-align: center;">Miscellaneous Cab Modifications</p> <p>Motorola PM-1500 Mobile Radio</p> <p>One (1) Motorola PM-1500 mobile radio and control head shall be installed and properly wired to the electrical system, cab speaker, and siren speaker. It shall have a reset-able circuit breaker between the radio and the power source.</p> <p>One (1) Motorola PM-1500 Mobile Radio head shall be installed at the pump operator's panel and slaved to the primary radio installed in the cab. An external speaker, headset connections.</p> <p>Cab Antenna Mounting</p> <p>One (1) antenna mounting base with 17' of coaxial cable shall be provided and installed on the cab roof. The attached antenna wire(s) shall be run to the right side cab dash area.</p> <p>Intercom System</p> <p>A Firecom wireless intercom system with or equivalent with two (2) UHW-51 headsets shall be installed and wired to function with the Motorola PM-1500 radio system. The system shall have a 1600' range. The headsets shall have integrated <i>Push-To-Talk</i> buttons for transmitting over the mobile radio.</p> <p>The wireless intercom system shall be totally hands-free and shall not require the use of belt mounted transmitters or receivers.</p> <p>Integrated headset chargers/hangers shall be installed in the cab.</p> <p>Vehicle Data Recorder</p> <p>An Alaron/Weldon Vehicle Data Recorder (VDR) and Seat Belt monitor system shall be provided. The system shall include an NFPA compliant "Black Box" with reporting software that shall be capable of data storage to coincide with the NFPA requirements. Data storage capabilities shall include interfaces with the following systems:</p> <ul style="list-style-type: none"> • Display module (Master Optical Warning Device) • Seat belt monitoring (seat occupied with seat belt) • Surface or panel mount • VDR, date & time stamp • Max Vehicle speed (MPH) • Vehicle acceleration / deceleration (MPH/Sec.) • Engine Speed (RPM) • ABS event • Data password protected • Data sampled once per second, in 48-hour loop • Data sampled min by min for 100 engine hours • Throttle position (% of Throttle) • Data software • Data interface for data download • PC / Mac Compatible • Hours Driven 			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<ul style="list-style-type: none"> • Data summary reports • Last Minute Log • Idle Time • Differential lock control switch • "Driver Diff Lock" indicator <p style="text-align: center;">Chassis Electrical System</p> <p>Commercial Chassis Electrical System</p> <p>The commercial chassis electrical system shall be provided as furnished by the original manufacturer. A customized interface shall be provided and designed, so as not to disturb any of the required chassis functions. The necessary interfaces shall only be provided in areas where load management is allowed or with accessory components provided on the chassis.</p> <p>270 Amp Alternator</p> <p>One (1) 270 amp Leese-Neville alternator with cab cut-off switch & warning light shall be installed.</p> <p>Batteries</p> <p>All batteries shall be of 3000 c.c.a cranking capacity.</p> <p>12 Volt Electrical System Testing</p> <p>The apparatus low voltage electrical system shall be tested and certified by the manufacturer. The certification shall be provided with the apparatus. All tests shall be performed with air temperature between 0°F and 100°F.</p> <p>The following three (3) tests shall be performed in order. Before each test, the batteries shall be fully charged.</p> <p>TEST #1-RESERVE CAPACITY TEST</p> <p>The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load shall be activated for 10 minutes. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a test failure.</p> <p>TEST #2-ALTERNATOR PERFORMANCE TEST AT IDLE</p> <p>The minimum continuous electrical load shall be activated with the engine running at idle speed. The engine temperature shall be stabilized at normal operating temperature. The battery system shall be tested to detect the presence of battery discharge current. The detection of battery discharge current shall be considered a test failure.</p> <p>TEST #3-ALTERNATOR PERFORMANCE TEST AT FULL LOAD</p> <p>The total continuous electrical load shall be activated with the engine running up to the engine manufacturers governed speed. The test duration shall be a minimum of 2 hours. Activation of the load management system shall be permitted during this test. However, an alarm sounded due to excessive battery discharge, as detected by the system, or a system voltage of less than 11.7 volts DC for a 12 volt system, for more than 120 seconds, shall be considered a test failure.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Low Voltage Alarm Test</p> <p>Following completion of the preceding tests, the engine shall be shut off. The total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm is activated.</p> <p>The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts shall be considered a test failure. The battery system shall then be able to restart the engine.</p> <p>At time of delivery, documentation shall be provided with the following information:</p> <ul style="list-style-type: none"> • Documentation of the electrical system performance test • A written load analysis of the following; • Nameplate rating of the alternator • Alternator rating at idle while meeting the minimum continuous electrical load • Each component load comprising the minimum continuous electrical load. • Additional loads that, when added to the minimum continuous load, determine the total connected load. • Each individual intermittent load. <p>Wiring</p> <p>All electrical wiring shall be stranded copper with thermoplastic insulation, sized for the amp load and connected in accordance with ASME standards. They shall be color coded as well as numbered. Wires shall not be spliced and shall extend from service point to use point, or terminal blocks in such a manner as far removed from the exhaust and cylinders, as good design will permit in order to be protected against heat, oil, and mechanical injury.</p> <p>Battery Disconnect Switch</p> <p>The chassis batteries shall be wired in parallel to a single 12 volt electrical system, controlled through a heavy duty, rotary type, master disconnect switch. The master disconnect switch shall be located within easy access of the driver upon entering or exiting the cab. There shall be a green pilot light, visible to the driver, which illuminates when the master switch is activated.</p> <p>120 Volt Shoreline Connection</p> <p>A 120-volt shoreline connection with a weather tight cover shall be provided. The receptacle shall be a standard household, recessed male plug in, which shall be wired to the specified on board battery charging system. A label shall be provided indicating voltage and amperage ratings.</p> <p>The shoreline power protective ground shall be bonded to the vehicle frame. The neutral conductor shall be switched through the transfer switch.</p> <p>Auto-Eject Shoreline Connection</p> <p>A Kussmaul 20 amp 120-volt Super Auto-Eject model 091-55-20-120 shall be provided. The unit shall automatically eject the connecting plug when the engine is cranked.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>Shoreline Power Inlet Plate</p> <p>A shoreline power receptacle information plate shall be permanently affixed at or near the power inlet. The plate shall indicate the following;</p> <ul style="list-style-type: none"> • Type of Line Voltage • Current Rating in Amps Power Inlet Type (DC or AC). <p>The shoreline receptacle shall be located in the driver's cab step well. It shall be wired to the electrical system to maintain the proper electrical charge required to maintain the batteries and other electrically powered accessories.</p> <p>Kussmaul Battery Charger</p> <p>A Kussmaul Auto-Charge fully automatic battery charger with 20-amp output shall be installed on the apparatus. Remote voltage sensing shall be provided to compensate the charger output for the voltage drop in the charging wires. A 0-25 ampere meter shall be provided on the charging unit to indicate charge rate.</p> <p>Auto-Eject Mating Plug</p> <p>A NEMA 5-15P mating female cord end shall be shipped loose with the apparatus to allow the Fire Department to connect cord end to a Fire Department provided charging cord. It shall be yellow in color.</p> <p>Kussmaul Air Maintainer</p> <p>A Kussmaul Air Maintainer system shall be installed and tied to the apparatus air system.</p> <p>Lighting</p> <p>The lighting system shall be 12-volt with circuit protection.</p> <p>Two (2) single headlights shall be of the halogen sealed beam type with high and low beams. They shall be factory installed for the chassis type.</p> <p>The front directional turn signals and parking lights shall be Amber in color. The turn signals shall be fender mounted, one (1) each side on the front of the cab. The turn signal controls shall be self-canceling and mounted on the steering column.</p> <p>One four-way hazard flasher switch with pilot light shall be installed, mounted in the cab within easy reach of the driver.</p> <p>Daytime running lights shall be installed.</p> <p>Engine Compartment Light</p> <p>(1) 12-volt work light with switch shall be mounted in the engine enclosure.</p> <p>Red / White Cab Utility Light</p> <p>One (1) Whelen 80CREHCR Split Red/White overhead utility light will be provided centered between the driver and passenger seats. Red shall be for night vision use, White for utility use. The lights shall feature High/Low intensity mode.</p>			

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Description:	Yes	No	Exceptions
<p>White Overhead Map Lights</p> <p>Two (2) small White overhead map lights shall be installed above each seating position.</p> <p>“Do not Move Apparatus” Warning Light with Audible Alarm</p> <p>A 1" round, red flashing warning light with an integral audible alarm, shall be functionally located in the cab to signal when an unsafe condition is present such as an open cab door or body compartment door, an extended ladder rack, a deployed stabilizer, an extended light tower or any other device which is opened, extended or deployed which may cause damage to the apparatus if it is moved.</p> <p>This light shall be activated through the parking brake switch to signal when the parking brake is released. This light shall be labeled "DO NOT MOVE TRUCK".</p> <p>ROOF MOUNTED 155W LED BROW LIGHT - Above Windshield</p> <p>Fire Research Evolution LED model FCA800-V15 contour roof mount light shall be installed. The mounting brackets shall attach to the bottom of the lamp head and be machined to conform to the roof radius. Wiring shall extend from a weatherproof strain relief at the rear of the lamp head.</p> <p>The lamp head shall have eight (8) ultra-bright white LEDs. It shall operate at 12 volts DC, draw 13 amps, and generate 15,000 lumens. The lamp head shall direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. The lamp head shall incorporate heat-dissipating fins and be no more than 4" high by 11 1/2" wide. The lamp head and mounting arm shall be powder coated white. The floodlight shall be for fire service use.</p> <p>The Evolution brow mounted floodlight shall be located above the windshield in the center of the cab.</p> <p>BROW LIGHT MASTER SWITCH</p> <p>A master power switch shall be provided in the cab warning light switch console to turn the brow lights above windshield on and off.</p> <p>FLOOR MOUNTED CONSOLE TOWER</p> <p>A floor mounted console tower shall be provided to mount the switches used to control the dump valves, scene, and emergency lighting and mobile radio head.</p> <p>MOUNTED HAND-HELD SPOTLIGHTS WITH CHARGERS</p> <p>Two (2) Streamlight Fire Vulcan LED spotlights and charger mounts shall be mounted in the chassis cab and connected to the electrical system so that the spotlights will charge when the battery switch is in the off position.</p> <p>12 VOLT POWER PORTS</p> <p>Two (2) 12-volt power port accessory outlets shall be installed in the cab of the truck for the High Rolls Fire Departments accessory devices. The lighters shall be located as directed in the cab for devices such as cellular phones.</p> <p>12 VOLT ACCESSORY CIRCUIT</p> <p>A dedicated 12 volt power and ground circuit shall be provided in the specified body compartment as required. The circuit shall be for future installation of radios or accessories.</p>			

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<p>REAR VISION CAMERA</p> <p>A Federal Signal model # CAMSET56-NTSC-2 rear vision camera system shall be provided to allow the driver to visually see the rear of the apparatus while in the cab. The system shall include a Federal 5.6" flat panel LCD color monitor mounted adjacent to the driver and a Federal rear vision color camera that shall be mounted at the rear of the vehicle. The system shall also feature a microphone on the camera and speaker built into the monitor. The rear vision camera system shall be wired to automatically activate when the chassis transmission is placed in reverse.</p> <p>The monitor for the rear vision system shall be mounted ceiling of the cab in easy view of the driver.</p> <p>The rear-mounted camera shall have a wide enough lens and be so mounted that a clear view of the apparatus rear dump chute is visible on the monitor. The camera shall be recess mounted to prevent damage.</p> <p>RED WARNING LIGHTS IN CAB DOORS</p> <p>One (1) Red LED warning light shall be mounted on the surface of each cab door to indicate to oncoming traffic that the door is open. This light shall function any time the door is opened and the fire apparatus is running.</p> <p style="text-align: center;">Vehicle Appearance</p> <p>CAB, CHASSIS, AND APPARATUS BODY PAINT</p> <p>The color of the cab, chassis, and apparatus body shall be Red.</p> <p>The top of the cab and roof starting from the bottom window level up shall be White.</p> <p>All exposed steel surfaces shall be thoroughly cleaned and prepared for finish painting.</p> <p>All removable items, such as brackets and compartment doors, shall be removed and painted separately to insure finish paint behind them after they are reinstalled.</p> <p>All roll up compartment doors shall be left unpainted, in a natural aluminum finish.</p> <p>The apparatus body shall be masked as needed to prevent the painting of unwanted areas and over-spray damage. All exterior surface scratches and blemishes shall be filled with body putty and sanded down, along with all primed surfaces.</p> <p>The complete apparatus body shall be cleaned, blown free of dust; washed with solvent; and wiped with tack cloths before priming.</p> <p>A primer shall be applied and when dry, the apparatus body shall be sprayed with minimum of three (3) coats of finish paint. All loose body components shall be treated in the same manner Any irregularity in any painted surface shall be repaired prior to the application of the finish paint coats.</p> <p>A two (2) ounce container of touch-up paint, with applicator brush, shall be supplied for each color of the finished apparatus body paint upon completion of the apparatus.</p> <p>CAB AND BODY STRIPE</p> <p>A 6" white Scotchlite stripe shall be installed on the lower portion of the left and right cab doors, and along the apparatus body to match in compliance with NFPA 1901 standards. This 6" white stripe shall have black pin striping on the top and bottom border.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>CAB AND BODY LETTERING</p> <p>The numbers 623 shall be applied to each side of the cab doors along the White Scotchlite stripe, centered in the middle of the door. The lettering shall be 5" in height and Black in color.</p> <p>The number 623 shall be applied to the top center of the front windshield. It shall be White lettering. It shall be equal in size to the door lettering.</p> <p>The words "High Rolls Fire Dept." shall be applied in Black 4" vinyl lettering along the rear of the apparatus body on the 6" White Stripe. These words shall be centered above and between the rear tandem axles.</p> <p>The words "High Rolls Fire Dept." and the numbers "623" shall be applied to the rear of the elliptical tank. They shall be in 6" black vinyl lettering. The words "High Rolls Fire" shall be centered above the numbers "623"</p> <p>REAR CHEVRON STRIPING</p> <p>The entire rear portion of the elliptical water tank shall have a 3M reflective chevron style striping, applied at a 45-degree upward angle pointing towards the center upper portion of the rear panel in compliance with NFPA 1901.</p> <p>At least 50% of the rear facing vertical surface shall be covered with alternating strips of reflective striping.</p> <p>The striping shall be 6" Diamond Grade Scotch-Lite.</p> <p>The Diamond Grade Scotch-Lite shall be Red #983-72 and Fluorescent Yellow Green #983-23 in color.</p> <p>INTERIOR CAB DOOR STRIPING PANELS</p> <p>Interior cab door retro-reflective chevron striping panels shall be installed on both cab doors in compliance with NFPA 1901.</p> <p>REFLECTIVE RUBRAIL STRIPING</p> <p>Reflective DOT striping shall be installed in the recessed portion of the rubrails.</p> <p style="text-align: center;">Apparatus Body</p> <p>12 VOLT BODY ELECTRICAL SYSTEM</p> <p>All electrical lines in the body shall be protected by automatic circuit breakers, conveniently located to permit ease of service. Flashers, heavy solenoids and other major electrical controls shall be located in a central area near the circuit breakers.</p> <p>All lines shall be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram. A complete wiring diagram shall be supplied with the apparatus.</p> <p style="text-align: center;"><i>Wiring shall be carefully protected from weather elements and snagging. Heavy duty loom shall be used for the entire length. Grommets shall be utilized where wiring passes through panels.</i></p> <p>In order to minimize the risk of heat damage, wires run in the engine compartment area shall be carefully installed and suitably protected by the installation of heat resistant shielded loom.</p> <p style="text-align: center;"><i>All electrical equipment shall be installed to conform to the latest federal standards as outlined in NFPA 1901.</i></p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>BODY ELECTRICAL JUNCTION COMPARTMENT</p> <p>A weather resistant electric junction compartment shall be provided in the left side lower front compartment. This compartment shall be recessed through the inside rear wall of the compartment to provide an easily accessible enclosure to house all of the body wiring junction points, terminal strips, solenoids, etc. The design of this compartment shall not decrease the storage capacity area of the compartment in which it is located. A removable panel shall be provided for access to this compartment.</p> <p>AMDOR LUMA BAR TRACK MOUNTED COMPARTMENT LIGHTS - LED</p> <p>Each individual, equipment storage compartment shall be equipped with the AMDOR Luma Bar LED light fixture mounted one each side of the forward (and rear) vertical doorframe.</p> <p>DOT MARKER LIGHTS AND REFLECTORS</p> <p>Cab marker lights and signaling devices shall be as provided on the commercial chassis cab from the original chassis manufacturer. FMVSS reflectors shall also be provided as required.</p> <p>Truck-Lite Model #19 red LED clearance lights shall be provided on the apparatus rear upper, one (1) each side at the outermost practical location.</p> <p>Truck-Lite Model # 33740R LED 3-lamp identification bar shall be provided on the apparatus rear center. The lights shall be red in color.</p> <p>Truck-Lite # 98034Y yellow reflectors shall be provided on the apparatus body lower side, as far forward and low as practical, one (1) each side if the apparatus is 30' long or longer.</p> <p>Truck-Lite # 98034R red reflectors shall be provided on the apparatus rear, one (1) each side at the outermost practical location.</p> <p>GROUND LIGHTS</p> <p>One (1) rubber-mounted halogen ground light shall be provided under each side cab door entrance step, running board. Two (2) shall be installed for the rear apparatus body. A minimum six (6) total ground lights shall be provided and installed.</p> <p>The ground lights for the cab doors shall turn on automatically with each respective door jamb switch and also by a master ground light switch in the warning light switch console.</p> <p>Each light shall illuminate an area at a minimum 30" outward from the edge of the vehicle. The rear crew door ground lights shall be positioned at an angle rearward to provide illumination at the pump panel and the front of the bodywork areas.</p> <p>The ground lighting system shall operate as required by the current editions of NFPA 1901 and 1906.</p> <p>LICENSE PLATE LIGHT - REAR</p> <p>One (1) Weldon model # 9186 license plate light shall be provided above the mounting position of the license plate. The light shall be clear and shall have a chrome finish.</p> <p>A license plate bracket shall be provided.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>TAIL, STOP, TURN AND BACK-UP LIGHTS</p> <p>The vehicle shall be equipped with Whelen M600 LED series tail lights, stop lights, reverse lights, and turn signals. These lights shall be installed in two (2) Whelen Cast4V four-lighthouse polished aluminum vertical housings that shall be mounted, one each side, at the rear of the body. Each stack shall include a red LED stop/tail light, amber arrow LED turn signal, white LED reverse light, red LED warning light and a quadruple stack, polished aluminum, mounting bezel.</p>			
<p>BODY STEP LIGHTS</p> <p>Chrome plated Weldon model # 9186, shielded halogen body step lights shall be provided and controlled with marker light actuation. Step lights shall be located to properly illuminate all body access steps and walkway areas.</p>			
<p>SCENE LIGHTS - REAR OF BODY</p> <p>Two (2) Fire Research Evolution 15K LED scene lights or equivalent shall be provided, one on each side of the rear elliptical tank wrapper in a chrome plated flange. These lights shall be mounted on flush mounted polished stanchions that are angled slightly down to illuminate the area around the fire apparatus. The scene lights shall be controlled by a rocker switch in the master warning light switch console. All scene lights shall be wired through the load management system.</p> <p>The lamp head shall have eight (8) ultra-bright white LEDs. It shall operate at 12 volts DC, draw 13 amps, and generate 15,000 lumens. The lamp head shall direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. The lamp head shall incorporate heat-dissipating fins and be no more than 4" high by 11 1/2" wide. The lamp head and mounting arm shall be powder coated white. The floodlight shall be for fire service use.</p>			
<p>SCENE LIGHTS - SIDE OF BODY, FRONT</p> <p>Two (2) Fire Research Evolution 15K LED scene lights or equivalent shall be provided. The scene lights shall be mounted one each side, to the front, on the upper side elliptical tank wrapper in a chrome plated flange. These lights shall be mounted on flush mounted polished stanchions that are angled slightly down to illuminate the area around the fire apparatus. The scene lights shall be controlled by a rocker switch in the master warning light switch console. All scene lights shall be wired through the load management system.</p> <p>The lamp head shall have eight (8) ultra-bright white LEDs. It shall operate at 12 volts DC, draw 13 amps, and generate 15,000 lumens. The lamp head shall direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. The lamp head shall incorporate heat-dissipating fins and be no more than 4" high by 11 1/2" wide. The lamp head and mounting arm shall be powder coated white. The floodlight shall be for fire service use.</p>			
<p>SCENE LIGHTS - SIDE OF BODY, REAR</p> <p>Two (2) Fire Research Evolution 15K LED scene lights or equivalent shall be provided. The scene lights shall be mounted one each side, to the rear, on the upper side elliptical tank wrapper in a chrome plated flange on a flush mounted polished stanchion that is angled slightly downward to illuminate the area around the fire apparatus. The scene lights shall be controlled by a rocker switch in the master warning light switch console.</p>			

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	Yes	No	Exceptions
<p style="text-align: center;">Description:</p> <p>All scene lights shall be wired through the load management system.</p> <p>The lamp head shall have eight (8) ultra-bright white LEDs. It shall operate at 12 volts DC, draw 13 amps, and generate 15,000 lumens. The lamp head shall direct 50 percent of the light onto the action area while providing 50 percent to illuminate the working area. The lamp head shall incorporate heat-dissipating fins and be no more than 4" high by 11 1/2" wide. The lamp head and mounting arm shall be powder coated white. The floodlight shall be for fire service use.</p>			
<p>DRIVERS SIDE DUMP CHUTE LIGHT</p> <p>One (1) Fire Research SPA900-Q65 surface mount light or equivalent shall be installed adjacent to the driver's side dump chute. It shall have a switch in the cab to activate it for nighttime operations. The dump chute light shall be wired through the load management system.</p>			
<p>OFFICER'S SIDE DUMP CHUTE LIGHT</p> <p>One (1) Fire Research SPA900-Q65 surface mount light shall be installed adjacent to the officer's side dump chute. It shall have a switch in the cab to activate it for nighttime operations. The dump chute light shall be wired through the load management system.</p>			
<p>NFPA AUDIBLE AND LIGHTING WARNING PACKAGE</p> <p>The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901 Fire Apparatus Standard. The lighting as specified shall meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" as noted.</p>			
<p>LIGHT PACKAGE ACTUATION CONTROLS</p> <p>The entire warning light package shall be actuated with a single warning light switch located on the cab switch panel. 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.</p>			
<p>NFPA ZONE A, UPPER</p> <p>One (1) 56" NFPA compliant Whelen Justice JEONFPA all LED light bar or equivalent, shall be provided and installed on cab roof. The light bar as a minimum shall have four (4) linear corner modules with nine (9) Super-LED light heads per module, and six (6) CON3 modules with three (3) CON3 Super-LED light heads per module. Color for modules shall be red with flashing LR11 white LED front takedowns. The white takedowns shall be turned off when the vehicle's parking brake is activated as required by NFPA 1901.</p> <p>The light bar shall be NFPA 1901 compliant.</p> <p>Activation shall be via the switch panel located in the cab.</p>			
<p>NFPA ZONE C, UPPER</p> <p>One (1) Whelen L31 Super LED 360 degree Red beacon or equivalent shall be provided and installed on a stanchion mount at the right upper rear corner of the apparatus</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
Description:	Yes	No	Exceptions
<p>WARNING LIGHT SYSTEM CERTIFICATION</p> <p>The warning light system specified above shall not exceed a combined total amperage draw of 45 AMPS with all lights activated in either the "Clearing Right of Way" or the "Blocking Right of Way" mode.</p> <p>The warning light system shall be certified by the light system manufacturer(s), to meet all of the requirements in the current revision of the NFPA 1901 Fire Apparatus Standard as noted in the General Requirements section of these specifications. The NFPA required "Certificate of Compliance" shall be provided with the completed apparatus.</p> <p>BACK-UP ALARM</p> <p>One (1) back-up alarm shall be provided and installed at the rear of the apparatus under the tailboard. The back-up alarm shall activate automatically when the transmission is placed in reverse gear and the ignition is "on".</p> <p>ELECTRONIC SIREN</p> <p>One (1) Whelen # 295SLSA1, 100 watt electronic siren shall be provided featuring: bottom mount control head in cab, "Si-Test" self-diagnostic feature, six (6) function siren, radio repeat and public address.</p> <p>The electronic siren and speaker shall meet the NFPA required SAE certification to ensure compatibility between the siren and speaker.</p> <p>One (1) Whelen, model # SA122FMP polished aluminum siren speakers shall be provided, recessed in the front bumper and wired to the electronic siren.</p> <p style="text-align: center;">Pump, Tank, and Piping</p> <p>750 GPM PUMP</p> <p>The pump shall be a Hale RSD 750 gallon per minute PTO driven pump.</p> <p>The pump must deliver the percentage of rated capacity at the pressure listed below:</p> <ul style="list-style-type: none"> • 100% of rated capacity at 150 P.S.I. net pump pressure • 100% of rated capacity at 165 P.S.I. net pump pressure • 70% of rated capacity at 200 P.S.I. net pump pressure • 50% of rated capacity at 250 P.S.I. net pump pressure. <p>PUMP ASSEMBLY</p> <p>The pump shall be of a size and design to mount on the chassis rails of commercial and custom truck chassis, and have the capacity of 750 gallons per minute (U.S. GPM), NFPA-1901 rated performance.</p> <p>PUMP CONSTRUCTION</p> <p>The entire pump shall be manufactured and tested at the pump manufacturer's factory.</p> <p>The pump shall be driven by a drive line from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance.</p> <p>The entire pump, both suction and discharge passages, shall be hydrostatically tested to a minimum pressure of 500 PSI. The pump shall be fully tested at the pump manufacturer's factory to the performance spots as outlined by the latest NFPA Standard 1901. Pump shall be free from objectionable pulsation and vibration.</p> <p>All moving parts in contact with water shall be of high quality bronze or stainless steel.</p>			

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<p>Pump body shall be vertically split, on a single plane, for easy removal of impeller assembly, including clearance rings.</p> <p>PUMP CERTIFICATION</p> <p>The pump shall be third party performance tested to meet the requirements of NFPA1901. To ensure top quality and integrity, the test company shall be Underwriters Laboratories (UL).</p> <p>PUMP BODY AND PARTS</p> <p>The pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI. All moving parts in contact with water shall be of high quality bronze or stainless steel. Pump utilizing castings made of lower tensile strength cast iron not acceptable.</p> <p>Pump body shall be vertically split, on a single plane, for easy removal of impeller assembly, including clearance rings.</p> <p>PUMP GEARBOX</p> <p>Pump gearbox shall be of sufficient size to withstand the required torque of the pump in operating conditions. The gearbox shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.</p> <p>The gearbox shall be manufactured and tested at the pump manufacturer's factory.</p> <p>PUMP RATIO</p> <p>The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.</p> <p>The manufacturer shall supply at time of delivery copies of the pump manufacturer's certification of hydrostatic testing, the engine manufacturer's current certified brake horsepower curve.</p> <p>PUMP SHIFT CONTROL</p> <p>The drive unit shall be equipped with a PTO shift. An air operated in-cab control for rapid shift shall be provided that locks in road or pump, with a neutral position for use when manual override is required.</p> <p>The pump shift control shall be mounted in the driver's lower left panel. This control shall be equipped with a mechanical type lock to prevent inadvertent activation or deactivation. The lever positions and indicator light shall be clearly marked.</p> <p>MAIN PUMP - PUMP SHIFT INDICATOR LIGHTS</p> <p>For automatic transmissions, three (3) green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift for Road to Pump position. Two (2) green lights to be located in the truck driving compartment and one (1) green light on pump operator's panel adjacent to the throttle control. All lights to have appropriate identification/instruction plates.</p> <p>PUMP ANODE</p> <p>A pump anode corrosion system shall be installed.</p>			

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<p>PRIMING PUMP</p> <p>The priming pump shall be a positive displacement, oil-less rotary vane electric motor driven pump conforming to the requirements of NFPA 1901. The pump body shall be manufactured of heat-treated anodized aluminum for wear and corrosion resistance.</p> <p>The pump shall be capable of producing 24 Hg vacuum.</p> <p>The electric motor shall be a 12 VDC (or 24 VDC) totally enclosed unit. The priming pump shall not require lubrication.</p> <p>The priming pump shall be operated by a single control mounted on the pump operator panel. The control valve shall be of all bronze construction and shall be vacuum tight.</p> <p>TRANSMISSION LOCK</p> <p>The automatic transmission furnished in the chassis shall have a lock-up assembly that brings the transmission to direct drive and prevents the transmission from shifting gears while in the pumping mode.</p> <p>BRAKING SYSTEM</p> <p>A positive braking system shall be provided to prevent vehicle movement during pumping operations. The air brakes furnished must satisfy this requirement.</p> <p>MASTER DRAIN VALVE</p> <p>A rotary type, 12 port master drain valve shall be provided and controlled at the lower portion of the side pump panel. The valve shall be located in pump compartment lower than the main body and connected in such a manner as to allow complete water drainage of the pump body and all required accessories. Water shall be drained below the apparatus body and away from the pump operator.</p> <p>MAIN PUMP MOUNTS</p> <p>Extra heavy-duty pump mounting brackets shall be furnished. These shall be bolted to the frame rails in such a position to perfectly align the pump so that the angular velocity of the drive line joints shall be the same on each end of the drive shaft. This shall assure full capacity performance with a minimum of vibration. Mounting hardware shall utilize Grade 8 bolts. Pumps that are not mounted directly to the frame shall not be considered. Under no circumstance shall the pump function as a frame cross member.</p> <p>PUMP SHAFT</p> <p>Pump shaft to be rigidly supported by two bearings for minimum deflection. The bearings shall be heavy-duty, deep groove ball bearings in the gearbox and they shall be splash lubricated. The pump shaft shall be heat-treated, electric furnace, corrosion resistant, stainless steel. Pump shaft must be sealed with double lip oil seal to keep road dirt and water out of gearbox.</p> <p>PUMP IMPELLER</p> <p>Pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machined, hand-ground and individually balanced. The vanes of the impeller intake eye shall be hand-ground and polished to a sharp edge, and be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.</p>			

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<p>Impeller clearance rings shall be bronze, easily renewable without replacing impellers or pump volute body.</p> <p>MECHANICAL SHAFT SEAL</p> <p>The pump shall be equipped with a high quality, spring loaded, self-adjusting mechanical seal capable of providing a positive seal to atmosphere under all pumping conditions. This positive seal to atmosphere must be achievable under vacuum conditions up to 26 Hg (draft) or positive suction pressures up to 250 PSI.</p> <p>The mechanical seal assembly shall be 2 inches in diameter and consists of a carbon sealing ring, stainless steel coil spring, Viton rubber boot, and a tungsten carbide seat with a Teflon backup seal provided.</p> <p>Only one (1) mechanical seal shall be required, located on the suction side of the pump and be designed to be compatible with a one piece pump shaft. A continuous cooling flow of water from the pump shall be directed through the seal chamber when the pump is in operation.</p> <p>PUMP MANIFOLDS</p> <p>A custom made suction and discharge manifold shall be constructed from stainless steel and flexible tubing. The manifold shall be designed to provide maximum efficiency for the suction inlets and the discharges.</p> <p>DISCHARGE PRESSURE RELIEF VALVE</p> <p>The pump shall be equipped with a Hale Model "P-25", automatic pressure control device. A single bronze, variable pressure setting relief valve shall be provided and be of ample capacity to prevent an undue pressure rise as per NFPA-1901. The relief valve shall be normally closed and shall open against pump pressure, with a control light to signal when open. In event of relief valve control failure, the pump is to remain operable for the complete range of the pump's rated capacity, without requiring the closing of any emergency or "in case of failure" (off/on) valves.</p> <p>INDIVIDUAL BLEEDERS AND DRAINS</p> <p>All lines shall drain through the master drain valve or shall be equipped with individual drain valves, easily accessible and labeled.</p> <p>One (1) individual "CLASS ONE" quarter turn drain valve shall be furnished for each 1 1/2" or larger discharge port and each 2-1/2" gated auxiliary suction.</p> <p>Drain/bleeder valves shall be located at the bottom of the side pump module panels. All drains and bleeders shall discharge below the running boards.</p> <p>HOSE THREADS</p> <p>The hose threads shall be National Standard Thread (NST) on all base threads on the apparatus intakes and discharges.</p> <p>SYNFLEX SUCTION, DISCHARGE, PRESSURE AND CONTROL LINES</p> <p>Small lines within the pump enclosure shall be constructed from Synflex hose. Uses include, but are not limited to such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush and air bleeder valves</p>			

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<p>PUMP MODULE</p> <p>The pump module shall be a self-supported structure mounted independently from the body and chassis cab. The design must allow normal frame deflection without imposing stress on the pump module structure or side running boards. The pump module shall be securely mounted to the chassis frame rails.</p> <p>The pump module shall be a welded frame work utilizing structural steel components properly braced to withstand the rigors of chassis frame flex.</p> <p>PUMP SUCTION INLETS</p> <p>Two (2) 6" N.S.T. suction inlets shall be provided, one on the driver side and one on the officer side pump panel. A removable strainer shall be installed on each inlet.</p> <p>PUMP SUCTION ENDS</p> <p>The main pump suction inlets shall be furnished with an elongated suction end.</p> <p>Two (2) suction inlet butterfly valves with ratcheting lever handles and drains shall be provided and installed on each side (right and left) of the pump panels. These gated inlet valves shall have a 4 1/2" MNST adapter. The valves shall have polished long handled caps.</p> <p>AUXILIARY SIDE SUCTION</p> <p>One (1) 2-1/2" auxiliary suction shall be provided at the driver side pump panel, to the rear of the main inlet. The 2-1/2" auxiliary suction shall terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the driver's side rear auxiliary suction. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. All stainless steel parts shall be 316 grade for increased resistance to corrosion. The valve shall be compatible with a slow closing devise. The valve shall be quickly adjustable to one of eight handle options and require only 90° travel.</p> <p>The valve shall carry a 10 year manufacturer's warranty.</p> <p>A 1/4 turn swing control handle shall be provide on the driver side rear auxiliary suction valve</p> <p>All side gated inlet valves shall be recess mounted behind the side pump panels or body panels.</p> <p>PRIMING PUMP</p> <p>The priming pump shall be an air primer system. A push in primer handle shall open the priming valve and prime the pump.</p> <p>TANK TO PUMP</p> <p>One (1) 3" tank to pump line shall be, piped through the front bulkhead of the tank with a 90-degree elbow down into the tank sump. This line shall be plumbed directly into the rear of the pump suction manifold for maximum efficiency.</p> <p>A check valve shall be provided to prevent accidental pressurization of the water tank through the pump connection. Connection from the valve to the tank shall be made by using a non-collapsible flexible rubber hose.</p>			

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<p>PUMP MODULE</p> <p>The pump module shall be a self-supported structure mounted independently from the body and chassis cab. The design must allow normal frame deflection without imposing stress on the pump module structure or side running boards. The pump module shall be securely mounted to the chassis frame rails.</p> <p>The pump module shall be a welded frame work utilizing structural steel components properly braced to withstand the rigors of chassis frame flex.</p> <p>PUMP SUCTION INLETS</p> <p>Two (2) 6" N.S.T. suction inlets shall be provided, one on the driver side and one on the officer side pump panel. A removable strainer shall be installed on each inlet.</p> <p>PUMP SUCTION ENDS</p> <p>The main pump suction inlets shall be furnished with an elongated suction end.</p> <p>Two (2) suction inlet butterfly valves with ratcheting lever handles and drains shall be provided and installed on each side (right and left) of the pump panels. These gated inlet valves shall have a 4 1/2" MNST adapter. The valves shall have polished long handled caps.</p> <p>AUXILIARY SIDE SUCTION</p> <p>One (1) 2-1/2" auxiliary suction shall be provided at the driver side pump panel, to the rear of the main inlet. The 2-1/2" auxiliary suction shall terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the driver's side rear auxiliary suction. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. All stainless steel parts shall be 316 grade for increased resistance to corrosion. The valve shall be compatible with a slow closing devise. The valve shall be quickly adjustable to one of eight handle options and require only 90° travel.</p> <p>The valve shall carry a 10 year manufacturer's warranty.</p> <p>A 1/4 turn swing control handle shall be provide on the driver side rear auxiliary suction valve</p> <p>All side gated inlet valves shall be recess mounted behind the side pump panels or body panels.</p> <p>PRIMING PUMP</p> <p>The priming pump shall be an air primer system. A push in primer handle shall open the priming valve and prime the pump.</p> <p>TANK FILL</p> <p>One (1) 2 1/2" gated full flow pump to tank refill line controlled at the pump panel shall be provided. A deflector shield inside the tank shall be furnished. Tank fill plumbing shall utilize 2 1/2" high-pressure hose for tank connection to accommodate flexing between components. (NO EXCEPTIONS)</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided between the pump discharge manifold and the water tank. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. All stainless steel parts shall be 316 grade for increased resistance to corrosion.</p>			

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<p>The valve shall be compatible with a slow closing devise. The valve shall be quickly adjustable to one of eight handle options and require only 90° travel.</p> <p>The valve shall carry a 10 year manufacturer's warranty.</p> <p>2-1/2" NSTF X 1-1/2" NSTM reducer with cap shall be provided on the driver's side # 1 discharge.</p> <p>The discharge valve shall be equipped with integral 2 1/2" NST, 30 degree, chrome plated elbow.</p> <p>The driver's side # 1 discharge valve shall be controlled by a push/pull handle located on the operator's panel.</p> <p>The driver's side # 1 discharge shall be equipped with a 2 'A" diameter Noshok pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from —40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p>OFFICER'S SIDE MAIN DISCHARGE #1</p> <p>A discharge shall be provided and located at the officer's side pump panel. The officer's side discharges #1 shall terminate with NST threads, through the officer's side panel above the main pump intake.</p> <p>The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.</p> <p>An Akron Brass 2 1/2" Generation H Swing-Out Valve shall be provided for the officer's side # 1 discharge. The valve shall be equipped with the Akron "Tork-Lok" feature. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. All stainless steel parts shall be 316 grade for increased resistance to corrosion. The valve shall be compatible with a slow closing devise. The valve shall be quickly adjustable to one of eight handle options and require only 90° travel.</p> <p>The valve shall carry a 10 year manufacturer's warranty.</p> <p>The discharge valve shall be equipped with a straight 2 1/2" NST adapter.</p> <p>2-1/2" NSTF X 1-1/2" NSTM reducer with cap shall be provided on the officer's side # 1 discharge.</p> <p>The officer's side # 1 discharge valve shall be controlled by a push/pull handle located on the operator's panel.</p>			

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<p>The officer's side # 1 discharge shall be equipped with a 2 'A" diameter Noshok pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from —40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p>OFFICER'S SIDE MAIN DISCHARGE #2</p> <p>A discharge shall be provided and located at the officer's side pump panel. The officer's side discharges #2 shall terminate with NST threads, through the officer's side panel above the main pump intake.</p> <p>The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the officer's side #2 discharge. The valve shall be equipped with the Akron "Tork-Lok" feature. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. All stainless steel parts shall be 316 grade for increased resistance to corrosion. The valve shall be compatible with a slow closing devise. The valve shall be quickly adjustable to one of eight handle options and require only 90° travel.</p> <p>The valve shall carry a 10 year manufacturer's warranty.</p> <p>The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.</p> <p>A 2-1/2" NSTF X 1-1/2" NSTM reducer w/cap shall be provided on the officer's side #2 discharge.</p> <p>The officer's side #2 discharge valve shall be controlled by a push/pull handle located on the operator's panel.</p> <p>The officer's side #2 discharge shall be equipped with a 2 1/2" diameter Noshok pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from —40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p>			

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<p>OFFICER SIDE REAR DISCHARGE</p> <p>A 2 1/2" NST rear discharge shall be provided at the rear of the vehicle, plumbed from the pump.</p> <p>The rear discharge shall terminate on the rear body panel, on the officer side of the body.</p> <p>The officer side rear discharge pipe shall be equipped with a chrome 2 1/2" NSTM thread adapter.</p> <p>The officer side rear discharge shall be plumbed utilizing 2 1/2" schedule 10 stainless steel piping, 45 degree threaded elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the rear of the vehicle.</p> <p>A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.</p> <p>An Akron Brass 2 1/2" Generation II Swing-Out™ Valve shall be provided for the officer's side rear discharge. The valve shall be equipped with the Akron "Tork-Lok" feature. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. All stainless steel parts shall be 316 grade for increased resistance to corrosion. The valve shall be compatible with a slow closing devise. The valve shall be quickly adjustable to one of eight handle options and require only 90° travel.</p> <p>The valve shall carry a 10 year manufacturer's warranty.</p> <p>The officer side rear discharge valve shall be controlled by a push/pull handle located on the operator's panel.</p> <p>2-1/2" NSTF X 1-1/2" NSTM reducer(s) with cap shall be provided on the officer's side rear discharge.</p> <p>The officer side rear discharge shall be equipped with a 2 W' diameter Noshok pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from —40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p>HORIZONTAL STYLE CROSSLAY #1</p> <p>A crosslay hose bed shall be provided and plumbed from the pump in a transverse design, located above the pump enclosure for quick attack deployment. The crosslay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.</p> <p>Polished stainless steel hose roller assemblies shall be provided at the sides and lower edges of the crosslay opening on each side of the apparatus body.</p> <p>Crosslay #1 shall be designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA -1901 to accommodate a minimum of 200 feet of 1-3/4" fire hose.</p>			

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<p>The crosslay #1 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45 degree threaded elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to crosslay hose bed.</p> <p>A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.</p> <p>An Akron Brass 2" Generation II Swing-Out™ Valve shall be provided for the crosslay #1 discharge. The valve shall be equipped with the Akron "Tork-Lok" feature. The valve shall have an all brass body with flow optimising stainless steel ball and dual polymer seats. All stainless steel parts shall be 316 grade for increased resistance to corrosion. The valve shall be compatible with a slow closing devise. The valve shall be quickly adjustable to one of eight handle options and require only 90° travel.</p> <p>The valve shall carry a 10 year manufacturer's warranty.</p> <p>The crosslay #1 discharge valve shall be controlled by a push/pull handle located on the operator's panel.</p> <p>The crosslay #1 discharge shall be equipped with a 2 Y2" diameter Noshok pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from —40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p>HORIZONTAL STYLE CROSSLAY #2</p> <p>A crosslay hose bed shall be provided and plumbed from the pump in a transverse design, located above the pump enclosure for quick attack deployment. The crosslay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.</p> <p>Polished stainless steel hose roller assemblies shall be provided at the sides and lower edges of the crosslay opening on each side of the apparatus body.</p> <p>Crosslay #2 shall be designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA -1901 to accommodate a minimum of 200 feet of 1-3/4" fire hose.</p> <p>The crosslay #2 discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45 degree threaded elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to crosslay hose bed.</p> <p>A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.</p> <p>An Akron Brass 2" Generation II Swing-Out™ Valve shall be provided for the crosslay #2 discharge. The valve shall be equipped with the Akron "Tork-Lok" feature. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. All stainless steel parts shall be 316 grade for increased resistance to corrosion. The valve shall be compatible with a slow closing devise. The valve shall be quickly adjustable to one of eight handle options and require only 90° travel.</p> <p>The valve shall carry a 10 year manufacturer's warranty.</p>			

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<p>The valve shall carry a 10 year manufacturer's warranty.</p> <p>The crosslay #2 discharge valve shall be controlled by a push/pull handle located on the operator's panel.</p> <p>The crosslay #2 discharge shall be equipped with a 2 1/2" diameter Noshok pressure gauge. The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant i molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauge shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from —40°F to +160°F.</p> <p>The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.</p> <p>A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauge shall have black graphics on a white background.</p> <p>DEADLAY STORAGE</p> <p>A deadlay storage area shall be installed on top of the pump enclosure to accommodate 200 feet of 3" supply line. The hose storage area shall have a floor of perforated aluminum material.</p> <p>CROSSLAY AND DEADLAY LOCATION OPTIONS</p> <p>Alternate locations for the two specified crosslays shall be considered if the option saves space, is more efficient, or shortens the overall length of the apparatus. Alternate installation types, such as removable speed-lays, may be deemed acceptable.</p> <p>Alternate locations for the deadlay storage may be deemed acceptable if it shortens the overall length of the fire apparatus and allows the elliptical tank to be mounted closer to the apparatus cab.</p> <p>If an optional crosslay or deadlay locations are presented in the bid proposal, installation must be agreed upon by High Rolls Fire Department.</p> <p>Bids with alternate crosslay locations that do not save space, shorten the apparatus, or are deemed less efficient shall not be acceptable. (No Exceptions).</p> <p>PUMP ENCLOSURE HOSEBED HOSE RETENTION</p> <p>Webbed netting shall be provided for the openings of each speedlay style crosslay and deadlay tray. These nets shall be securely fastened to the apparatus body with buckles and Velcro.</p> <p>The webbing shall be black in color.</p> <p>PUMP PANEL — SIDE MOUNT</p> <p>The pump operator's control panel shall be located on the driver side of the apparatus. The pump enclosure side panels shall be completely removable and designed for easy access and servicing.</p> <p>ALTERNATE UNDERTANK PUMP MODULE</p> <p>Alternate under-tank mounting of the pump module and panel instead of side-mounting shall be considered if it shortens the overall apparatus length and places the elliptical tank in a better position for proper center of gravity. This must be agreed upon with the High Rolls Fire Department.</p>			

High Rolls, NM 3000 Gallon Tanker - Specification Requirements	Complies		
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<p>PUMP PANEL MATERIAL</p> <p>The left side operator's panel, gauge panel, right side pump panel and right side access door shall be fabricated from 12-gauge 304L stainless steel with a #4, (150/180 grit), standard brushed finish.</p> <p>HINGED GAUGE PANEL</p> <p>A full width, hinged gauge access panel shall be provided at the operator's position. Chrome plated positive locks shall be provided along with chain holders to prevent the front of the gauge panel from coming in contact with other panels when open.</p> <p>HINGED, SPLIT PUMP PANEL OFFICER SIDE</p> <p>The officer's side pump panel shall be split, hinged, to provide complete access to the pump and plumbing on the officer side of the pump enclosure. The panels shall be equipped with stainless steel hinges and secured with push type locks to hold the panels closed. The drains located on the officer's side panel shall be fastened to the lower panel, which shall be stationary.</p> <p>PANEL FASTENERS</p> <p>Stainless steel machine screws and lock washers shall be used to hold these panels in position. The panels shall be easily removable to provide complete access to the pump for major service.</p> <p>CAPS AND ADAPTERS SAFETY TETHER</p> <p>All applicable discharge and suction caps, plugs and adapters shall be equipped with chrome plated ball chain or double looped coil chain and secured to the vehicle.</p> <p>All intakes and discharges shall be supplied with a tethered cap if applicable.</p> <p>PUMP PANEL TRIM PLATES</p> <p>A high polish stainless steel trim plate shall be provided around each discharge port and suction inlet opening to allow accessibility to the respective valve for service and repairs.</p> <p>DISCHARGE GAUGE TRIM BEZELS</p> <p>Each individual discharge gauge shall be installed into a decorative chrome-plated mounting bezel that incorporates valve-identifying verbiage and color labels.</p> <p>COLOR CODED IDENTIFICATION TAGS</p> <p>Color coded identification tags shall be provided for all gauges, controls, connections, switches, inlets and outlets.</p> <p>PUMP OPERATOR'S PANEL LIGHT SHIELD</p> <p>The pump operator's panel shall be equipped with a light shield that shall be full width of the control panel, and shall be positioned to cover the lights and prevent glare.</p> <p>The light shield shall be equipped with the following lights:</p> <ul style="list-style-type: none"> • Four (4) Weldon #2630 halogen lights. <p>One (1) light under the operator's panel light shield shall be actuated when fire pump is engaged in addition to the pump engaged light.</p>			

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Description:	Yes	No	Exceptions
<p>PUMP OPERATOR'S PANEL</p> <p>Particular attention is to be given to functional arrangement of all controls. The pump operator's panel shall accommodate the following:</p> <ul style="list-style-type: none"> • Hinged gauge panel • Water tank fill valve • Auxiliary suction valve control • All discharge valve controls • Auxiliary engine cooler controls • Water tank suction control valve • Pump primer valve • Engine throttle control • Master compound vacuum gauge • Master pressure gauge • Individual discharge gauges • Pump shift engaged indicator light • Water tank water level indicator • Engine tachometer • Engine oil pressure gauge with audible alarm • Engine water temperature gauge with audible alarm • Low voltage light and audible alarm • Pump panel light switch • Speed counter (Underwriters) • Pump performance plate (Underwriters) • Pump serial No. plate • Master pump drain valve • Individual drains • Voltmeter • Fire research "ThrottleXcel" throttle control. <p>PUMP TEST PORTS</p> <p>The pump panel shall be equipped with Vacuum & Pressure test plugs to allow for test equipment to monitor pump pressure and vacuum levels. Chrome plugs and labels shall be provided for the test ports.</p> <p>MASTER GAUGES</p> <p>One (1) 4" diameter pressure gauge (labeled: "PRESSURE") and one (1) 4" diameter compound vacuum gauge (labeled: "INTAKE") shall be provided. The master gauges shall be "No Shok", silicone filled. The gauge faces shall be white with black numerals.</p> <p>PRESSURE & COMPOUND GAUGE RANGES</p> <p>All applicable pressure gauges shall have a range of 0 - 400 P.S.I., and the compound gauge shall have a range of -30" - 0 - 400 P.S.I.</p> <p>THROTTLE CONTROL AND MONITORING DISPLAY</p> <p>The apparatus shall be equipped with a Fire Research ThrottleXcel model ELA200-A00 engine throttle and monitoring display shall be installed. The control module case shall be waterproof and have dimensions not to exceed 6 3/4" high by 4 5/8" wide by 1 1/2" deep. The control knob shall be 2" in diameter with no mechanical stops, have a serrated grip, and a red idle push button in the center. It shall not extend more than 1 3/4" from the front of the control module. Inputs for monitored information shall be from a J1939 databus or independent sensors. Outputs for engine control shall be on the J1939 databus or engine specific wiring.</p>			

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<p>The engine RPM shall be set to idle when the pump engaged interlock signal is recognized regardless of the throttle control knob position. Optical technology shall be used to detect the direction and speed that the control knob rotated for RPM control.</p> <ul style="list-style-type: none"> • The following continuous displays shall be provided: • Engine RPM; shown with four daylight bright LED digits more than 1/2" high • Check engine and stop engine warning LEDs • Oil pressure; shown on a dual color (green/red) LED bar graph display • Engine coolant temperature; shown on a dual color (green/red) LED bar graph display • Transmission Temperature; shown on a dual color (green/red) LED bar graph display • Battery voltage; shown on a dual color (green/red) LED bar graph display • Interlock; OK TO PUMP LED is green to indicate throttle ready. <p>A dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options when selected by the operator. Operator selections and inputs shall be via push buttons on the front panel. The program shall store the accumulated operating hours for the pump and engine, previous incident hours, and current incident hours in a non-volatile memory. Stored elapsed hours shall be displayed at the push of a button. The program shall have calibration and self-diagnostic capabilities. It shall monitor inputs and support audible and visual warning alarms for the following conditions:</p> <ul style="list-style-type: none"> • Low Oil Pressure • High Engine Coolant Temperature • High Transmission Temperature • Low Battery Voltage (Engine Off) • Low Battery Voltage (Engine Running) • High Battery Voltage • High Engine RPM. <p>The program features shall be accessed via push buttons located on the front of the control module. There shall be a USB port located at the rear of the control module to upload future firmware enhancements.</p> <p>ENGINE COOLER</p> <p>An auxiliary cooler or heat exchanger shall be installed in the engine compartment between the engine and the chassis radiator. The cooler shall permit the use of water from the pump for cooling system. The cooling shall be done without mixing engine and pump water.</p> <p>TANK LEVEL GAUGE</p> <p>A Fire Research, model #WLA200-A00, "TANKVISION" gauge that shows the actual volume of water in the tank shall be provided on the pump operator's panel. The "TANKVISION" gauge is designed for both ease of operation and installation. The "TANKVISION" gauge utilizes ultra-bright LEDs for sunlight readability and also uses 2 specially designed wide-viewing lens for 180° of clear viewing. The "TANKVISION" gauge utilizes a pressure sender to measure the liquid volume. The gauge shall be equipped self-calibration feature allows the LED's TANKVISION gauge to be used on tanks of different shapes and sizes.</p> <p>Features:</p> <ul style="list-style-type: none"> • Flashes warning when the volume is less than 25%. Rapid down scrolling LED's alert the operator when the tank is almost empty. Remote audio warning available. • One size fits all'. The self-calibration feature allows for easy calibration of any shape or size tank. • Multiple displays are possible with a single sender through the FRC data bus. • Rugged waterproof cast aluminum housing. 			

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<ul style="list-style-type: none"> • No fitting needed for poly tank. • Special fittings available for other tank materials. • Connector disconnects at back of display. <p>CAB TANK LEVEL GAUGE</p> <p>A Fire Research model, WLA205-A00 miniature "TANKVISION" gauge that shows the actual volume of water in the tank shall be provided in the cab. The "TANKVISION" gauge is designed for both ease of operation and installation. The "TANKVISION" gauge utilizes ultra-bright LED's for sunlight readability and also uses 2 specially designed wide-viewing lens for 180° of clear viewing. The "TANKVISION" gauge utilizes a pressure sender to measure the liquid volume. The gauge shall be equipped self-calibration feature allows the TANKVISION gauge to be used on tanks of different shapes and sizes.</p> <p>The gauge shall use a pressure transducer installed near the bottom of the water tank to determine the correct volume in the tank.</p> <p>A Fire Research model #WLA290, remote relay module shall be provided to provide outputs for large indicator lights on the side of the vehicle.</p> <p>LARGE LIGHT WATER LEVEL GAUGE, EACH SIDE OF BODY</p> <p>A large light water level gauge system shall be provided on both sides of the elliptical tank on a flush mounted polished stanchion mount attached to the Stainless Steel wrapper of the elliptical tank. Each side shall have four (4) Whelen 500 series linear LED lights mounted on the body as directed. Each light shall be surface mounted on the sides of the body using a chrome plated #5LSMAC flange.</p> <p>The lights shall be mounted as to indicate the following water levels:</p> <ul style="list-style-type: none"> • Top light with green lens Full tank • Second light with blue lens 3/4 tank • Third light with amber lens 1/2 tank • Fourth light with red lens 1/4 tank <p>The fourth light shall burn steady red to indicate 1/4 tank and shall start to flash when the water level drops below 1/4 tank. To prevent distraction to drivers, this tank level gauge shall be wired to display only when the park brake is engaged.</p> <p>LARGE LIGHT WATER LEVEL GAUGE, REAR OF BODY</p> <p>A large light water level gauge system shall be provided on the rear of the elliptical tank. Four (4) Whelen 500 series super LED lights shall be surface mounted using a chrome-plated flange attached to a blended stanchion. They shall be</p> <p>The lights shall be mounted as to indicate the following water levels:</p> <ul style="list-style-type: none"> • Top light with green lens Full tank • Second light with blue lens 3/4 tank • Third light with amber lens 1/2 tank • Fourth light with red lens 1/4 tank <p>The fourth light shall burn steady red to indicate 1/4 tank and shall start to flash when the water level drops below 1/4 tank. To prevent distraction to drivers, this tank level gauge shall be wired to display only when the park brake is engaged.</p>			

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<p style="text-align: center;">Water Tank and Tank Mounted Equipment</p> <p>Water Tank Style</p> <p>The water tank shall be a polished stainless steel wrapped elliptical design.</p> <p>The exterior of the water tank shall be jacketed with a 20 gauge #316 stainless steel, brushed finish. The front and rear outer heads shall be #316 16 gauge stainless steel with a brushed finish. There will be 1" insulation between the inner barrel and the outer wrap reducing thermal transfer. For added strength and stability the top walk way of the barrel will be reinforced with a section of 16 gauge #316 corrosion resistant sheet curved to conform to the radius of the tank. The area around the fill tower and dump manifold will be trimmed with brushed #316 stainless steel in a pleasing manner.</p> <p>Water Tank Top Steps</p> <p>Black grip tape strip steps shall be installed from the ladder to the rear of the tank. These strips will be approximately 4" wide X 16" long and provide for secure safe footing when on top of the tank.</p> <p>Poly Water Tank</p> <p>The water tank shall have a capacity of 3000 gallons, constructed from polypropylene material, and shall feature a lifetime warranty.</p> <p>Water Tank Construction</p> <p>The Poly water tank shall be constructed of 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 1/2 to 1" as required. Internal baffles are generally 3/8" in thickness.</p> <p>The 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 a sealant that shall be installed between the plastic components prior to being fusion welded. This sealing method shall 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 3/8" 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 1901. 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 1/8" on all dimensions.</p> <p>Water Tank Capacity Certification</p> <p>The water tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale. The tank shall be weighed empty and full to provide precise fluid capacity.</p> <p>Tanknology Tag</p> <p>A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foam (s), the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the tank manufacturer, and contact information. The QR code shall allow the user to connect with the tank manufacturer for additional information and assistance.</p>			

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<p>WATER TANK LIFTING EYES</p> <p>The top of the booster tank shall be fitted with removable lifting eyes designed with a 3 to 1 safety factor to facilitate easy removal.</p> <p>WATER TANK FILL TOWER</p> <p>The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 1/2" PT3 polypropylene and shall be a minimum dimension of 12" x 36" 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 front center of the tank unless otherwise specified by the tank manufacturer to the High Rolls Fire Department. The tower shall have a 1/4" 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 that is designed to run through the tank, and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction.</p> <p>OVERFLOW AND VENT PIPE</p> <p>The fill tower shall be fitted with an integral 10" minimum I.D. schedule 40 P.V.C. combination overflow/vent pipe running from the fill tower through the tank to a 6" coupling flush mounted into the bottom of the tank to allow water to overflow behind the chassis rear axle.</p> <p>The overflow/vent size diameter shall be matched with the 12" tank dump diameter for maximum efficiency and flow while dumping a load of water. The final vent size must be agreed upon with High Rolls Fire Department. (No Exceptions)</p> <p>WATER TANK SUMPS</p> <p>Both water tank sumps shall be a minimum of 10" wide x 10" long x 3" deep. An anti-swirl plate shall be mounted inside each sump, approximately 1" above the bottom of the sump.</p> <p>WATER TANK SUMP CONNECTION</p> <p>The front bulkhead of the water tank shall be fitted with one (1) front and one (1) rear. A 3" drain plug shall be provided for each sump.</p> <p>WATER TANK OUTLETS</p> <p>There shall be two (2) standard tank outlets; one for tank-to-pump suction line which shall be a minimum of 4" coupling and one for a tank fill line which shall be a minimum of a 2" N.P.T. coupling. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank.</p> <p>WATER TANK MOUNTING</p> <p>The tank shall rest on the body cross members spaced a maximum of 22" apart, and shall be insulated from these cross members with a minimum of 3/8" nylon webbing or 1/2" rubber, 2-1/2" wide. The tank shall sit cradle-mounted using four (4) corner angles of 6 x 6 x 4 x 0.250 welded directly to the body cross members. The angles shall keep the tank from shifting left to right or front to rear. The tank is designed on the free-floating suspension principle and shall not require the use of hold downs. The tank shall be completely removable without disturbing or dismantling the apparatus body structure. The hose bed cross braces shall act as water tank retainers.</p>			

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<p>12" ROUND EJ METALS STAINLESS STEEL DUMP WITH AIR ACTUATOR –REAR</p> <p>The rear of the water tank shall be equipped with a 12" round EJ Metals Maddic Stainless Steel Dump Valve with telescoping extension. The dump valve shall be air actuated. The dump valve setup shall be capable of discharging the water tank contents at a rate of at least 2500 G.P.M.</p> <p>22" EXTENSION TUBE FOR DUMP - REAR</p> <p>The rear EJ Metals Maddic dump shall be equipped with an integrated telescoping, stainless steel dump chute.</p> <p>REAR DUMP SWITCHING - DRIVER SIDE</p> <p>The rear dump switching shall be installed on the driver side of the rear body panel. The switch shall be a toggle style switch installed in a protective cast enclosure with a hinged door. A light shall be installed inside the enclosure to illuminate the switching area. This light shall be activated whenever the vehicle marker lights are turned on.</p> <p>REAR DUMP SWITCHING - IN CAB</p> <p>The rear dump shall be switched by a momentary style multiplexed switch from inside the cab. The switch shall be located in an area near the driver and shall be a backlit style switch.</p> <p>The switch shall be interlocked with a master dump power switch located in the same switch console. The master dump power switch shall provide power to all dumps switching inside the cab. This setup is designed to prevent accidental activation of a dump from inside the cab.</p> <p>A light shall be located in the cab to indicate when the dump and chute are in operation.</p> <p>REAR CHUTE SWITCHING - DRIVER SIDE</p> <p>The rear chute switching shall be installed on the driver side of the rear body panel, next to the dump switch. The switch shall be a toggle style switch.</p> <p>The operation of the telescoping dump chute shall be integrated with the dump switch.</p> <p>A warning light shall be located in the cab to indicate when the dump and chute are in operation.</p> <p>REAR CHUTE SWITCHING - IN CAB</p> <p>The rear chute shall be switched by a momentary style multiplexed switch from inside the cab. The switch shall be located adjacent to the respective dump switch.</p> <p>The switch shall be interlocked with a master dump power switch located in the same switch console. The master dump power switch shall provide power to all dumps switching inside the cab.</p> <p>The operation of the telescoping dump chute shall be integrated with the dump switch.</p> <p>A warning light shall be located in the cab to indicate when the dump and chute are in operation.</p> <p>12" ROUND EJ METALS STAINLESS STEEL DUMP WITH AIR ACTUATOR — DRIVER'S SIDE</p> <p>The driver's side of the water tank shall be equipped with a 12" round EJ Metals Maddic Stainless Steel Dump Valve with telescoping extension. The dump valve shall be air actuated. The dump valve setup shall be capable of discharging the water tank contents at a rate of at least 2500 G.P.M.</p> <p>This dump valve and chute shall be located between the tandem rear wheels.</p>			

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<p>22" EXTENSION TUBE FOR DUMP — DRIVER'S SIDE</p> <p>The driver's side EJ Metals Maddic dump shall be equipped with an integrated telescoping, stainless steel dump chute.</p> <p>DRIVER SIDE DUMP SWITCHING - REAR OF BODY</p> <p>The driver dump switching shall be installed on the driver side of the rear body panel. The switch shall be a toggle style switch installed in a protective cast enclosure with a hinged door. A light shall be installed inside the enclosure to illuminate the switching area. This light shall be activated whenever the vehicle marker lights are turned on.</p> <p>The operation of the telescoping dump chute shall be integrated with the dump switch.</p> <p>A warning light shall be located in the cab to indicate when the dump and chute are in operation.</p> <p>DRIVER SIDE DUMP SWITCHING - IN CAB</p> <p>The driver's side dump shall be switched by a momentary style multiplexed switch from inside the cab. The switch shall be located in an area near the driver and shall be a backlit style switch.</p> <p>The switch shall be interlocked with a master dump power switch located in the same switch console. The master dump power switch shall provide power to all dumps switching inside the cab. This setup is designed to prevent accidental activation of a dump from inside the cab.</p> <p>The operation of the telescoping dump chute shall be integrated with the dump switch.</p> <p>A warning light shall be located in the cab to indicate when the dump and chute are in operation.</p> <p>DRIVER SIDE CHUTE SWITCHING - IN CAB</p> <p>The driver's side chute shall be switched by a momentary style multiplexed switch from inside the cab. The operation of the telescoping chute shall be integrated with the operation of the tank dump switch.</p> <p>12" ROUND EJ METALS STAINLESS STEEL DUMP WITH AIR ACTUATOR — OFFICER'S SIDE</p> <p>The officer's side of the water tank shall be equipped with a 12" round EJ Metals Maddic Stainless Steel Dump Valve with telescoping extension. The dump valve shall be air actuated. The dump valve setup shall be capable of discharging the water tank contents at a rate of at least 2500 G.P.M.</p> <p>This dump valve and chute shall be located between the tandem rear wheels.</p> <p>22" EXTENSION TUBE FOR DUMP — OFFICER'S SIDE</p> <p>The officer's side EJ Metals Maddic dump shall be equipped with an integrated telescoping, stainless steel dump chute.</p> <p>OFFICER SIDE DUMP SWITCHING - REAR OF BODY</p> <p>The officer dump switching shall be installed on the officer side of the rear body panel. The switch shall be a toggle style switch installed in a protective cast enclosure with a hinged door. A light shall be installed inside the enclosure to illuminate the switching area. This light shall be activated whenever the vehicle marker lights are turned on.</p> <p>The operation of the telescoping dump chute shall be integrated with the dump switch.</p> <p>A warning light shall be located in the cab to indicate when the dump and chute are in operation.</p>			

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<p>OFFICER SIDE DUMP SWITCHING - IN CAB</p> <p>The officer's side dump shall be switched by a momentary style multiplexed switch from inside the cab. The switch shall be located in an area near the driver and shall be a backlit style switch.</p> <p>The switch shall be interlocked with a master dump power switch located in the same switch console. The master dump power switch shall provide power to all dumps switching inside the cab; this setup is designed to prevent accidental activation of a dump from inside the cab.</p> <p>The operation of the telescoping dump chute shall be integrated with the dump switch.</p> <p>A warning light shall be located in the cab to indicate when the dump and chute are in operation.</p> <p>OFFICER SIDE CHUTE SWITCHING - IN CAB</p> <p>The officer's side chute shall be switched by a momentary style multiplexed switch from inside the cab. The operation of the telescoping chute shall be integrated with the operation of the tank dump switch.</p> <p>A warning light shall be located in the cab to indicate when the dump and chute are in operation.</p> <p>HINGED DUMP CHUTE DOOR</p> <p>Each dump chute shall have a hinged door made of polished aluminum tread plate. Three (3) hinged doors shall be provided and installed for the rear, drivers, and officer's side dump chutes.</p> <p>DIRECT TANK FILL - DRIVER SIDE</p> <p>Two (2) 3" NSTF direct tank fill shall be provided at the rear of the body, on the driver side, as low as possible. The direct tank fills shall be gated with a 2-1/2" Fireman's Friend (TTMA 6-bolt attachment pattern) check-type fill valve. The fill valve shall be capable of flowing at a rate in excess of 1,000 gallons per minute and shall be of a self-deflecting design, requiring no additional diffusion device. The fill valve shall be constructed of stainless steel, with a spring actuated piston-type sealing mechanism to minimize seal wear and provide positive sealing of the valve. The fill shall be equipped with a 30 degree elbow terminating with a 3" NSTF connection.</p> <p>HARD SUCTION HOSE</p> <p>The High Rolls Fire Department shall supply two sections of 6" Hard Suction Hose to fit the pump steamer intake.</p> <p>HARD SUCTION HOSE MOUNTS</p> <p>The hard suction hose shall be mounted on external racks above the driver's side compartments. Other storage options will be considered, but must be agreed upon by High Rolls Fire Department.</p> <p>Hard suction hose shall be provided by the purchaser.</p> <p>STRAINER</p> <p>One (1) 6" NST barrel type strainer shall be provided to attach to the suction hose. A compartment mounting bracket shall also be provided to store the strainer when not in use.</p> <p>POWERED COVERED DROP-DOWN PORTABLE TANK MOUNT</p> <p>There shall be one (1) Zico PTS-30-7 + PTS-TCH-30 "Quic-Lift" Portable Tank System shall be provided above the lower compartments on the passenger side to carry a portable folding tank. It shall be sized to fit a folding 30" high 3500-gallon portable tank.</p>			

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<p>The system shall be installed to accommodate the folding tank. Switching shall be located on the officer side pump panel in an enclosed housing, with an audible and visual alarm installed on the officer side rear body panel.</p> <p>The specified portable tank storage system shall be designed to carry a 3500 gallon portable water tank with approximate folded dimensions of 14'3" x 8" x 29".</p> <p>The tank carrier shall hold the folding tank in the vertical position for travel, and fold down over the lower body side for loading and unloading. The folding tank carrier shall be fabricated of one-inch square tubing and have a hinged bracket that is bolted to the top of the lower compartments with rubber stops to prevent the folding tank carrier from touching the body side when in the down position.</p> <p>There shall be a reinforcement plate installed on the compartment top where the folding tank carrier is attached.</p> <p>There shall be two (2) heavy-duty clamps provided to hold the tank in the travel position. The folding tank carrier cover shall be made of polished aluminum diamond tread plate.</p> <p>The folding tank mount shall have a switch activating the "Door Open" light in the cab when the folding tank is not stowed and locked.</p> <p>FOLDING TANK ENCLOSURE</p> <p>The above specified portable tank storage shall be enclosed on the front, rear, top, and outboard side. The top and outboard side shall be 1/8" polished aluminum tread plate. Two (2) retaining straps shall be installed on the inside of the enclosure to secure the tank inside the rack and prevent the tank from contacting the side of the body or elliptical tank.</p> <p>FOLDING PORTABLE TANK</p> <p>One (1) FDTA-3500-Aluminum folding tank of a minimum capacity of 3500 gallons shall be provided. The tank shall have a folding aluminum frame with heavy 30oz vinyl 1 sides and floor. The fabric shall be colored red.</p> <p style="text-align: center;">Apparatus Body</p> <p>APPARATUS BODY DESIGN CONSTRUCTION</p> <p>The body side and compartment assemblies shall be designed and assembled to provide maximum strength and durability under all operating conditions.</p> <p>Special attention shall be taken to minimize corrosion on all fabricated parts and structural members of the body. All bolt-on components shall be provided with a dissimilar metals isolation barrier to prevent electric corrosion. The body design shall also incorporate removable panels to access spring hangers, rear body mounts and fuel tank sending units.</p> <p>The body assembly shall be an all-welded configuration. The body shall be completely isolated from the cab and pump module structure.</p> <p>BODY AND COMPARTMENT FABRICATION - 3/16" ALUMINUM</p> <p>All compartment panels and body side sheets shall be entirely 3/16" aluminum (5052-H32). Each side compartment assembly shall be both plug welded and stitch welded to ensure proper weld penetration on all panels while avoiding the possible warping caused by a full seam weld. The side compartments shall be welded on a fixture to ensure true body dimensions of all door openings. The side compartments and body side panels are then set into a body squaring fixture where the super structure is installed and the entire body is aligned to be completely symmetrical. The super structure is then welded to the compartment side panels and reinforcement plates are inserted which allows the compartment panels to become an integral component of the body support structure.</p>			

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<p>A full seam weld shall not be used due to the applied heat which may distort sheet metal and remove the protective coating from the perimeter of the welded area. All seams shall be caulked prior to finish paint to ensure proper compartment seal.</p> <p>Stainless Steel construction shall also be deemed acceptable with approval from High Rolls Fire Department.</p> <p>Galvanneal Body construction shall not be considered. (NO EXCEPTIONS)</p> <p>100" WIDE FIRE BODY</p> <p>The fire body shall be 100" wide to provide the maximum amount of usable space, approximately 76" wide, and to extend the body fenderettes outward for better tire tread coverage. All lower compartments shall be 26" deep overall.</p> <p>SUPER STRUCTURE - ALUMINUM</p> <p>The body super structure shall be an all welded configuration utilizing a combination of 3" x 1-1/2" 6061-T6 thick walled structural tubing and 6061 structural channel.</p> <p>This structure shall be designed to totally support the full length and width of the body and shall be welded to the body side compartments by use of reinforcement plates to incorporate the compartments into an integral part of the body weldment.</p> <p>The super structure shall be bolted to the sides of the chassis frame at four (4) points.</p> <p>STEPPING, STANDING, & WALKING SURFACES</p> <p>All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be ALCOA No Slip type. Upon request by the High Rolls Fire Department, the manufacturer shall supply proof of compliance with this requirement.</p> <p>All vertical surfaces on the body, which incorporate aluminum tread plate material, shall utilize the same material pattern to provide a consistent overall appearance.</p> <p>CATWALK AND LADDER TO FILL TOWER</p> <p>A means to access the fill tower and top of the tank shall be provided.</p> <p>SAFETY SIGN (S) AT REAR STEP AND CROSS WALKWAY (S)</p> <p>Safety sign(s) shall be located on the vehicle at the rear step, and at any cross walkway(s), to warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.</p> <p>FOLDING STEPS</p> <p>One (1) Heavy-duty folding step shall be provided on the front face of the driver's side and passenger side compartments. The steps will be chrome-plated and have a minimum 42 square inch serrated stepping surface. The steps shall be fastened with stainless steel bolts with nylon lock nuts and reinforced with backing plates.</p> <p>DRIVERS SIDE COMPARTMENTATION</p> <p>Compartmentation shall be constructed to the following approximate dimensions:</p> <p>One (1) low side compartment, with a rollup door, forward the rear wheels. Compartment dimensions approximately 36" High x 40" Wide x 26" Deep.</p> <p>OFFICERS SIDE COMPARTMENTATION</p> <p>One (1) low side compartment, with a rollup door, forward of the rear wheels.</p> <p>Compartment dimensions approximately 36" High x 40" Wide x 26" Deep.</p>			

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<p>ALTERNATE COMPARTMENTATION LAYOUTS</p> <p>Alternate compartmentation layouts may be acceptable if it shortens the overall length of the fire apparatus. Any alternate layout must be approved by High Rolls Fire Department.</p> <p>ROLL-UP DOORS</p> <p>Roll-up doors shall be provided on all compartments. The roll-up doors shall be constructed from aluminum extruded slats which shall have a flexible seal between each slat for proper sealing of the door.</p> <p>A synthetic rubber seal shall be provided at each side, top and bottom edge of the door to prevent entry of dirt into the compartment.</p> <p>The door shall be equipped with a lift bar style latch mechanism which shall latch at the bottom of the door mounting extrusion.</p> <p>The roll-up door assembly shall be furnished with a spring-loaded, counter balance assembly to assist in door actuation.</p> <p>All running board and high side compartments shall be equipped with roll-up doors.</p> <p>ROBINSON ROLL-UP DOORS</p> <p>The roll-up doors shall be Robinson (ROM) brand roll-up doors, equipped with a brushed aluminum finish, with a PVC inner seal to prevent metal to metal contact and to repel moisture. The slats shall be double-wall extrusion 1.366" high by 315" thick with interlocking end shoes to prevent the slats from moving side-to-side and binding the door. All slats are to have interlocking joints to prevent penetration by sharp objects.</p> <p>SWEEP-OUT COMPARTMENT FLOORS</p> <p>Compartment floors shall be welded to the compartment walls and have a sweep out design for easy cleaning.</p> <p>Compartments with hinged doors shall have the door opening flanges bend down to produce the sweep-out design.</p> <p>Compartments with roll-up style doors shall have the external floor flange stepped down, 1/2" high x 2" deep, to produce a sealing surface for the roll-up doors below the compartment floor. The sweep out design shall also permit easy cleaning.</p> <p>All compartments shall have waterproof Turtle-Tile or equivalent flooring material installed.</p> <p>COMPARTMENT TOPS</p> <p>Compartment tops shall be covered with polished aluminum tread plate on both sides.</p> <p>COMPARTMENT DRIP MOLDING</p> <p>Compartment tops over all side compartments shall have a 45 degree flange formed out to provide protection against water runoff. A secondary extruded drip molding shall be provided between low compartments and auxiliary high side compartments, when auxiliary compartments are provided.</p> <p>COATED FASTENERS</p> <p>All exterior fasteners shall be coated stainless steel screws. Screw threads shall be coated with reusable, self-locking, sealing material to provide vibration resistance. Screw heads shall be coated with a sealing element to prevent galvanic corrosion between dissimilar metals. Non-coated screws shall only be provided as part of vendor supplied component installations.</p>			

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<p>COMPARTMENT LOUVERS</p> <p>Ventilation between compartments to atmosphere shall be provided and located to avoid water entry into compartments.</p> <p>ACCESS PANELS</p> <p>Removable access panels shall be provided in all lower compartments to access spring pins, fuel tank sender, electrical junction compartment and rear body mounts.</p> <p>Protective panels shall be located in the rear compartments providing access to the lights and associated wiring. The covers shall also serve as protective covers to prevent inadvertent damage to lights or wiring from tools or equipment located in the compartment.</p> <p>STANCHION LIGHT MOUNTS</p> <p>Polished stainless steel stanchion mounts shall be provided for mounting warning and scene lights and accessories. These stanchions shall be blended with the stainless steel wrapped cover of the elliptical water tank to present a blended appearance. These stanchions shall be angled slightly downwards for scene lighting.</p> <p>BODY RUB RAILS</p> <p>Sacrificial aluminum tread plate rub rails shall be mounted at the base of the body, extend outward a minimum 3/4", downward 2" and flange inward 1". The rub rails shall extend the full length of the main body and wrap around the rear body corners. Rub rails shall be designed to bolt to the body from the bottom side of the compartment area, so as not to damage the body side panels on initial impact and to provide for ease of replacement.</p> <p>RUNNING BOARD STEPS</p> <p>The driver and officer running board steps shall be fabricated of 3/16" polished aluminum tread plate. The outside edge on each step shall be fabricated with a double break, return flange. The steps shall be rigidly reinforced with a heavy duty support structure. The running boards shall not form any part of the compartment design, and shall be bolted into place with a minimum 1/2" clearance gap between any panel to facilitate water runoff.</p> <p>TANDEM REAR WHEEL WELL LINERS</p> <p>Fully removable, bolt-in, seamless 1/8" aluminum fender liners shall be provided. The wheel well liners shall extend from the outer wheel well body panel, into the truck frame. Removable vertical splash shields, inward of the wheels, shall be provided to give access to the hydraulic components. The completely washable fender liners shall be designed to protect the front and rear compartments and main body supports from road salts, dirt accumulation and corrosion.</p> <p>FENDERETTES</p> <p>Polished #316 stainless steel fenderettes are to be installed around the wheel well openings using a black reinforced vinyl trim and 1/4" stainless steel bolts with lock washers drilled and tapped into the body.</p> <p>SCBA SPARE BOTTLE STORAGE</p> <p>Two (2) breathing air cylinder storage compartments shall be provided and located in the rear wheel well area of the apparatus body in front of the tandem wheels.</p> <p>The cylinder storage compartment shall be constructed entirely of aluminum. The door assemblies shall be provided with a gasket between door and body side, bolted in-place and removable for repair or replacement.</p> <p>Compartment shall be provided with SCBA cylinder scuff protection. A brushed aluminum door with push button trigger latch shall be provided.</p>			

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<p>An additional two (2) SCBA bottle storage compartments shall be included as an option if space allows.</p> <p>REAR APPARATUS BODY — GROUND CLEARANCE</p> <p>The rear of the apparatus body leading from the rear wheel to the rear bumper shall be angled to provide a high angle of ground clearance.</p> <p>REAR BUMPER</p> <p>The apparatus shall be configured with a structural steel channel bumper with an aluminum tread plate overlay to allow a shorter overhang. Two (2) two eyes shall be attached directly to the end of each frame rail.</p> <p>All stepping surfaces shall be in compliance with the latest version of all applicable NFPA standards.</p> <p>REAR TOW EYES</p> <p>Two (2) painted tow eyes shall be furnished on the rear of the vehicle, extending through the rear body panel. The tow eyes shall be made from plate steel and shall be bolted directly to the chassis frame rails with grade 8 bolts. The tow eyes shall be smooth and free from sharp edges, and have a minimum eyelet hole of 2-1/2". The tow eyes shall be painted.</p> <p>REAR APPARATUS BODY TREAD PLATE</p> <p>The lower rear apparatus body above the rear bumper to the lower portion of the elliptical water tank shall be covered with polished aluminum tread plate.</p> <p>GRAB RAILS</p> <p>All handrails shall be 1-1/4" outer diameter, knurled bright-anodized aluminum extrusion, designed to meet NFPA 1901 requirements.</p> <p>Molded gaskets shall be installed between the handrail stanchion castings and body surfaces to prevent electrolytic reaction between dissimilar metals and to protect paint.</p> <p style="text-align: center;">Miscellaneous Loose Equipment</p> <p>EXTERIOR MOUNTED TOOLS</p> <p>Three (3) hydrant and spanner wrench brackets shall be mounted on the apparatus body. These brackets shall have one (1) hydrant wrench and two (2) hose spanner wrenches.</p> <p>They shall be installed in the following locations:</p> <ol style="list-style-type: none"> 1. Rear of the apparatus body. 2. Driver's side pump panel forward of low side compartments on the lower exterior compartment wall. 3. Passenger's side pump panel forward of low side compartment on the lower exterior compartment wall. <p>One (1) Flat-head Axe shall be installed in brackets on the rear of the apparatus. One (1) Pick-head Axe shall be installed in brackets on the rear of the apparatus.</p> <p>HANDLINE NOZZLES</p> <p>Two (2) 1 % " Task Force Tips G-Force Automatic Nozzles shall be provided for the crosslays.</p>			

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<p>EXTERNALLY MOUNTED FIRE EXTINGUISHERS</p> <p>Two (2) externally mounted fire extinguishers and brackets shall be mounted on the rear of the apparatus in a position that does not interfere with water dump operations. One (1) shall be of the 2 1/2 gallon pressurized water type, and one (1) shall be of the Amerex multi-purpose dry chemical type with a minimum UL rating of 20A:120B: C or equivalent.</p> <p>Optional acceptable extinguisher mounting location shall be inside a side compartment.</p> <p>HYDRANT ADAPTER</p> <p>A double female swivel hydrant adapter shall be provided along with a screw base mounting bracket. One end shall attach to the 3 1/2" NSTF suction hose and the other end to be 4-1/2" N.S.T.M thread.</p> <p>Rubber Mallet</p> <p>One (1) Rubber Mallet shall be provided.</p> <p>HOSE FITTINGS</p> <p>One (1) Double Male NST connector and one (1) Double Female NST connector shall be included for 1 1/4" and 2 1/2" hose. Four (4) total.</p> <p>ANSI Compliant First Aid Kit</p> <p>One (1) ANSI Compliant First Aid Kit shall be mounted in the cab.</p> <p>ANSI COMPLIANT TRAFFIC VESTS</p> <p>One traffic vest for each seating position, each vest to comply with ANSIJISEA 207, Standard for High-Visibility Public Safety Vests, and have a five-point breakaway feature that includes two at the shoulders, two at the sides, and one at the front.</p> <p>28" COLLAPSIBLE ILLUMINATED TRAFFIC CONES</p> <p>Five (5) collapsible 28" illuminated traffic cones and carrying case shall be provided.</p>			