

INVITATION TO BID

The City of Rochester, New Hampshire is accepting sealed bids for a brand new 2016 model year volume of 3,000 gallons fire apparatus tanker truck. Bids must be submitted to the City at the address below in a sealed envelope plainly marked as follows:

**Sealed Bid, 2016 model year 3,000 Gallon Fire Apparatus Tanker Truck
“Bid # 16-12”**

City of Rochester
31 Wakefield Street
Rochester, NH 03867
Attn: Purchasing Agent

All bids must be received no later than **“September 3, 2015”** at **2:15 PM**. Actual bid opening will be at Rochester City Hall, 31 Wakefield Street in Rochester NH, at **2:30 PM**. No late bids, faxed, e-mailed or telephone bids will be accepted. Bid proposals and specifications may be obtained by visiting www.rochesternh.net, or emailing purchasing@rochesternh.net, or by contacting the Purchasing Agent at City Hall, 31 Wakefield Street, Rochester, NH 03867, (603) 335-7602. All bid questions must be submitted in writing (email preferred) to the Purchasing Agent. Bidders are to monitor website for addendums, and postings of all bid questions and answers. the period for questions or addendums will end 1 week prior to bid opening. All bid proposals must be made on the bid proposal forms supplied, and the bid proposal forms must be fully completed when submitted.

3,000 Gallon Fire Apparatus Tanker Truck

Please quote price for a brand new model year 2016 Fire Apparatus Tanker Truck with a 3,000 gallon capacity that complies with the attached specifications. Deviations from specifications contained herein must be shown in dealer supplied spec sheet and clearly marked as "alternative/exception to specifications." Alternatives/exceptions to the specifications contained herein will be evaluated to determine if they are equal to or superior and whether acceptance is in the best interests of the City. The City retains all discretion as to equality and suitability. Note - the City has determined that the base vehicle will be a MACK brand cab and chassis (no exceptions). Alternative tanker equipment from well know industry leaders is to be mounted upon the base vehicle and delivered to the City as a singular unit. The tanker unit is to be constructed of stainless steel (no exceptions).

Bid submissions must supply standard manufacturer's warranty information for all components. The apparent successful bidder must supply all service and parts manuals for all equipment before award of bid will be finalized.

Vendor Name: _____

Address: _____

Phone: _____ Fax# _____ E-mail _____

Date Prices are Good Through: _____

Date Submitted: _____

Contact Person: _____

Authorized Signature: _____

Item #1	2016 Mack 3,000 Gallon Tanker Truck per Specifications	Brand	Amount

Bid results will be posted after 48 hours on the City of Rochester's web site:
www.rochesternh.net or will be available by request via e-mail at the following address:
purchasing@rochesternh.net

INSTRUCTION TO BIDDERS

PREPARATION OF BID PROPOSAL

1. The Bidder shall submit her/his proposal upon the form(s) furnished by the City (attached). The bidder shall specify a unit price for each pay item. All figures shall be in ink or typed.
2. If a unit price or lump sum bid already entered by the bidder on the proposal form is to be altered it should be crossed out with ink, the new unit price or lump sum bid entered above or below it, and initialed by the bidder, also with ink. In case of discrepancy between the prices written in words and those written in figures, the prices written in words shall govern.
3. The bidder's proposal must be signed with ink by the individual, by one or more members of the partnership, by one or more members or officers of each firm representing a joint venture, by one or more officers of a corporation, or by an agent of the contractor legally qualified and acceptable to the owner. If the proposal is made by an individual, his name and post office address must be shown, by a partnership the name and post office address of each partnership member must be shown; as a joint venture, the name and post office address of each must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles, and business addresses of the President, Secretary, and Treasurer.
4. All questions shall be submitted in writing to and received by the Purchasing Agent at the above address, a minimum of 7 days prior to the scheduled bid opening. The Purchasing Agent, will then forward both the question and the city's response to the question to all prospective bidders.

IRREGULAR PROPOSALS

Bid proposals will be considered irregular and may be rejected for any of the following reasons:

1. If the proposal is on a form other than that furnished by the Owner or if the form is altered or any part thereof is detached.
2. If there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite or ambiguous as to its meaning.
3. If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
4. If the proposal does not contain a unit price for each pay item listed, except in the case of authorized alternate pay items.

DELIVERY OF BID PROPOSALS

When sent by mail, the sealed proposal shall be addressed to the City of Rochester, Purchasing Agent, 31 Wakefield Street, Rochester, NH 03867. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the bidder, unopened. Emailed or faxed bid proposals are not acceptable.

WITHDRAWAL OF BID PROPOSALS

A bidder will be permitted to withdraw his proposal unopened after it has been deposited if such request is received in writing prior to the time specified for opening the proposals.

PUBLIC OPENING OF BID PROPOSALS

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

DISQUALIFICATION OF BIDDERS

Either of the following reasons may be considered as being sufficient for the disqualification of a bidder and the rejection of her/his bid proposal(s):

1. Evidence of collusion among bidders.
2. Failure to supply complete information as requested by the bid specifications.

CONSIDERATION OF PROPOSALS

1. Bids will be made public at the time of opening and may be reviewed only after they have been properly recorded. In case of discrepancy between the prices written in words and those written figures, the prices written in words shall govern. In case of a discrepancy between the total shown in the proposal and that obtained by adding the products of the quantities of items and unit bid prices, the latter shall govern.
2. The right is reserved to reject any or all proposals, to waive technicalities or to advertise for new proposals, if in the judgment of the City, the best interest of the City of Rochester will be promoted thereby. The City reserves the right to alter the specifications by negotiation on the accepted bid.
3. Bid results will be available on the website at www.rochesternh.net within 48 hours of the bid opening.

AWARD OF CONTRACT

The City holds the right, in its judgment, to award the contract to the bidder, which it feels is in the best interest of the City. If a contract is to be awarded, the Contractor/Vendor selection shall be based in part on possession of the necessary experience, organization, technical and professional qualifications, skills and facilities, reference checks, project understanding, approach, ability to comply with proposed or required time to completion or performance, licensing or certification, in good standing with Federal, State and Local agencies, possession of satisfactory record of performance,

cost and to a responsible and qualified bidder whose proposal complies with all the requirements prescribed as soon as practical after the bid opening. No bid shall be withdrawn for a period of (60) sixty days subsequent to the opening of bids without the consent of the City of Rochester. The successful bidder will be notified, by the form mailed to the address on his proposal, that his bid has been accepted and that he has been awarded the contract.

CANCELLATION OF AWARD

The City reserves the right to cancel the award of any contract at any time before the execution of such contract by all parties without any liability against the City.

BID EVALUATION

In addition to the bid amount, additional factors will be considered as an integral part of the bid evaluation process, including, but not limited to:

1. The bidder's ability, capacity, and skill to perform within the specified time limits.
2. The bidder's experience, reputation, efficiency, judgment, and integrity.
3. The quality, availability and adaptability of the supplies and materials sold.
4. The bidder's past performance.
5. The sufficiency of bidder's financial resources to fulfill the contract.
6. The bidder's ability to provide future maintenance and/or services.
7. Any other applicable factors as the City determines necessary and appropriate (such as compatibility with existing equipment).

CONDITIONS AT SITE

Bidders shall be responsible for having ascertained pertinent local conditions, such as: location, accessibility and general character of the site of the building. The character and extent of existing work within or adjacent to the site, and any other work being performed thereon at the time of the submission of her/his bid.

LAWS, PERMITS AND REGULATIONS

1. The Contractor shall obtain and pay for all licenses and permits as may be required of him by law, and shall pay for all fees and charges for connection to outside services, and use of property other than the site of the work for storage of materials or other purposes.
2. The Contractor shall comply with all State and Local laws, ordinances, regulations and requirements applicable to work hereunder, including building code requirements. If the Contractor ascertains at any time that any requirement of this Contract is at variance with applicable laws, ordinances, regulations or building code requirements, she/he shall promptly notify the City of Rochester in writing.

STANDARDS

1. Materials specified by reference to the number, symbol or title of a specific standard, such as a Commercial Standard, a Federal Specification, Department's Standard Specifications, a trade association standard or other similar standard. Shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of advertisement, except as limited to type, class or grade or modified in such reference.
2. Reference in the Specifications to any article, device, product, material, fixture, form or type of construction by name, make or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. In such cases the Contractor may, at his option, use any articles, device, product, material fixture, form or type of construction that, in the judgment of the City expressed in writing to all Bidders before opening of bids as an addendum, is an acceptable substitute to the specified.
3. Substitution During Bid Time: Whenever any particular brand or make of material or apparatus is called for in the Specifications, a Bidder's Proposal must be based upon such material or apparatus, or upon a brand or make which has been specifically approved as a substitution in an Addendum issued to all Bidders during the bidding time.
4. The intent is that the brand or make of material or apparatus that is called for herein establishes a standard of excellence that, in the opinion of the Consultant and Engineer, is necessary for this particular Project.
5. Substitution After Bid Opening: No substitutions will be considered after bids have been opened unless necessary due to strikes, lockouts, bankruptcy or discontinuance of manufacture, etceteras. In such cases, the Contractor shall apply to the City, in writing within ten (10) days of his realizing his inability to furnish the article specified, describing completely the substitution he desires to make.

EXTRAS

Except as otherwise herein provided, no charge for any extra work or material will be allowed unless the Fire Chief has ordered the same, in writing.

GUARANTEE OF WORK

1. Except as otherwise specified, all work shall be guaranteed by the Contractor against defects resulting from the use of inferior materials, equipment or workmanship for one (1) year from the Date of Final Acceptance.
2. Make good any work or material, or the equipment and contents of said building or site disturbed in fulfilling any such guarantee.
3. In any case, wherein fulfilling the requirements of the Contract or of any guarantee, should the Contractor disturb any work guaranteed under another contract, the Contractor shall restore such disturbed work to a condition satisfactory to the Fire Chief. And guarantee such restored work to the same extent as it was guaranteed under such other contracts.

4. If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee, the City of Rochester may have the defects corrected and the Contractor shall be liable for all expense incurred.
5. All special guarantees applicable to definite parts of the work that may be stipulated in the Specifications or other papers forming a part of the Contract shall be subject to the terms of this paragraph during the first year of the life of such special guarantee.

DEFAULT AND TERMINATION OF CONTRACT

If the Contractor:

1. Fails to begin work under Contract within the time specified in the notice to proceed; or
2. Fails to perform the work with sufficient workers and equipment, or with sufficient materials to assume prompt completion of said work; or
3. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable; or
4. Discontinues the prosecution of the work; or
5. Fails to resume work, which has been discontinued, within a reasonable time after notice to do so; or
6. Becomes insolvent or has declared bankruptcy, or commits any act of bankruptcy or insolvency; or
7. Makes an assignment for the benefit of creditors; or
8. For any other causes whatsoever, fails to carry on the work in an acceptable manner the City of Rochester will give notice, in writing, to the Contractor for such delay, neglect, and default.

If the Contractor does not proceed in accordance with the Notice, then the City of Rochester will have full power and authority without violating the Contract to take the prosecution of the work out of the hands of the Contractor. The City of Rochester may enter into an agreement for the completion of said Contract according to the terms and conditions thereof, or use such other methods as in the City's opinion will be required for the completion of said Contract in an acceptable manner.

All extra costs and charges incurred by the City of Rochester as a result of such delay, neglect or default, together with the cost of completing the work under the Contract will be deducted from any monies due or which may become due to said Contractor. If such expenses exceed the sum which would have been payable under the contract, then the Contractor shall be liable and shall pay to the City of Rochester the amount of such excess.

OBTAINING BID RESULTS

Bid results will be available on the website at www.rochesternh.net within 48 hours of the bid opening.

GENERAL REQUIREMENTS

Each bid must be accompanied by bidders accurate written and detailed specifications covering the apparatus and related items which the bidder is proposing to furnish and to which the apparatus furnished under contract must conform. It is the intent of these specifications to cover the furnishing to the City a complete apparatus constructed and equipped exactly as specified in the attached specifications. Any details of construction, materials, or equipment not specified are left to the discretion of the Contractor, whom will be responsible for all construction and manufacturing techniques involved in the assembly of the apparatus.

All aspects of the apparatus shall conform to any applicable rules/regulations imposed to such vehicles by any of the following Governing Agencies:

- National Fire Protection Association (not including recommended equipment).
- Occupational Safety Health Administration.
- Federal Motor Vehicle Safety Standards.
- Department of Transportation.
- Underwriters Laboratories.

BID LAYOUT

Each bidder must put bid specifications in the same format and order as seen below for ease of review. There will be *NO EXCEPTIONS* to this.

EXCEPTIONS TO SPECIFICATIONS

It is the intent of the City to purchase a fire/rescue apparatus brand that has a proven record of dependability and reliability in the fire/rescue service. It is also the City's intent to purchase said apparatus from a dealer known for exceptional customer service. Experimental manufacturing techniques or materials are not acceptable and will be rejected. Alternatives to the attached specifications will be considered provided they are of equal or superior quality and/or value of what has been specified. It is the responsibility of the bidder to prove to the City within the bid submission package that any/all alternatives are equal or superior. All bidders shall provide supporting documentation with their proposal that may prove the 'equal to' or 'superior' quality or value. The City shall be solely responsible for determining 'equal to' or 'superior' status. The City's decision regarding these items is exclusive to the City and will be final and conclusive.

Any area(s) of the attached specification that contain statements such as 'no exceptions' or similar statements with the same general meaning shall be strictly adhered to. The City has deemed these items to be extremely important to achieve the final delivered product that the City wishes to purchase. Any exceptions to these areas will result in rejection of that bidder's proposal regardless of bid price.

All exceptions, no matter how minor, or seemingly un-important, must be detailed fully with supporting documentation submitted with proposal. Failure to submit exceptions and supporting documentation will cause rejection of bidder's proposal.

All bidders shall be aware that the attached specifications shall be made part of the Purchase Contract between the City and the contractor/bidder. The successful bidder will be required to meet all construction, fabrication, and material requirements as called for in these specifications. Any deviations from these specifications must be specifically listed, explained, and submitted with the bid proposal. Failure to submit the detailed exceptions will indicate to the City that an exception is not taken and the bidder will provide the construction, fabrication, and material requirements as desired by the City and detailed in the attached specifications. Submission of list of exceptions does not indicate acceptance/approval of exceptions by the City.

In the unlikely event that the contractor/bidder fails to construct the apparatus as requested in the attached specifications, the City retains the right to reject the entire apparatus and invoice the contractor/bidder for any costs or losses that the City may have incurred due to the contractor/bidder failing to meet specifications described in the purchase contract.

CORPORATE CONTACT INFORMATION

The City shall be provided with the following information to allow them to contact the President/CEO of the manufacturing company (not dealer) when deemed necessary:

1. Name of Company President
2. Office address
3. Office telephone number
4. Email address
5. Home address
6. Home telephone number
7. Cellular telephone number (business and personal, if applicable)

If the manufacturing company is a subsidiary of, division of, or owned by a different Company, the above information shall also be provided on the 'Parent' Company.

There will be no exception to this requirement.

CONSTRUCTION TIME

The completed apparatus shall be delivered within 300 calendar days after signing of the contract. This delivery date is an extremely important consideration.

DELIVERY OF COMPLETED APPARATUS

When the apparatus is completed at the manufacturer's facility, a factory trained delivery technician shall deliver the apparatus to the City. The technician shall familiarize all individuals designated by the City on the operation and maintenance of the apparatus at this time. The technician shall remain at the City's location for a sufficient period of time to allow all individuals to gain a thorough knowledge of the operation of the apparatus.

FIRE STATION PRE-CONSTRUCTION CONFERENCE

After award of the bid and prior to commencement of the construction process, the factory authorized distributor shall perform a pre-construction conference at the fire station to finalize all construction details.

FINAL INSPECTION TRIP

The contractor shall provide a final inspection at the factory in which the apparatus has been constructed. The apparatus must be 100% complete for final inspection. All travel expenses incurred by the City for up to two officials shall be paid by the contractor/bidder in order for the City to be present for said final inspection. Air fare and overnight expenses shall be included.

WARRANTY

All bidders shall submit warranty information on all of the following items:

1. Chassis including engine and transmission.
2. Fire Pump and related accessories.
3. Booster tank.
4. Apparatus body and paint.

All warranties shall be fully defined and explained on the respective manufacturer's official Certificate of Warranty document. Either the original certificate or copy of an identical certificate will be acceptable.

It is assumed that the manufacturer of the apparatus will be familiar with the installation requirements of component parts used in the construction of the apparatus that are not actually manufactured by the apparatus manufacturer, (i.e.: booster tank and fire pump). If, however, the manufacturer fails to strictly follow the installation requirements of the component part manufacturer, the apparatus manufacturer will assume the warranty liability for the duration of the component parts warranty normally offered.

CERTIFICATION OF NFPA 1901 COMPLIANCE

As per NFPA 1901, the City shall assume the responsibility of determining, prior to the purchase of the apparatus, who will be responsible for ensuring that all aspects of NFPA 1901-2009 are met. The manufacturer shall be responsible for providing or performing only the items requested by the City in the documents provided to the manufacturer by the City.

Written certification shall be provided by the manufacturer stating that the delivered apparatus complies with the NFPA 1901-2009 Standard. If the City has elected to provide, perform, outsource and/or contract with a third party, any item required by NFPA 1901-2009 (per the previous paragraph), the manufacturer shall provide, upon delivery, a "Statement of Exceptions" per Chapter 4 of NFPA 1901-2009.

This "Statement of Exceptions" shall include:

1. A separate specification of the section of the NFPA Standard for which the apparatus is lacking compliance.
2. A description of the particular aspect of the apparatus that is not compliant.
3. A description of the further changes or modifications to the delivered apparatus which must be completed to achieve full compliance.
4. An identification of the entity who will be responsible for making the necessary post-delivery changes or modifications to the apparatus to achieve full compliance with the applicable standard.

Prior to, or at the time of, delivery of the apparatus, the Statement of Exceptions shall be signed by an authorized agent of the entity responsible for the final assembly of the apparatus and by an authorized agent of the purchasing entity, indicating a mutual understanding and agreement between the parties regarding the substance thereof.

The City shall not place the apparatus into active emergency service until fully compliant with NFPA 1901-2009.

NFPA REQUIRED EQUIPMENT

The end user of this apparatus shall provide all other equipment and accessories that are required by NFPA 1901 but not specifically listed in these specifications.

CHASSIS SPECIFICATION

2016 Mack Granite GU713

Engine: MP8-455M

Transmission: Allison 4500EVS-6

Front Axle: 20,000# FXL20

Front Tires: 425/65R22.5

Rear Axles: 46,000# S462 / SS462 Ratio 5.31

Rear Tires: 11R22.5

Fuel Tank: 72 Gallon

GVWR: 66,000#

OPTIONS:

Air Conditioning

Electric Fan Clutch

Engine Brake

(3) Group 31 Batteries

320 Amp Leece Neville Alternator

Spin-On Coolant Filter

Extended Life Coolant

Fuel/Water Separator with Heater

120 Volt Block Heater

Synthetic Transmission Fluid

Main Driveline - Spicer 1810HD Universal Joints

Inter-Axle Driveline – Spicer 1710HD Universal Joints

6 Bodybuilder Switches

Fender Extensions

Diagonal Grab Handle On Inside Of Driver's Door

Bright Grill Finish

Instrument Panel Brushed Nickel Finish

Interior Trim – Slate Gray

Power & Heated Mirrors

Heated Convex Mirrors

Hi-Back Bostrom Talladega 915 Air Suspension Drivers Seat

Fixed Mack Hi-Back Non-Suspension Passengers Seat

Push Button Starter Switch

Stainless Steel Exterior Sun Visor

Power Windows

Power Door Locks

Front Bumper – Swept Back – Steel Channel With Bright Finish, Includes Stone Guard

Polished Aluminum Fuel Tank

Bright Aluminum Fuel Tank Steps With Stainless Steel Straps

All Polished Aluminum Wheels

Rear Axle Differential Locks

Bendix Heated Air Dryer

Polished Aluminum Air Tanks
Bendix Anti-lock Brake System With Roll Stability Control
Manual Air Tank Drain Valves With Lanyards
Polished Aluminum Battery Box Cover
Battery Box Mounted Emergency Starting Studs

MAXIMUM TOP SPEED

The maximum top speed of this apparatus shall be determined using the following NFPA 1901 Chapter 4 criteria:

- Apparatus with GVWR of over 50,000 lbs. shall not exceed 60 MPH.

WATEROUS MODEL CSU 1,500 GPM SINGLE STAGE PUMP

The fire pump shall be a Waterous Fire Pump Company model CSU that complies with all applicable requirements of the latest edition of the "Standard for Automotive Fire Apparatus" published by the National Fire Protection Association and printed in Pamphlet 1901.

UNDERWRITER'S LABORATORY CERTIFICATION

The completed apparatus shall be tested and approved by the independent testing company Underwriters Laboratories, Inc. The manufacturer of the apparatus shall be responsible for all costs involved in this test. The certification of inspection and approval shall be presented to the Fire Chief of the Department upon delivery of the completed apparatus.

MECHANICAL SEAL

The pump shaft shall have self-adjusting corrosion and wear resistant mechanical seals.

SACRIFICIAL PUMP ANODES

To aid in protecting the pump from internal corrosion, two sacrificial anodes shall be provided and located one in left side inlet and one on the discharge side of the pump.

FRC PUMP BOSS PRESSURE GOVERNOR SYSTEM

Fire Research Pump Boss pressure governor and monitoring display kit shall be installed. The kit shall include a control module, pressure sensor, and cables.

WATEROUS MODEL VPO OILLESS PRIMING SYSTEM

A Waterous model VPO oil less priming system shall be provided. The priming pump shall be an electrically driven, positive displacement vane type conforming to

requirements outlined in NFPA 1901. One priming control shall both open the priming valve and start the priming motor.

The primer shall be capable of taking suction and discharging water with a lift of 10 feet in not more than 30 seconds with the pump dry and using 20 feet of appropriately sized hard suction hose with strainer. The system shall develop a vacuum of 22 inches at an altitude of up to 2,000 feet above sea level. The vacuum test shall be performed with a capped 20 foot length of hard suction hose, developing a vacuum of at least 20 inches with a drop not exceeding 10 inches in 5 minutes.

SUPPLEMENTARY HEAT EXCHANGER

A supplementary heat exchanger cooling system shall be provided on the pump drive engine. Proper valving shall be installed to permit water from the discharge side of the fire pump to temper the engine coolant circulating through the heat exchanger system without intermixing. The heat exchanger shall be adequate in size to maintain the temperature of the coolant in the pump drive engine not in excess of the engine manufacturer's temperature rating under all pumping conditions.

Appropriate drains shall be provided to allow draining the heat exchanger to prevent damage from freezing. A valve control shall be provided on the pump operators panel. The valve control handle shall be of the rotary type and shall have an arrow indicator that identifies the opened/closed position of the valve.

6" LEFT (DRIVER) SIDE MASTER INTAKE

A 6" master intake shall be provided on the left (driver) side of the apparatus. The intake shall have a 6" male NST connection. The intake shall have a removable screen to prevent the entry of large objects into the pump. The screen shall be constructed of a material that will provide cathodic protection to the pump. A label shall be provided above the intake that states "DRIVER SIDE MASTER INTAKE". The label shall be color coded burgundy.

ELECTRIC MASTER INTAKE VALVE FOR LEFT SIDE MASTER INTAKE

The left side master intake shall be equipped with an electric operated intake valve. The valve shall be a full flow butterfly type valve designed to mount on the fire pump between the suction tube extension and the suction tube behind the pump panel. The valve shall not interfere with other suction or discharge openings on the fire pump.

LEFT INTAKE VALVE DRAIN

A 3/4" drain shall be provided on the intake to allow draining of the outer side of the valve.

LEFT INTAKE BLEEDER VALVE

A 1/4" bleeder valve shall be provided on the intake to bleed off air on the outer side of the valve.

SHORTEN SUCTION TUBE - LEFT SIDE

The left side master suction tube shall be shortened for use with externally installed hose appliances keeping the overall apparatus width to a minimum.

LEFT SIDE SUCTION HOSE WELL

A soft suction hose well shall be provided on the left side of the pump compartment. The hose well shall be of the "sunken" type below the running board.

LEFT SIDE SUCTION HOSE WELL CAPACITY

The left side hose well shall hold up to 25 feet of 5" hose.

LEFT SIDE MASTER INTAKE STORZ ADAPTER

A 6" female NST swivel x 4" locking Storz elbow fitting with blind cap and chain shall be provided on the left side master intake.

6" RIGHT (PASSENGER) SIDE MASTER INTAKE

A 6" master intake shall be provided on the right (passenger) side of the apparatus. The intake shall have a 6" male NST connection. The intake shall have a removable screen to prevent the entry of large objects into the pump. The screen shall be constructed of a material that will provide cathodic protection to the pump. A label shall be provided above the intake that states "PASSENGER SIDE MASTER INTAKE". The label shall be color coded burgundy.

ELECTRIC MASTER INTAKE VALVE FOR RIGHT SIDE MASTER INTAKE

The right side master intake shall be equipped with an electric operated intake valve. The valve shall be a full flow butterfly type valve designed to mount on the fire pump between the suction tube extension and the suction tube behind the pump panel. The valve shall not interfere with other suction or discharge openings on the fire pump.

RIGHT INTAKE VALVE DRAIN

A 3/4" drain shall be provided on the intake to allow draining of the outer side of the valve.

RIGHT INTAKE BLEEDER VALVE

A 1/4" bleeder valve shall be provided on the intake to bleed off air on the outer side of the valve.

INTAKE RELIEF VALVE

A intake relief/dump valve shall be provided in the supply side of the right side gated master intake to relieve excess incoming pressure. The system shall be designed to self-restore to a non-relieving position when excessive pressure is no longer present. The pressure adjustment range shall be from 50 psi to 200 psi. The relief system shall be adjustable with a common type box end wrench. The pressure setting shall be preset by the apparatus manufacturer at 125 psi.

SHORTEN SUCTION TUBE - RIGHT SIDE

The right side master suction tube shall be shortened for use with externally installed hose appliances keeping the overall apparatus width to a minimum.

RIGHT SIDE SUCTION HOSE WELL

A soft suction hose well shall be provided on the right side of the pump compartment. The hose well shall be of the "sunken" type below the running board.

The floor shall be covered with gray Turtle Tile flooring.

RIGHT SIDE SUCTION HOSE WELL CAPACITY

The right side hose well shall hold up to 50 feet of 5" hose.

RIGHT SIDE MASTER INTAKE STORZ ADAPTER

A 6" female NST swivel x 4" locking Storz elbow fitting with blind cap and chain shall be provided on the right side master intake.

3/8" PUMP COOLING/BYPASS LINE

A 3/8" pump cooling/bypass line shall be provided from the pump discharge manifold directly into the tank.

This discharge shall implement a Class 1 model 38BV all brass ball type 1/4 turn valve with chrome plated handle control located on the pump panel.

The valve control handle shall indicate the open/closed position of the valve. The handle shall have a recessed area for mounting of the identification label which shall clearly state "PUMP COOLER".

TANK REFILL/RECIRCULATION DISCHARGE

A discharge shall be provided from the pump discharge manifold to allow pump cooling when necessary as well as to refill the booster tank.

The water tank fill gauge shall be directly in line with this discharge control.

The valve and piping shall be 2".

The refill/recirculation discharge shall be manually controlled on the pump panel.

STAINLESS STEEL PIPING

All piping for discharges shall be stainless steel using stainless steel fittings. Victaulic couplings shall be used in all front, rear and side discharges, deck pipes and cross lays for quick, simple removal of any pipe section or valve for maintenance. High pressure flexible helix wire reinforced piping with a minimum burst pressure of 1200 psi may be used in some areas to minimize friction losses. All flexible piping couplings shall be high tensile strength stainless steel.

All piping shall be properly supported and braced to prevent movement of piping other than what is allowed by the Victaulic couplings to compensate for apparatus flexing.

Any discharge manifolds provided on the apparatus must be fabricated of a minimum of schedule 10 304 marine grade piping. Use of any welded light gauge (less than Schedule 10) manifolding or plumbing will not be acceptable.

VENTED LUG CAPS AND PLUGS

All intake and discharge plugs and caps and plugs shall be vented lug type designed to relieve trapped pressure and help reduce possible operator injuries.

LEFT SIDE FORWARD AUXILIARY INTAKE

An auxiliary intake shall be provided on the left side of the pump compartment in the forward position.

The intake valve and piping shall be 2 1/2".

The valve control shall be manually controlled at the intake location.

The intake shall have a 2 1/2" chrome plated female NST swivel connection with screen and a male NST chrome plated intake plug and chain.

A 3/4" bleeder/drain valve shall be provided.

RIGHT SIDE DISCHARGES

One 2 1/2" discharge and one 3" discharge shall be provided on the right side pump panel. The 3" discharge shall be located forward of the intake and the 2 1/2" shall be located rear of the intake.

One (1) right side 2 1/2" discharge(s):

The right side 2 1/2" discharge shall be manually controlled on the pump panel.

The discharge shall be equipped with a chrome plated brass or bright finish stainless steel discharge elbow.

A 2 1/2" FNST x 1 1/2" MNST chrome plated reducer and chain shall be provided.

One (1) right side 3" discharge(s):

The right side 3" discharge shall be manually controlled on the pump panel. The control shall have an integrated slow closing mechanism to comply with NFPA 1901.

The discharge shall extend straight out of the apparatus with no type of elbow.

A Kochek model SKE4T3R 3" FNST x 4" locking swivelstorz elbow adapter with ZCC407 blind cap and chain shall be provided.

LEFT SIDE DISCHARGES

Two 2 1/2" discharges shall be provided on the left side pump panel. The discharges shall be located in the forward section of the side pump panel, vertically stacked one above the other.

Two (2) left side 2 1/2" discharge(s):

The left side 2 1/2" discharge shall be manually controlled on the pump panel.

The discharge shall be equipped with a chrome plated brass or bright finish stainless steel discharge elbow.

A 2 1/2" FNST x 1 1/2" MNST chrome plated reducer and chain shall be provided.

1 3/4" SPEEDLAY PRECONNECTS

Two 1 3/4" preconnectedspeedlays shall be provided and located ahead of the side mount pump panel.

The speedlay compartment shall be constructed of 5052 smooth aluminum sheet material with a random brushed finish applied after fabrication. Each speedlay shall be piped using 2" piping or high pressure hose incorporating a 2" ball valve with the control on the pump operator's panel.

The # 1 - 1 3/4" crosslay shall have the capacity to hold 200 feet of 1 3/4" fire hose and nozzle.

The # 2 - 1 3/4" crosslay shall have the capacity to hold 200 feet of 1 3/4" fire hose and nozzle.

REMOVABLE SPEEDLAY TRAYS - Two (2)

The speedlays shall have removable trays to allow for reloading hose. The trays shall be constructed of 1/2" thick black poly material. The trays shall have handhold cutouts on the vertical and horizontal edges.

SPARE TRAYS

One (1) spare cartridge trays shall be provided for the crosslays.

The valve(s) shall be manually controlled on the pump panel.

There shall be two (2) 2" swivel elbows with 1 1/2" Male NST hose thread connections provided on the 1 3/4" cross lay hose beds. The swivels shall be mounted in a position to prevent hose "pinching" at the hose thread connection.

1 3/4" CROSSLAY DRAIN VALVES - AUTOMATIC

3/4" automatic drain valves shall be provided for all 1 3/4" crosslays. The valves shall have an all brass body with heavy duty neoprene seal. The valves shall be normally open and shall close at 6 psi using an all brass check assembly with stainless steel spring.

3" MONITOR DISCHARGE

A 3" monitor discharge shall be provided above the pump compartment. The discharge piping shall extend above the pump compartment a sufficient distance to allow use of the deck gun.

The valve shall be manually controlled on the pump panel. The control shall have an integrated slow closing mechanism to comply with NFPA 1901.

TFT MODEL XFT-NJ MONITOR ASSEMBLY

One (1) Task Force Tips model XFT-NJ monitor assembly shall be provided on the monitor discharge. A 2 1/2" NH outlet shall be provided on the monitor.

EXTENDA-GUN XG-18 EXTENSION

A Task Force Tips model XG18**-XL Extenda-Gun extension shall be provided on the monitor discharge to allow the monitor assembly to be manually extended 18" above its nested position. The Extenda-Gun shall be wired to the open compartment warning light in the cab to notify occupants that the device is not properly stowed for travel.

A discharge adapter shall be furnished for attaching the specified monitor.

TFT MST-4NJ QUAD STACKED TIPS

One set of TFT MST-4NJ quad stacked tips shall be provided with the apparatus.

TFT XF-SS5 STREAM STRAIGHTENER

One (1) TFT XF-SS5 5" stream straightener shall be provided with 2 1/2" FNST treads on one end and 2 1/2" MNST on the other.

TFT MR1250 NJ MASTER STREAM NOZZLE

One (1) TFT model MR1250-NJ automatic master stream nozzle (300-1250 gpm) shall be provided with the apparatus.

LEFT FRONT OF HOSEBED 2 1/2" DISCHARGE

One (1) 2 1/2" discharge shall be provided in the front of the hose bed on the left side. The discharge shall be located in an area that will not interfere with other apparatus equipment.

The valve shall be manually controlled on the pump panel.

The discharge shall have extend straight out with no chrome discharge elbow(s).

The discharge shall be used as a pre-connected line and shall not require any cap or chain.

If any piping for the discharge is visible in front area of the apparatus body, it shall be concealed with a fabricated cover.

STAINLESS STEEL PUMP COMPARTMENT CONSTRUCTION

The entire pump compartment shall be constructed using only 304 marine grade stainless steel fabricated sheeting with a #4 annealed and polished finish on all exterior surfaces. The pump compartment shall not require any finish painting. Due to the extreme twisting

and flexing that all fire apparatus are subjected to, aluminum shall not be used in any portion of the pump compartment structural support. The use of any type of enclosed tubing that requires the use of self tapping or any other type of machine screw shall not be acceptable.

PUMP COMPARTMENT RUNNINGBOARDS - STAINLESS STEEL

The pump compartment side running boards shall be constructed of **brushed finish stainless steel tread plate**. Stainless steel grip-strut material shall be provided on the walkway and as an insert in the lower step. Heavy duty 3M "Safety Walk" replaceable traction tread strips shall be provided on step edges.

PUMP HEAT PAN ENCLOSURE

A heat pan shall be provided to enclose the bottom of the pump compartment. The entire enclosure shall be fabricated of 304 marine grade alloy stainless steel to prevent rust and corrosion that is commonly found in pans made of steel or aluminum. The assembly shall completely enclose the underside of the pump to aid in the prevention of freezing in winter weather. The bottom of this enclosure shall be designed to be easily removed without the need to remove any bolts or fasteners. For ease of handling, the bottom enclosures shall be installed in two (2) sections. One (1) section shall slide out each side for maintenance and pump compartment clean-out.

PUMP COMPARTMENT HEATER

A minimum 40,000 BTU hot water type heater shall be provided and mounted within the pump compartment. Coolant hoses, both feed and return, shall be routed within the frame rails from the engine compartment to the heater in the pump compartment. Shutoff valves shall be provided in both lines and shall be located in an easily accessible location within the engine compartment. A 12-volt fan shall be provided and shall be mounted to direct heated air toward the back of the gauge panel. A lighted switch shall be provided on cab console to activate/de-activate the heater fan.

SIDE MOUNTED PUMP PANEL ROLL UP DOORS

A roll up door shall be provided to cover the pump operator's panel and the intake/discharge panel on the opposite side. The sides of the pump compartment shall be extended to the apparatus body width.

PUMP PANEL ROLL UP DOORS - PAINTED

The roll up doors that cover the side pump panels shall be painted the single primary color of the apparatus body.

PUMP COMPARTMENT EXTERIOR

The exterior of the pump compartment shall have a painted upper stainless steel finish.

PUMP COMPARTMENT FRONT WALL - BRUSHED STAINLESS

The front wall of the pump compartment shall be constructed of brushed stainless steel which is bolted to the pump compartment assembly.

SIDE MOUNT BRUSHED STAINLESS STEEL PUMP PANEL

All controls and instruments shall be located on the left side of the apparatus. All discharge and intake valve controls shall be located on the left side pump panel.

BRUSHED STAINLESS STEEL PUMP PANELS

The left and right side pump panels shall be constructed of 304 2B marine grade brushed stainless steel with a #4 brushed and polished finish. The panels shall be held into place with two latches on the top to allow for easy removal of the panels.

The upper section of the left side pump panel shall be constructed of the same 304 2B marine grade stainless steel. The upper section shall be vertically hinged and have a chrome plated latch to secure the panel when closed.

SIDE MOUNT PUMP PANEL LIGHTS - L.E.D.

The side mount pump panel shall be illuminated using L.E.D. lights.

RIGHT SIDE DISCHARGE/INTAKE PANEL LIGHTS - L.E.D.

The right side discharge and intake panels shall be illuminated using an L.E.D. light.

ENCLOSED MOUNT PUMP PANEL AUXILIARY LIGHTS - L.E.D.

In addition to the horizontal LED lighting above the pump panel, the enclosed side mount pump panel shall have vertical LED lighting to the front and rear in the door jamb area on both sides. Four LED track style lights total.

PUSH/PULL VALVE CONTROL HANDLES

For valve actuation, the apparatus pump panel shall be equipped with side mount valve controls.

The ergonomically designed ¼ turn push-pull T-handle shall be chrome plated zinc with recessed labels for color coding and verbiage. The geared control rod, double laminated locking clips and rod housing shall be stainless steel and provide a true positive lock that

will eliminate valve drift. Bronze and Teflon impregnated stainless steel bushings in both ends of rod housing shall minimize rod deflection, never need lubrication, and ensure consistent long term operation.

DISCHARGE VALVE CONTROL HANDLE LAYOUT

All discharge valve control handles shall be located in one or two horizontal lines across the mid section of the pump panel. All discharge valve control handles shall be located immediately below their corresponding pressure gauge for ease of pump operation.

STAINLESS STEEL VALVE CONTROL LINKAGES

All manual valve controls shall have control rod linkages constructed of 1/2" stainless steel rod or pipe and shall implement heavy ball swivel joints and clevises for smooth valve operation.

Plain, painted or coated control rods are not acceptable. (No Exception).

MASTER PUMP DISCHARGE PRESSURE GAUGE

An 4" diameter master pressure gauge shall be provided to indicate the main pump discharge pressure. The gauge shall read from 30" hg vacuum to 400 psi and shall be accurate within +/- 1%. The gauge shall be glycerin filled (-40F to +150F), read up to 400 psi, be accurate within +/- 1% and have a high impact resistant clear acrylic lens.

MASTER PUMP INTAKE PRESSURE GAUGE

An 4" diameter master pressure gauge shall be provided to indicate the pump intake pressure. The gauge shall read from 30" hg vacuum to 400 psi and shall be accurate within +/- 1%. The gauge shall be glycerin filled (-40F to +150F), read up to 400 psi, be accurate within +/- 1% and have a high impact resistant clear acrylic lens.

The master intake and discharge gauges shall have bright finish stainless steel bezels.

The discharge pressure gauge dials shall be white with black markings. The needle shall match the color of the markings.

The master intake gauge shall be clearly labeled "PUMP INTAKE" and shall be located to the left of the master discharge pressure gauge. (Burgundy label).

The master discharge gauge shall be clearly labeled "PUMP DISCHARGE" and shall be located to the right of the intake pressure gauge. (Black with silver lettering).

PRESSURE/VACUUM TEST PLUGS

Underwriter's test plug adapters shall be provided for connection of pump test gauges.

TANK GAUGE - PUMP PANEL

An tank gauge shall be provided on the pump panel. The gauge shall feature a 180 degree highly visible wide view ultra-brite LED display showing the level of the booster tank.

TANK GAUGE - REAR

A tank gauge shall be provided on the rear of the apparatus. The gauge shall feature a 180 degree highly visible wide view ultra-brite LED display showing the level of the booster tank.

TANK GAUGE - RIGHT SIDE

A tank gauge shall be provided on the right side of the body or pump compartment. The gauge shall feature a 180 degree highly visible wide view ultra-brite LED display showing the level of the booster tank.

TANK GAUGE - LEFT SIDE

A tank gauge shall be provided on the left side of the body or pump compartment. The gauge shall feature a 180 degree highly visible wide view ultra-brite LED display showing the level of the booster tank.

DISCHARGE PRESSURE GAUGES

Unless otherwise specified, each 1 1/2" or larger discharge shall have an pressure gauge. The gauge shall be glycerin filled (-40F to +150F), read from 0 - 400 psi, be accurate within +/- 1% and have a high impact resistant clear acrylic lens.

The individual discharge pressure gauges shall have a 2 3/4" diameter.

The discharge pressure gauge dials shall be white with black markings. The needle shall match the color of the markings.

The pressure gauge shall be directly in line with the discharge control handle for the discharge that they provide pressure readout for. **For ease of operation, this requirement must be strictly adhered to. There shall be no exception to this requirement.**

The gauges shall be clearly labeled with permanent color coded labels.

PUMP PANEL AIR HORN BUTTON(S)

One (1) momentary push button(s) shall be provided on the pump panel to activate airhorns.

DUNNAGE COMPARTMENT

A dunnage compartment shall be provided above the pump compartment. The compartment shall be as large as space permits.

DUNNAGE COMPARTMENT OPEN

The dunnage compartment shall be open on top without any type of cover.

DUNNAGE COMPARTMENT FLOOR - ALUMINUM TREADBRITE

The dunnage compartment floor shall be aluminum treadbrite.

L.E.D. DUNNAGE PUMP COMPARTMENT LIGHTS (2)

Two LED lights shall be provided to illuminate the dunnage compartment. The lights shall function with the pump operators gauge panel lights.

BOOSTER TANK- UNITED PLASTIC FABRICATING, INC.

The tank shall have a LIFETIME warranty provided by United Plastic Fabricating, Inc.

The tank exterior shell shall be constructed of minimum 1/2" thick PT3 polypropylene sheet stock. This material shall be non-corrosive stress relieved thermoplastic which is U.V. stabilized for maximum protection. The booster tank shall be of a specific configuration and is designed to be completely independent of the body and compartments. All joints and seams shall be nitrogen welded and tested for maximum strength and integrity. The tank construction shall include PolyProSeal technology. A sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise.

The transverse swash partitions shall be manufactured of 3/8" PT3 polypropylene material. The longitudinal swash partitions shall be constructed of 3/8" PT3 polypropylene and extend through the cover to allow for positive welding and maximum integrity. 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 shall interlock with one another and are welded to each other as well as to the walls of the tank. All partition spacing shall be compliant with NFPA 1091 recommendations.

The top of the booster tank shall be fitted with removable lifting eyes.

The tank cradle assembly shall be designed to provide support to the tank. The assembly shall be approved by the manufacturer of the tank.

BOOSTER TANK CAPACITY 3,000 GALLONS

The poly booster tank shall have a capacity of 3,000 U.S. Gallons.

BOOSTER TANK FILL TOWER - LEFT SIDE FRONT

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 1/2" polypropylene and shall be a minimum of **12" x 24"** outer dimension. The tower shall be located in the left front corner of the hose bed. The tower shall have a 1/4" thick removable polypropylene screen and polypropylene hinged type cover.

NOTE: Fill tower shall be "anti-surge" type. NO EXCEPTIONS.

6" TANK OVERFLOW

A 6" diameter tank vent/overflow shall be provided and integrated into the tank. The piping shall be a minimum of schedule 40 polypropylene designed to run through the tank and discharge behind the rear wheels.

1" TANK SUMP DRAIN

A 1" drain shall be provided in the bottom of the tank sump to fully drain the tank. The drain shall use 1" stainless steel piping with a 1" valve. The control for the valve shall be remotored to the driver's side of the apparatus just under and behind the side rub rail. The drain control handle shall be labeled "TANK DRAIN".

3" TANK SUMP CLEAN OUT PLUG

A 3" tank sump clean out plug drain shall be provided in the bottom of the tank sump.

NEWTON 10" DUMP VALVE WITH SWIVELING TELESCOPIC CHUTE

A Newton model 1050-34-44-14 10" stainless steel dump valve shall be provided on the rear of the apparatus.

The valve controls shall be located on top of the dump valve.

A Newton model 6012SW-34 stainless steel swivel adapter shall be provided to allow use to either side or the rear.

A Newton model 4036-34-8x12 stainless steel 36" telescoping extension chute shall be provided.

NOTE: The swivel portion and the extension must be nested while the unit is in motion.

MANUAL DUMP VALVE CONTROL

The Newton swivel dump shall be manually operated on the rear of the apparatus.

SWIVEL DUMP VALVE MOUNTING

The swivel dump valve shall be mounted to the rear surface of the tank. The tank mounting flange shall not be recessed into the rear face of the tank.

4" REAR TANK FILL - "FIREMAN'S FRIEND"

A 4" rear fill shall be provided on the apparatus. The fill shall incorporate a 4" FFE fill device. An internally mounted check type valve capable of flowing at a rate in excess of 1,000 gallons per minute. The fill shall be self deflecting and shall have a stainless steel spring actuated piston type sealing mechanism to minimize seal wear and provide positive sealing of valve after shutting off at water feed source. The valve shall be self cleaning utilizing EPDM rubber. A mounting plate with TTMA standards 8 bolt attachment pattern.

REAR TANK FILL STORZ ADAPTER

A 4" female NST swivel x 4" locking Storz elbow fitting with blind cap and chain shall be provided on the rear tank fill.

4" TANK TO PUMP

A 4" tank to pump line and valve shall be provided between the tank and the pump.

The tank to pump valve shall be manually controlled from the pump operator's position with a gear actuated handwheel control featuring position indication.

TANK TO PUMP CHECK VALVE

A check valve assembly shall be provided on the pump. The valve shall prevent unintentional back filling of the tank through the tank to pump line. Connection from the valve to the tank shall be made by using a non-collapsible flexible rubber hose.

APPARATUS BODY MATERIAL

The entire apparatus body shall be constructed of 304 marine grade stainless steel with a #4 annealed and polished finish. The interior of the apparatus body shall not require any

finish painting. The compartment interiors must be a #4 finish. Mill finish or DA sanded finish will not be acceptable.

APPARATUS BODY ASSEMBLY METHOD

The entire apparatus body shall be assembled using only bolted type construction. All apparatus body parts shall be able to be unbolted without the need to cut welds, etc. No exceptions to this requirement as all apparatus manufacturers have the capability to manufacture apparatus bodies in this manner.

COMPARTMENT FLOORS

All compartment floors shall be constructed of 304 marine grade stainless steel with a # 4 annealed and polished finish on the interior surface. A drainport shall be provided in each rear corner of the compartment to allow any water that may collect on the floor to drain out. The drainports shall be designed to prevent road spray from entering the compartment. The front edge shall consist of a minimum of two bends to provide additional strength in the compartment floor and shall then form the lower door jamb.

All compartment floors shall be sweep out design. This shall include the lower side compartments, any compartments above the wheel well, any transverse compartments, and the rear face compartment(s). Any exception to this requirement will cause immediate rejection of bid.

INTERIOR COMPARTMENT SURFACES

All visible interior compartment surfaces shall be 304 marine grade stainless steel with a # 4 annealed and polished finish. Surfaces that are painted or coated in any manner, raw material or any surface with any type sanded finish are not acceptable.

PAINTED FENDERWELLS

The left and right side rear fender wells shall be constructed of ultra-smooth 304 marine grade stainless sheet steel. The outer surface of the fender well shall be finished painted. This surface shall not be overlaid with aluminum treadbrite or overlaid with a painted panel that is bolted on after the painting of the apparatus body.

PAINTED FENDERWELLS

The fender wells shall be finish painted the primary exterior color of the apparatus.

Two prevent potential corrosion points, aluminum treadbrite or bolted on overlapping panels shall not be implemented in the construction of the apparatus body.

UPPER DOOR POSTS - PAINTED

The upper door post to the front and rear of the compartment door above the rear wheels shall be constructed of ultra-smooth 304 marine grade stainless sheet steel with a minimum tensile strength of 90,000 psi.

The outer surface of these door posts shall be finished painted.

REPLACEABLE FENDERETTE

The stainless steel fenderette shall be secured to the apparatus body with stainless steel fasteners and shall be easily removable for replacement.

Fenderettes that are welded to the apparatus body are not acceptable.

OUTER BODY SIDES

The outer left and right side body panels above the compartment tops shall be constructed of 304 2B marine grade stainless steel with a painted finish.

COMPARTMENT VENTILATION

Each compartment shall have a ventilation plate to allow for air movement in the compartment.

ROM ROLL UP COMPARTMENT DOORS

For all compartments requiring roll up doors, Robinson (ROM) roll up doors shall be installed.

The doors shall be constructed of aluminum extrusion slats and shall be fitted with a flexible, watertight seal between the slats at pivoting joints. Each slat shall be individually removable for replacement if damaged. The end caps and rollers shall be manufactured of type-6 nylon. The doors shall have a pre-tension operator in a sealed alloy drum that shall be positioned in the upper portion of the compartment providing maximum clearance and head room in the upper portion of the compartment.

Each door shall have a full door width lift bar latching handle which shall be spring loaded with two (2) surface mounted latch points, mounted one (1) on each end. The door shall be reinforced and the latch point with a "ledge" surface above the lift bar designed to provide a "push" surface when closing.

A drip rail shall be provided above all doors.

STAINLESS STEEL COATED FASTENERS

All fasteners used in the finish construction of the apparatus body shall be marine grade stainless steel

DRIVER'S SIDE COMPARTMENT IN FRONT OF THE REAR WHEELS

A full height compartment shall be provided in front of the rear wheels.

The compartment shall have a roll up door which shall be painted to match the primary exterior color of the apparatus.

DRIVER'S SIDE ABOVE WHEEL COMPARTMENTS (2)

Two compartments shall be provided above the rear wheels.

Both compartments shall have roll up doors which shall be painted to match the primary exterior color of the apparatus.

DRIVER'S SIDE COMPARTMENT BEHIND REAR WHEELS

A full height compartment shall be provided behind the rear wheels.

The compartment shall have a roll up door which shall be painted to match the primary exterior color of the apparatus.

PASSENGER'S SIDE COMPARTMENT IN FRONT OF THE REAR WHEELS

A full height compartment shall be provided in front of the rear wheels.

The compartment shall have a roll up door which shall be painted to match the primary exterior color of the apparatus.

PASSENGER'S SIDE LOW COMPARTMENT BEHIND THE REAR WHEELS

A low compartment shall be provided behind the rear wheels.

The compartment shall have a roll up door which shall be painted to match the primary exterior color of the apparatus.

UPPER DOOR JAMB EXTENSION - HARD SUCTION COMPARTMENT

The upper door jamb of the drivers compartments shall be extended upward for storage of hard suction hose.

A hinged door shall be provided on each side on the rear to access the compartments.

UPPER DOOR JAMB EXTENSIONS FINISH PAINTED

The outer surface of the upper door jamb shall be finish painted to match the exterior of the apparatus body color.

REAR TAILBOARD STEP

A rear tailboard step shall be provided on the apparatus.

RUBRAILS - ALUMINUM

Aluminum rub rails shall be provided on the apparatus body sides. The rub rails shall have a bright finish with anodized coating to protect the finish.

The rub rails must be bolted on to the apparatus body to allow easy replacement if damaged.

HOSE BED FLOORING

The floor of the hose bed shall be constructed of fiber reinforced Dura-Dek, or equal, material.

HOSE BED CAPACITY

The hose bed shall have the capacity to carry the following hose load:

1500' of 4" LDH

600' of 2.5" DJ Hose

HOSE BED DIVIDERS

There shall be two (2) hose bed divider(s) to partition off hose.

The divider(s) shall be adjustable by sliding in tracks

ALUMINUM TREADBRITE HOSEBED COVER

A hose bed cover shall be provided to protect the hose load from the weather. The cover shall be constructed of 1/8" aluminum treadbrite. The cover shall extend from the front of the hose bed to the rear. The cover shall be hinged on each side and open from the center. Pneumatic holders shall be provided to hold the covers in the up position. The hose bed covers shall be incorporated into the door ajar system.

HOSE BED COVER END FLAPS - RED

Red vinyl end flaps shall be provided on the rear. The flaps shall be fastened to the rear edge of the aluminum treadbrite covers and then extend downward to cover the exposed rear of the bed and from the left side to the right side of the hose bed.

HOSE BED COVER LIGHTING - LED

LED lighting shall be provided and mounted to the inner liner of the both hose bed doors

LOW MOUNT ENCLOSED LADDER COMPARTMENT

A ladder storage compartment shall be provided on the right side of the apparatus with an access door on the rear. The compartment shall be located below the hose bed level and shall not be located above booster tank.

An aluminum tread plate vertically hinged door with a slam-type latch shall be provided on the compartment.

All ladders shall be capable of being removed individually without disturbing the remaining ladders.

PIKE POLE STORAGE

Storage for four straight handle pike poles shall be provided in the ladder storage compartment.

LADDER COMPARTMENT LIGHT

An LED light shall be provided in the ladder storage compartment. The light shall be mounted just inside the ladder compartment access door and activated with an automatic door switch.

The light switch shall be incorporated into the door ajar warning system in the cab.

DUO SAFETY 24' 2 SECTION ALUMINUM LADDER

One (1) Duo Safety model 900A 24' NFPA compliant 2 section aluminum extension ladder provided and mounted.

DUO SAFETY 14' ALUMINUM ROOF LADDER

One (1) Duo Safety model 775A 14' NFPA compliant aluminum roof ladder with folding hooks shall be provided and mounted.

DUO SAFETY 10' ALUMINUM FOLDING ATTIC LADDER

One (1) Duo Safety model 585A 10' NFPA compliant aluminum folding attic ladder shall be provided and mounted.

ZICO PTS-HA HYDRAULIC PORTABLE TANK RACK - RIGHT SIDE

A Zico hydraulically actuated portable tank rack shall be installed on the right side of the apparatus body.

ZICO PORTABLE TANK RACK ENCLOSURE

The area between the Zico cast aluminum end housings shall be enclosed on the top, bottom and outer side with a smooth aluminum panel painted the primary apparatus body color.

ZICO PORTABLE TANK RACK HARD SUCTION MOUNT

An aluminum compartment for one length of hard suction hose shall be provided on the Zico portable tank rack. The hard suction shall slide in from the rear and shall be secured using a velcro strap. Compartment to be painted body color.

6" x 10' HARD SUCTION HOSES (2)

Two sections of 6" diameter x 10' length clear lightweight PVC hard suction hose shall be provided.

HARD SUCTION HOSE COUPLINGS - NST

The hard suction shall be coupled long handle female NST x rocker lug male NST.

6" BARRELL STRAINER

A 6" barrell strainer shall be provided with a 6" female NST rigid connection.

3000 PORTABLE TANK - ALUMINUM FRAME

There shall be one (1) 3,000 gallon portable tank provided

PORTABLE TANK LINER - RED

The portable tank liner shall be red.

COMPARTMENT SHELF TRACKS - ALUMINUM

Two (2) sets consisting of two heavy duty aluminum Uni Strut tracks shall be provided in specified compartments, one for each end of shelf.

DUAL COMPARTMENT SHELF TRACKS - ALUMINUM

Four (4) sets consisting of four heavy duty aluminum Uni Strut tracks shall be provided in specified compartments, two for each end of shelf.

SHALLOW DEPTH COMPARTMENT SHELVING

There shall be two (2) shallow depth shelves provided

FULL DEPTH COMPARTMENT SHELVING

There shall be two (2) full depth shelves provided.

TURTLE TILE SHELF MAT

All shelving and floors shall have Turtle Tile on it.

DRIVER'S SIDE FRONT OF WHEELWELL STORAGE COMPARTMENT

A storage compartment shall be provided in the wheel cowel area in front of the rear axle on the driver's side.

DRIVER'S SIDE REAR OF WHEELWELL SPARE CYLINDER COMPARTMENT

A compartment shall be provided in the wheel cowel area behind the rear axle on the driver's side to hold a total of three (3) spare SCBA cylinders.

PASSENGER'S SIDE FRONT OF WHEELWELL STORAGE COMPARTMENT

A storage compartment shall be provided in the wheel cowel area in front of the rear axle on the passenger's side

PASSENGER'S SIDE REAR OF WHEELWELL SPARE CYLINDER COMPARTMENT

A compartment shall be provided in the wheel cowel area behind the rear axle on the passenger's side to hold a total of three (3) spare SCBA cylinders.

ACCESS LADDER

An access ladder shall be provided on the rear of the apparatus to access the upper area of the apparatus. A minimum of 8" of clearance shall be provided between the rung and the body or any obstruction.

ACCESS LADDER LEFT SIDE MOUNTING

The rear access ladder shall be mounted on the left (driver) side of the rear of the apparatus.

REAR INTERMEDIATE STEP

A rear aluminum treadbrite step shall be provided on the rear face of the apparatus.

NFPA KNURLED FINSH HANDRAILS

All handrails shall be 1 1/4" diameter extruded aluminum.

RIGHT REAR VERTICAL HAND RAILS

One NFPA compliant handrail shall be provided on the right rear of the apparatus for boarding the rear step and using the right rear hosebed.

RIGHT REAR GRAB RAIL

A 12" NFPA compliant horizontal handrail shall be provided on the right rear of the apparatus towards the rear of the hose bed.

LEFT REAR GRAB RAIL

A 12" NFPA compliant horizontal handrail shall be provided on the left rear of the apparatus towards the rear of the hose bed.

INTERMEDIATE REAR HORIZONTAL HAND RAIL

An intermediate horizontal handrail shall be provided on the rear of the apparatus.

NFPA 1901 CERTIFIED 12 VOLT ELECTRICAL SYSTEM

The 12-volt apparatus body electrical system shall be provided and shall be in compliance with NFPA 1901 testing and certification procedures as follows:

NFPA MINIMUM ELECTRICAL LOAD DEFINITION

The NFPA 1901 defined minimum electrical load shall consist of the total amperage required to simultaneously operate the following in a stationary mode:

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

RESERVE CAPACITY TEST

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

ALTERNATOR PERFORMANCE TEST AT IDLE

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

TEST CONDITIONS

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

12-VOLT WIRING SYSTEM

All 12-volt electrical wiring shall be rated to carry 125% of the maximum current for which the circuit is protected. The wire shall be of sufficient size so that voltage drop in

any electrical device shall not exceed 10%. All wiring shall be color, number, and function coded with the number and function being printed every three inches along the entire length of all apparatus body wires (as required by NFPA 1901). All wiring shall be routed through heavy-duty PVC split loom, securely attached and protected against heat, oil, and physical damage. All locations where the wire passes through a body panel shall be protected with electrical grommets

All connections shall be made using mechanical connectors and be screwed to terminal or junction box with machine screws. Wire nut, insulation displacement, or piercing connections shall not be used.

All circuits shall be provided with properly rated low voltage over current protective devices of the automatic reset type.

A removable bulkhead shall that extends from the floor to the ceiling of both side rear compartments shall be provided to protect rear wiring.

AUTOMATIC HIGH IDLE FUNCTION

An automatic high idle system shall be installed and will automatically activate whenever the system voltage drops below determined voltage. The high idle will remain on until adequate voltage is achieved.

MASTER BATTERY DISCONNECT

A Cole Hersee master battery disconnect switch shall be provided and mounted within easy reach of the driver when entering the apparatus.

A green 'battery on' indicator light shall be provided in clear view of the driver. The light shall be mounted in a manner that will not impair the driver's vision.

LICENSE PLATE LIGHT/BRACKET

A chrome plated LED license plate light shall be provided on the rear of the apparatus. The light shall function with the head light switch.

A license plate mounting bracket shall be provided that spaces the license plate away from the apparatus body.

CLEARANCE LIGHTS/REFLECTORS

All apparatus body clearance lights shall be LED style. All lower clearance lights and reflectors shall be mounted in a manner that provides protection from damage, and shall comply with FMVSS-108 regulations.

MID-MOUNTED SIDE TURN SIGNAL - L.E.D.

A mid-mounted amber LED side turn signal shall be provided in the mid section area of the apparatus on both sides. The low profile signal shall be recessed into the side rubrail for protection.

PUMP COMPARTMENT LIGHTS (2)

(2) lights shall be provided to illuminate the interior of the pump compartment. The lights shall function with the pump operator's gauge panel light switch.

ENGINE COMPARTMENT LIGHT

A light shall be provided and mounted over the engine on the engine compartment wall. An on/off switch shall be provided on the light to activate it.

DUAL LED COMPARTMENT LIGHTING

Each apparatus body compartment shall have two L.E.D. lights mounted in the compartment.

The lights shall function automatically and independently of other compartments when the compartment door is opened. **Compartment lighting systems that are controlled by a single, dash mounted switch are not acceptable.**

COMPARTMENT LIGHT SWITCHES

Each roll up door shall have an integral door open indicator magnet in the lift bar. If the bar is not properly closed, it shall activate the "Door Open" light in the cab.

The compartment lights shall function automatically when the door is opened. A master compartment light switch shall not be acceptable.

DOOR AJAR INDICATOR - L.E.D.

A red LED flashing light shall be provided in the cab in clear view of the driver to warn of an open compartment or personnel door.

A label shall be provided adjacent to the light that states "Do Not Move Apparatus When Light Is On".

AUDIBLE DOOR AJAR INDICATOR

In addition to the flashing door ajar indicator, an audible alarm shall be provided in the cab to warn of an open compartment or personnel door.

LED PERIMETER GROUND LIGHTING -Five (5)

There shall be five (5) LED underbody perimeter lights furnished and installed. The lights shall be sealed to help prevent moisture entry.

The ground lights shall be activated with the parking brake.

LED APPARATUS BODY STEP LIGHTING

All apparatus body and pump steps and runningboards shall be illuminated using LED lights. The lights shall function automatically with the park brake.

GROUND/STEP LIGHTING CUTOFF SWITCH

A ground/step light cut off switch shall be provided in the cab to allow the driver to disable the ground lights and other lights that activate when the parking brake is set. The switch shall automatically re-set itself when the parking brake is released.

KUSSMAUL 1200 BATTERY CHARGER

A Kussmaul Auto-Charge 1200 fully automatic battery charger with 40 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 built in meter shall be provided on the charging unit to indicate charge rate.

KUSSMAUL AUTO-PUMP AIR COMPRESSOR

A Kussmaul Auto-Pump 120 volt air compressor shall be provided on the apparatus. The compressor shall have a .76 cfm open flow with a maximum pressure of 100 psi. The pressure switch shall be pre-set at 70 psi cut in and 90 psi cut out.

MANUAL SHORELINE CONNECTION

A 120 volt 15 amp manually disconnected recessed male receptacle with spring loaded cover shall be provided.

120 VOLT SHORELINE CONNECTION LOCATION

The 120 volt shoreline connection shall be located under the driver's door.

WHELEN M6 QUAD-CLUSTER TAILLIGHTS - L.E.D.

Whelen M6BTT 4" x 6" LED taillights and M6T 4" x 6" LED turn signals shall be provided. The backup lights shall be M6BUW 4" x 6" clear LED's.

An additional space shall be provided in the quad-cluster for the lower C warning lights.

M6FCV4 polished trim housings shall be provided.

BACKUP ALARM

A minimum 97db backup alarm shall be provided and shall automatically activate when the apparatus transmission is placed into reverse.

The backup alarm shall exceed all NFPA1901 and SAE J994 Type D requirements and testing.

CONSOLE MOUNTED CONTROL PANEL

A control console shall be provided between the driver's and officer's seats for all warning/auxiliary light controls and pump shift.

WARNING LIGHT SWITCH - SINGLE

A single master optical warning device switch shall be provided that will activate all minimum optical warning lighting through a single switch. Individual switches shall not be provided for any minimum optical warning lighting to insure total compliance to the warning lighting requirements defined in NFPA 1901. All lighting controlled by this switch shall not be subject to load management.

Any warning lights that are installed on the apparatus that are not required to meet the minimum optical warning lighting requirements shall be subjected to load management and shall have individual switches to activate/de-activate the warning light.

All switches shall be clearly labeled as to their function.

ZONE A UPPER WARNING LIGHTING

A Whelen FN60QLED lightbar shall be mounted on the top of the cab roof. The lightbar shall be 60" in length and mounted with low profile stainless steel brackets.

The lightbar shall have two front corner Linear-LED's, four front Linear-LED's (2 red, 2 white) and two red Linear-LED's.

The lenses on the Officer's side shall be red and the lenses on the Driver's side shall be red.

FRONT GRILLE WARNING LIGHTS

Two Whelen model M6RC red LED lights with clear lens shall be provided in the grille area on the apparatus. A chrome bezel shall be provided around the lights.

INTERSECTION WARNING LIGHT - SIDES

One Whelen model M6RC red LED light with clear lens shall be provided on each side as low and far forward as possible on the apparatus. A chrome bezel shall be provided around the lights.

MID-SECTION WARNING LIGHTS - SIDES

One Whelen model M6RC red LED light with clear lens shall be provided on each side in the mid-section of the apparatus. A chrome bezel shall be provided around the lights.

SIDE FACING LOWER REAR WARNING LIGHTS

One Whelen model M6RC red LED light with clear lens shall be provided shall be provided on each side of the apparatus as low and as far rearward as possible on the apparatus. A chrome bezel shall be provided around the lights.

REAR FACING LOWER WARNING LIGHTS

Two Whelen model M6RC red LED lights with clear lens shall be provided on the lower rear of the apparatus. A chrome bezel shall be provided around the lights.

WHELEN M9RC UPPER ZONE B/D WARNING LIGHTING

Two Whelen model M9RC red LED light heads with clear lens shall be mounted on each side of the apparatus above the side compartments. An M9FC chrome bezel shall be provided for each light.

WHELEN M9RC UPPER ZONE C WARNING LIGHTING

Two Whelen model M9RC red LED light heads with clear lens shall be mounted on the rear of the apparatus, one each side. An M9FC chrome bezel shall be provided for each light.

OPTICOM EMITTER SYSTEM

An Opticom emitter system shall be provided and installed in or on the roof mounted lightbar depending on lightbar design.

ELECTRIC SIREN

An electric siren shall be provided and mounted in the cab.

The siren shall have wail, yelp, hyper-yelp, and air horn tones as well as public address (PA) and shall be capable of radio rebroadcast. A hard-wired microphone shall be provided.

FEDERAL SIGNAL Q2B MECHANICAL SIREN - RECESSED MOUNTED

A Federal Signal model Q2B recess mounted chrome plated mechanical siren shall be provided and mounted recessed in the front bumper extension. The siren shall have a maximum sound output of 123 db at 10'.

MECHANICAL SIREN ACTIVATION SWITCHES

Two floor mounted pad switches shall be provided to operate the mechanical siren, one on the right side and one on the left side.

MECHANICAL SIREN BRAKE

A siren brake push button switch shall be provided on the dash or console.

100 WATT SPEAKER

A 100 watt speaker shall be provided and recessed into the front bumper. The model of speaker installed shall be designed to fit bumper type.

GROVER 24" STUTTERTONE AIR HORNS

Two Grover model 1510 24" chrome plated emergency air horns shall be provided and mounted recessed into the front bumper area.

AIR HORN CONTROL

The air horn system shall be controlled by a lanyard control on the cab ceiling. The lanyard shall be mounted in the center of the cab accessible from both the driver and the officer.

AIRHORN PRESSURE PROTECTION VALVE

The airhorn system shall be equipped with a pressure protection valve that will prevent the use of the airhorns when the pressure in the air system drops below 80 psi.

WHELEN 9SCOENZR "GRADIENT" ' SCENELIGHTS

Six Whelen9SCOENZR "Gradient LED Opti-Scene scenelights shall be provided and mounted two on each side and two on the rear. The lights shall have a chrome plate trim bezel.

12 VOLT SCENELIGHT ACTIVATION SWITCH (1)

A single switch shall be located on the cab control console to activate the 12 voltscenelight(s).

DUAL FUNCTION REAR SCENELIGHT(S)

The rear facing scenelight(s) shall activate automatically when the apparatus transmission is placed into reverse.

LED HOSEBED LIGHT

One LED light shall be provided and mounted in the front of the hosebed .

The light shall be controlled by the pump panel light switch.

RED/CLEAR LED DOME LIGHT IN CAB

There shall be two (2) Whelen model 60CREGCS combination red/clear LED dome light(s) provided and mounted on the cab ceiling. The light(s) shall have a total of 12 diodes.

The light(s) shall have a switch located on the lighthouse.

BROW LIGHT - 12 VOLT L.E.D.

One (1) universal brow mounted light shall be mounted on the apparatus.

The lighthouse shall be a 12 volt DC LED.

OBSERVATION SYSTEM DISPLAY

An ASA Voyager observation system shall be provided on the apparatus. The system shall include a model AOM711 7" flat panel color display. The display shall have 300 nits brightness with a contrast ratio of 150:1. Viewing angles shall be 55 degrees left to right and 25 to 40 degrees top to bottom. The display shall have a water resistant housing, built-in audio speaker with volume control, 12 volt audio enable and power on (standby) trigger inputs, onscreen display picture controls, day/night mode, backlit controls and detachable sunshield. A 72704 mounting bracket shall also be included. The display shall be 7 3/4" wide x 5 1/4" high x 1 3/16" depth.

OBSERVATION SYSTEM CAMERAS (3)

Three ASA Voyager model VCCS130 color cameras shall be provided and properly connected to the flat panel display. The cameras shall feature a built-in microphone, enhanced low-light performance (LED assisted), image orientation selector switch and a locking waterproof cable connector with CEC50 camera extension cables.

UNDERWRITER'S LABORATORIES TESTING

The apparatus shall undergo an Underwriters Laboratories Certification Test to insure that the completed apparatus meets the requirements of NFPA #1901. The certificate shall be provided to the City upon completion. Underwriters Laboratories shall also perform the required testing on the entire installed electrical system. Self-certification by the apparatus manufacturer will not be acceptable.

VEHICLE ROLLOVER STABILITY

The apparatus chassis shall be equipped with a stability control system and shall be certified to NFPA 1901 Rollover Stability requirements.

VEHICLE DATA RECORDER (VDR)

The apparatus shall be equipped with an on-board Vehicle Data Recorder (VDR) . The recorder shall be capable of recording the following data, in this order, At a minimum of once per second:

- Vehicle speed (MPH).
- Acceleration (from speedometer) (MPH/Sec)
- Deceleration (from speedometer) (MPH/Sec)
- Engine speed (RPM)
- Engine throttle position (% of throttle)
- ABS event (on/off)
- Seat occupied status (occupied yes/no by position)
- Seat belt status (buckled yes/no by position)
- Master optical warning device switch (on/off)
- Time (24 hour)
- Date (year/month/day)

The data shall be stored at the sampling rate in a 48 hour loop. The system shall have sufficient memory to record 100 engine hours with of minute by minute summary data showing the data listed above. When the memory capacity is reached, the system shall erase the oldest data first..

All data stored in the VDR shall be password protected, uploadable by the user to a computer and importable into a data management software package. That shall be provided with the apparatus. The software shall be both "Windows" and "Apple" compatible. The software shall produce the following formatted reports from the uploaded data:

- Daily log for the time the engine is running for a given date (minute by minute output of all values).
- Weekly summary (maximum values each hour for each day of the week).
- Monthly summary (maximum values each day for each day of the month)

SEATBELT WARNING SYSTEM

The apparatus shall be equipped with a seatbelt warning system. The system shall consist of an audible warning device that can be heard at all seating positions that are designed to be occupied while the vehicle is in motion as well as a visual display visible to the driver showing each seating position. The warning system shall be activated anytime the parking brake is released or the automatic transmission is not in park.

OCCUPIED SEATING POSITIONS - (2)

There shall be two seating positions designated for use while the vehicle is in motion.

TWO TONE CAB PAINT

The upper portion of the chassis cab shall be re-painted to provide a two tone cab paint finish. The lower portion of the cab shall be painted also. The paint line shall be approximately 1" below the cab door windows and shall curve upward around the windshield and terminate at the windshield curve. The inner area of the door jamb shall be two toned also.

TIRE PRESSURE VISUAL INDICATOR

Valve stem mounted visual indicators shall be provided on each tire.

LETTERING

A maximum of sixty (60) 4" maximum height self-adhesive letters with black outline and drop shadow shall be applied to both sides of the chassis cab.

The exact type style, wording and placement of the lettering will be provided to the successful bidder at the pre-construction conference.

SIGNBOARD LETTERING

Twenty Eight (40) large scale letters with black border shall be provided on the upper body area of the apparatus. The total quantity of letters shall be divided equally per side.

SIGNBOARD LAYOUT

The signboard shall read:

>> ROCHESTER FIRE-RESCUE

1"-6"-1" NFPA REFLECTIVE STRIPE

A 6" reflective stripe shall be applied to the apparatus.

A 1" gap shall be provided on both the top and bottom of 6" stripe followed by a 1" reflective stripe above and below the upper and lower gap.

A single 6" stripe shall be applied to the front if space does not permit for the 3 stripe pattern.

The stripping shall be applied to a minimum of 50% of the length of the apparatus on each side and 25% across the front of the apparatus. The stripe shall comply with NFPA 1901 requirements.

PRIMARY REFLECTIVE STRIPE COLOR - WHITE

The primary reflective stripe shall be 680-10 white.

SECONDARY UPPER REFLECTIVE STRIPE COLOR - GOLD

The secondary upper reflective stripe shall be 680-64 gold.

SECONDARY LOWER REFLECTIVE STRIPE COLOR - GOLD

The secondary lower reflective stripe shall be 680-64 gold.

REFLECTIVE STRIPE - "HOCKEY STICK" DESIGN

The reflective stripe shall be applied in a "hockey stick" design. The stripe shall angle upward on the forward compartment door on the apparatus body and then continue back to the end of the apparatus.

INNER CAB DOOR REFLECTIVE STRIPING - 2 DOOR

A minimum of 100 square inches of reflective material shall be provided on the inner door liner of each cab door.

CAB PAINT BREAK STRIPPING

A single horizontal metallic gold pinstripe with black border on top and bottom shall be provided on the cab two tone paint break line.

REAR CHEVRON STRIPING

A minimum of 50 percent of the rear vertical surface of the apparatus shall be covered with 6 inch alternating 983-71 red and 983-23 fluorescent yellow green retro-reflective striping. The striping shall slope downward away from the centerline of the apparatus at a 45 degree angle.

PROVISIONS FOR PLYMOVENT EXHAUST EXTRACTION SYSTEM

The exhaust system shall be modified to accept a Plymovent exhaust extraction system.

ENGINE HORIZONTAL EXHAUST

Shielding shall be provided between the apparatus body and the exhaust pipe if necessary to deflect heat away from the body. The exhaust system shall be designed and installed by the chassis manufacturer to comply with EPA equipment requirements and shall not be modified by the apparatus manufacturer.

CAB ENTRY STEP COVER

The OEM provided cab entry step on the side opposite the fuel tank shall be removed from the chassis provided brackets and replaced with a fabricated aluminum treadbrite step assembly.

FUEL TANK/STEP COVER

The OEM provided cab entry step on the same side as the fuel tank shall be removed from the chassis provided brackets and replaced with a fabricated aluminum treadbrite step assembly.

STAINLESS STEEL WHEEL COVERS

Real Wheels, or equal, polished stainless steel wheel simulators shall be provided and installed on the front and rear tandem axles.

FRAMERAIL TOW EYES - CHROME PLATED

Two 3/4" plate steel tow eyes shall be attached direct to the end of the frame rails on the rear of the apparatus. The eyes shall have a minimum of a 3" diameter pass through. Each eye shall be attached to the frame rail with a minimum of four 3/4" hardened steel bolts with locking nuts.

The tow eyes shall be chrome plated.

CENTER CONSOLE MAP POCKET

A storage pocket shall be provided on the rear of the console for storing books, maps, etc.

CENTER CONSOLE CONSTRUCTION MATERIAL

The console shall be constructed of aluminum treadbrite.

CENTER CONSOLE PANEL MATERIAL

The console panel shall be constructed of brushed stainless steel.

RADIO ANTENNA(S)

One (1) radio antenna(s) shall be provided and mounted for customer installation of radio equipment.

"AS BUILT" APPARATUS BODY OWNERS MANUAL CD (2)

Two "as built" apparatus body owner's manual CD's shall be provided with the apparatus

ZIAMATIC AC-2 ALUMINUM WHEEL CHOCKS

One set of two Zico model AC-2 wheel chocks shall be provided. Two "underbody" horizontal brackets shall be provided and shipped loose.

DELETE OPTIONS LIST

Below is a list of truck options that at the discretion of the buyer can be deleted to save money on the overall cost of the vehicle if deemed necessary. **Do not subtract items listed below from the total bid cost. These may or may not be discussed once bid is awarded.**

- Enclosed Pump Panel \$ _____
- Deck Gun With Nozzles \$ _____
- Extenda- Gun XG-18 \$ _____
- Left Side Electric MIV Valve \$ _____
- Right Side Electric MIV Valve \$ _____
- Brow Light \$ _____