

**PURCHASE CONTRACT
CITY OF BISBEE**

THIS PURCHASE CONTRACT ("Contract") is made this 2nd day of February, 2016, by and between the CITY OF BISBEE, an Arizona municipal corporation ("City") and Western States Fire Equipment, a(n) LLC ("Vendor").

WHEREAS, the City is in need of certain materials, supplies and/or equipment (hereinafter "Equipment") as more particularly specified in the Notice of Solicitation for a Fire Truck and as incorporated herein by reference; and

WHEREAS, the Vendor has offered to provide the requested Equipment in accordance with the terms of this Contract.

NOW, THEREFORE, in consideration of the foregoing recitals, which are incorporated herein by reference, the following mutual covenants and conditions, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and the Vendor hereby agree as follows:

1. Equipment. The Vendor promises and agrees to provide the Equipment as described in the Specifications, Scope of Work or Requirements and the Vendor's Proposal each of which is incorporated herein by reference.

2. Warranty. The Vendor further agrees to provide all of the Equipment required by this Contract free from defects in material or workmanship and shall warrant against such defects for a periods stated in the Vendor's Bid Proposal starting from the date of acceptance by the City, and shall transfer to the City any other applicable manufacturers' warranties. The City shall have 60 days from delivery of the Equipment to determine whether to accept it.

3. Term. This Contract shall remain in effect until delivery and acceptance, provided, however, that terms such as the warranty and conflict provisions shall survive the termination of the Contract. It may be renewed for an additional period upon the mutual agreement of the parties.

4. Purchase Price. The City will pay the Vendor, and the Vendor agrees to accept as complete payment for the Equipment, the sum of \$178,780.00. The City shall have the right to reject all or any Equipment provided under this Contract which does not meet the required specifications. In the event of any such rejection, the Vendor agrees to promptly remedy any and all deficiencies. No payment shall be due for any rejected Equipment until such deficiencies have been corrected to the City's satisfaction at the Vendor's sole cost and expense.

5. Delivery and Payment. Vendor shall deliver the Equipment on or before June 1, 2016. Payment shall be made by the City to the Vendor on the basis of an invoice following delivery and acceptance of the Equipment. If the Equipment is not delivered on or before June 1, 2016, the City will deduct from the purchase price \$100 for each day after June 1, 2016 until the Equipment is delivered by the Vendor and accepted by the City. Risk of loss shall

remain with the Vendor until delivery and acceptance by the City.

6. Conflict of Interest. This Contract is subject to the provisions of ARIZ. REV. STAT. § 38-511. The City may cancel this Contract without penalty or further obligations by the City or any of its departments or agencies if any person significantly involved in initiating, negotiating, securing, drafting or creating this Contract on behalf of the City or any of its departments or agencies is, at any time while the Contract or any extension of the Contract is in effect, an employee of any other party to the Contract in any capacity or a consultant to any other party of the Contract with respect to the subject matter of the Contract.

7. Gratuities. The City may, by written notice to the Vendor, cancel this Contract if it is found by the City that gratuities, in the form of economic opportunity, future employment, entertainment, gifts or otherwise, were offered or given by the Vendor or any agent or representative of the Vendor to any officer, agent or employee of the City for the purpose of securing this Contract. In the event this Contract is cancelled by the City pursuant to this provision, the City shall be entitled, in addition to any other rights and remedies, to recover or withhold from the Vendor an amount equal to 150% of the gratuity.

8. Contract Subject to Appropriation. The provisions of this Contract for payment of funds by the City shall be effective when funds are appropriated for purposes of this Contract and are actually available for payment. The City shall be the sole judge and authority in determining the availability of funds under this Contract and the City shall keep the Vendor fully informed as to the availability of funds for the Contract. The obligation of the City to make any payment pursuant to this Contract is a current expense of the City, payable exclusively from such annual appropriations, and is not a general obligation or indebtedness of the City. If the City Council fails to appropriate money sufficient to pay the amounts as set forth in this Contract during any immediately succeeding fiscal year, this Contract shall terminate at the end of then-current fiscal year and the City and the Vendor shall be relieved of any subsequent obligation under this Contract.

9. Termination.

9.1 For City's Convenience. This Contract is for the convenience of the City and, as such, may be terminated without cause after receipt by Vendor of written notice by the City.

9.2 For Cause. This Contract may be terminated by either party upon 30 days' written notice should the other party fail to substantially perform in accordance with this Contract's terms, through no fault of the party initiating the termination.

10. Amendment. This Contract may be modified only by a written amendment signed by persons duly authorized to enter into contracts on behalf of the City and the Vendor.

11. Provisions Required by Law. Each and every provision of law and any clause required by law to be in the Contract will be read and enforced as though it were included herein and, if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract will promptly be physically amended to make such insertion or correction.

12. Entire Contract; Interpretation; Parol Evidence. This Contract represents the entire agreement of the parties with respect to its subject matter, and all previous agreements, whether oral or written, entered into prior to this Contract are hereby revoked and superseded by this Contract. No representations, warranties, inducements or oral agreements have been made by any of the parties except as expressly set forth herein, or in any other contemporaneous written agreement executed for the purposes of carrying out the provisions of this Contract. This Contract shall be construed and interpreted according to its plain meaning, and no presumption shall be deemed to apply in favor of, or against the party drafting the Contract. The parties acknowledge and agree that each has had the opportunity to seek and utilize legal counsel in the drafting of, review of, and entry into this Contract.

13. Assignment. No right or interest in this Contract shall be assigned by Vendor without prior, written permission of the City signed by the City Manager and no delegation of any duty of Vendor shall be made without prior, written permission of the City signed by the City Manager. Any attempted assignment or delegation by Vendor in violation of this provision shall be a breach of this Contract by Vendor.

14. Subcontracts. No subcontract shall be entered into by the Vendor with any other party to furnish any of the material or services specified herein without the prior written approval of the City. The Vendor is responsible for performance under this Contract whether or not subcontractors are used.

15. Rights and Remedies. No provision in this Contract shall be construed, expressly or by implication, as waiver by the City of any existing or future right and/or remedy available by law in the event of any claim of default or breach of this Contract. The failure of the City to insist upon the strict performance of any term or condition of this Contract or to exercise or delay the exercise of any right or remedy provided in this Contract, or by law, or the City's acceptance of and payment for services, shall not release the Vendor from any responsibilities or obligations imposed by this Contract or by law, and shall not be deemed a waiver of any right of the City to insist upon the strict performance of this Contract.

16. Attorneys' Fees. In the event either party brings any action for any relief, declaratory or otherwise, arising out of this Contract or on account of any breach or default hereof, the prevailing party shall be entitled to receive from the other party reasonable attorneys' fees and reasonable costs and expenses, determined by the court sitting without a jury, which shall be deemed to have accrued on the commencement of such action and shall be enforced whether or not such action is prosecuted through judgment.

17. Liens. All materials or services shall be free of all liens and, if the City requests, a formal release of all liens shall be delivered to the City.

18. Offset.

18.1 Offset for Damages. In addition to all other remedies at law or equity, the City may offset from any money due to the Vendor any amounts Vendor owes to the City for damages resulting from breach or deficiencies in performance or breach of any obligation under this Contract.

18.2 Offset for Delinquent Fees or Taxes. The City may offset from any money due to the Vendor any amounts Vendor owes to the City for delinquent fees, transaction privilege taxes and property taxes, including any interest or penalties.

19. Notices and Requests. Any notice or other communication required or permitted to be given under this Contract shall be in writing and shall be deemed to have been duly given if (a) delivered to the party at the address set forth below, (b) deposited in the U.S. Mail, registered or certified, return receipt requested, to the address set forth below, (c) given to a recognized and reputable overnight delivery service, to the address set forth below or (d) delivered by facsimile transmission to the number set forth below:

If to the City: City of Bisbee
 118 Arizona Street
 Bisbee, Arizona 85603
 Facsimile: (520) 432-6069
 Attn: _____

With copy to: Britt Hanson
 City Attorney
 118 Arizona Street
 Bisbee, Arizona 85603
 Facsimile: (520) 432-8778

If to Vendor: Western States Fire Equipment
 9899 W. Roosevelt Street
 Tolleson, AZ 85353
 Facsimile: 623-907-6403
 Attn: Chad Horne

or at such other address, and to the attention of such other person or officer, as any party may designate in writing by notice duly given pursuant to this subsection. Notices shall be deemed received (a) when delivered to the party, (b) three business days after being placed in the U.S. Mail, properly addressed, with sufficient postage, (c) the following business day after being given to a recognized overnight delivery service, with the person giving the notice paying all required charges and instructing the delivery service to deliver on the following business day, or (d) when received by facsimile transmission during the normal business hours of the recipient. If a copy of a notice is also given to a party's counsel or other recipient, the provisions above governing the date on which a notice is deemed to have been received by a party shall mean and refer to the date on which the party, and not its counsel or other recipient to which a copy of the notice may be sent, is deemed to have received the notice.

20. E-verify Requirements. To the extent applicable under ARIZ. REV. STAT. § 41-4401, the Vendor and its subcontractors warrant compliance with all federal immigration laws and regulations that relate to their employees and compliance with the E-verify requirements

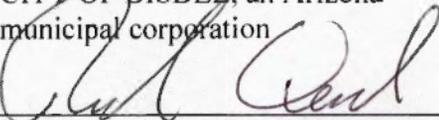
under ARIZ. REV. STAT. § 23-214(A). Vendor's or its subcontractor's failure to comply with such warranty shall be deemed a material breach of this Contract and may result in the termination of this Contract by the City.

21. Conflicting Terms. In the event of any inconsistency, conflict or ambiguity among the Contract, the Specifications, Scope of Work or Requirements and the Vendor's Proposal, the documents shall govern in the order listed herein.

IN WITNESS WHEREOF, the parties hereto have executed this instrument as of the date and year first set forth above.

"City"

CITY OF BISBEE, an Arizona
municipal corporation

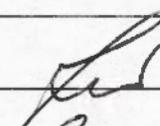


Ron Oertle, Mayor

"Vendor"

ROSCHEBAUER SOUTH DAKOTA

a(n) _____

By:  _____

Name: Cihan Horner

Title: SALES REPRESENTATIVE

ATTEST:



Ashlee Coronado, City Clerk

APPROVED AS TO FORM:



Britt Hanson, City Attorney

**NOTICE OF SOLICITATION
UNIFORM INSTRUCTIONS FOR PROPOSALS
CITY OF BISBEE**

FIRE TRUCK/ PUMPER

1. Introduction

The City of Bisbee is seeking sealed bids and proposals ("Proposals") in the manner specified herein from qualified vendors ("Vendor") capable of providing the following goods and/or services:

The City of Bisbee is accepting sealed bids and proposals for a Fire Truck/Pumper

2. SCHEDULE OF EVENTS

Submittal Due Date: December 15, 2015 at 4:00 P.M.
(Arizona, MST)

Submittal Location: City Clerk, City of Bisbee
118 Arizona Street
Bisbee, AZ 85603

Inquires may be directed to: Marc Burneleit
Fire Chief
192 Highway 92
Bisbee, AZ 85603
(520) 432-4110

3. Nature of the Purchase

The specifications and descriptions of the work and/or materials required are described in the attached "Specifications, Scope of Work or Requirements" that accompanies this Notice.

4. Preparation of Proposal

4.1 It is the responsibility of the Vendor to examine the entirety of this Notice of Solicitation and to seek clarification of any requirement that may not be clear. This Notice of Solicitation includes the City of Bisbee's standard Purchase Contract, which the successful bidder will be required to execute.

4.2 The City will not reimburse any costs incurred in developing, presenting or providing the Proposal. All materials and documents submitted in response become the property of the City and will not be returned.

4.3 All Proposals submitted to the City become a public record. If the Vendor believes that any information included in a Proposal should remain confidential, the Vendor must specifically identify that information and its reasons. In the event of any public request for this

information, the City will use its best reasonable efforts to provide the Vendor with notice of this request and an opportunity to obtain a court order, at the Vendor's sole expense, protecting this information from release prior to making it available.

4.4 The specifications included in this Notice of Solicitation are the minimum level required. All Proposals submitted must be for products or services that meet or exceed the minimum level of all such specifications.

4.5 If brand names or specific products are identified in the specifications, the Vendor may propose substantially equivalent alternatives. For any such Proposal, the Vendor must submit technical literature or detailed production information sufficient to allow the City to evaluate the nature of the proposed product.

4.6 Prices shall be submitted on a per unit basis, by line item, when applicable. The prices offered should not include applicable state and local taxes. The City will reimburse the Vendor for applicable transaction or sales taxes, provided that they are separately identified in any invoice. The Vendor will be responsible for the payment of all applicable taxes.

4.7 Any exceptions that are included with the Proposal shall be submitted in a clearly identified separate statement by which the Vendor specifically identifies the precise terms to which any exception is made and describes any alternative offer, if applicable. Any exception that is not clearly identified will be without force and effect. An attached preprinted form of contract or the Vendor's standard terms will not be considered to be a specific statement of exception.

5. Submission of the Proposal

5.1 **Two copies** of the Sealed Proposals must be in the actual possession of the City Clerk on or prior to the exact time and date indicated in the Schedule of Events. Late proposals will not be considered.

5.2 Sealed Proposals must be submitted in a sealed envelope or container with the following information clearly indicated on the outside:

- a. Name of the Solicitation, as indicated by the City.
- b. Name and address of the Vendor

5.3 Proposals shall be submitted in writing, by a paper document that is printed, typed or in ink. Proposals submitted directly to the City by electronic means, by facsimile, electronic mail, or otherwise, shall not be accepted. Any substitute for any document forms provided with this Notice of Solicitation must be legible and must contain the same information requested by any such form.

5.4 Proposals may be withdrawn upon the submission of written, signed request submitted by the Vendor prior to the due date and time. Proposals may not be amended or withdrawn after the due date and time.

6. Award of the Contract

6.1 The City reserves the right to waive any immaterial defect or informality in a Proposal; to reject any or all Proposals or portions thereof; to reissue this Notice of Solicitation; and to accept a Proposal on a partial basis, if in the best interests of the City.

6.2 Unless otherwise stated, the Contract will be awarded to the lowest responsive, responsible bidder who has demonstrated the ability to perform as required. Factors that will be considered in making this award include technical capability of the Vendor, performance history, demonstrated availability of the necessary people and equipment, price and timeliness of the performance.

7. Certification

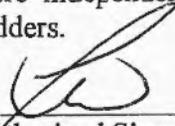
7.1 By signing and submitting a Proposal, the Vendor certifies that the Proposal did not involve any collusion or other anti-competitive practice; that the Vendor will not discriminate against any employee, applicant, or customer in violation of applicable state and federal law; and that the Vendor has not given, offered to give and will not give any economic opportunity, future employment, gift, loan, gratuity, trip, favor or discount to any City employee or official in connection with the Proposal.

7.2 The Vendor further certifies that the individual signing the Proposal has the authority to make a binding legal commitment on behalf of the Vendor to perform and deliver everything that is required in connection with the Proposal. Unless otherwise stated herein, the Proposal shall be effective for a period of thirty (30) days.

PROPOSAL

TO THE CITY OF BISBEE:

The undersigned hereby offers the following Proposal and agrees to furnish the materials and/ or services requested in compliance with all of the terms, conditions, specifications, and other descriptions of the work associated with this Notice of Solicitation. The Vendor certifies that he or she has read, understands and will fully and faithfully comply with the Notice of Solicitation, its attachments and any referenced documents. The Vendor also certifies that the prices offered were independently developed without consultation with any of the other bids or potential bidders.



Authorized Signature

12/9/15

Date

CHAD HORNE / SALES ENGINEER

Printed Name and Title

Company Name WESTERN STATES FIRE EQUIPMENT

Address 6899 W ROOSEVELT ST.

City, State and Zip Code TOLLESON, AZ 85353

Telephone Number(s) 602-705-5101

Company's Fax Number 623-907-6403

Email Address CHORNE@WSFIREEQWP.COM

[ATTACH PROPOSAL TO THIS PAGE]

**ACCEPTANCE OF PROPOSAL
NOTICE OF AWARD**

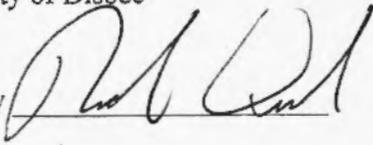
The Proposal is hereby accepted by the City of Bisbee. This document shall also constitute notice of award of the Contract to the Vendor.

The Vendor is bound to provide the materials and/or services identified in the Proposal, subject to all terms, conditions, specifications, amendments, and other requirements set forth in this Notice of Solicitation and the Contract.

The Vendor shall not commence any billable work or provide any materials or services under this document until the Vendor and the City execute the Contract and the Vendor receives a formal notice to proceed from the City of Bisbee.

City of Bisbee

By



Its:

Mayer

Date: 02-04-16

SPECIFICATIONS, SCOPE OF WORK OR REQUIREMENTS

See following page.

The City of Bisbee is accepting bids for a 1250 GPM 750 gallon tank fire truck/pumper. This truck can be either a new or a demo model.

The City of Bisbee reserves the right to reject any or all bids and to accept any bid presented which meets or exceeds these specifications and which the City deems to be in the best interest of the Bisbee Fire Department.

The Fire Truck Pumper shall not exceed a maximum length of 24 feet. * PLEASE SEE EXCEPTION LETTER

The Fire Truck Pumper shall include the following:

1. Roll Up Compartment Doors
2. Monitor/Deck Gun
3. 2- 1 3/4 Inch Cross Lays

Add alternates:

1. 12 Volt Scene Lighting
2. Stortz Intake Valves
3. Paint the entire unit red to match existing color, add a 4" blue reflective beltline stripe and a 3/4" white reflective pinstripe.
4. Bisbee Fire Department identification lettering

Any bid must warrant the Fire Truck Pumper. The Fire Truck Pumper must be delivered on or before June 1, 2016. Failure to deliver by that date shall result in a penalty of \$100/day, to be deducted from the purchase price.



Bid Price and Delivery Schedule For

******* City of Bisbee Fire Department *******

Rosenbauer South Dakota LLC is pleased to provide this bid proposal. The proposed apparatus has been tailored around the requirements of the fire service industry and we are confident that our proposal will meet and exceed the needs of the department. The proposed apparatus will be constructed utilizing only the highest quality materials and workmanship available in the industry. The apparatus will provide the upmost firefighter safety and efficiency on the fire ground along with extended life and lower maintenance cost throughout the life of the vehicle.

**One (1) Rosenbauer Top-Mount Pumper job #17037: \$178,780.00 plus tax
On a Freightliner M2-106 2-door chassis**

**** Please note the unit proposed is a “stock” unit and subject to prior sale**

***** Price includes a final inspection trip to the factory for one department representative**

The specifications herein contained shall form a part of the final contract, and are subject to changes desired by the purchaser, provided such alterations are interlined prior to the acceptance by the company of the order to purchase, and are provided such alterations do not materially affect the cost of the construction of the apparatus.

The proposal for fire apparatus conforms with all Federal Department of Transportation (DOT) rules and regulations in effect at the time of bid, and with all National Fire Protection Association (NFPA) guidelines for automotive fire apparatus as published at the time of bid, except as modified by customer specifications. Any increased costs incurred by the first party because of future changes in or additions to said DOT or NFPA standards will be passed along to the customers as an addition to the price set forth above.

Contract Terms

Delivery:

The proposed stock unit is due to be completed March 2016. If an award is made quickly there is an opportunity to make some changes to the unit if any are desired/needed.

Price Terms:

This offer shall remain valid for thirty, (30) calendar days from the quotation submittal date of December 15, 2105

Options:

Add (1) pair Focus FCA-D15, 150-watt pull-up scene lights = \$1,800.00
Add (2) Akron Black Max 7980 PIV intake valves = \$3,600.00
Add 1" pinstripes to 4" stripe = \$209.00 (4" stripe already included in price)
Add (75) letters for department verbiage = \$863.00

If the department chooses they have the option to drive the unit back themselves. A \$2,500.00 credit would be applied to the final sell price of the unit. This option would require that the unit be paid in full before leaving the plant and insured by the department.

Payment:

Contract payment of one-hundred percent (100%) of the purchase price shall be paid upon delivery and acceptance of the completed unit.

I want to thank the City of Bisbee for the opportunity to serve the needs of the department.

Sincerely

Chad Horne

Chad Horne

Rosenbauer America

(602) 705-5101



01-06-0500

CENTER OF GRAVITY

The apparatus, prior to acceptance, will be required to meet the vehicle stability of the applicable NFPA Automotive Fire Apparatus Standard.

A calculated center of gravity shall be provided. The calculated or measured center of gravity (CG) shall be no higher than 80-percent of the rear axle track width.

01-16-0150

BUMPER TO BUMPER WARRANTY

We warrant each new motorized fire apparatus manufactured by ROSENBAUER AMERICA, LLC for a period of ONE YEAR from the date of delivery, except for chassis and other components noted herein.

Under this warranty we agree to furnish any parts to replace those that have failed due to defective material or workmanship where there is no indication of abuse, neglect, unusual or other than normal service providing that such parts are, at the option of ROSENBAUER AMERICA, LLC, made available for our inspection at our request, returned to our factory or other location designated by us with transportation prepaid within thirty days after the date of failure or within one year from the date of delivery of the apparatus to the original purchaser, whichever occurs first, and inspection indicates the failure was attributed to defective material or workmanship.

The warranty on the chassis and chassis supplied components, 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.

This warranty will not apply to any fire apparatus that has been repaired or altered outside our factory in any way, which in our opinion might affect its stability or reliability.

This warranty shall not apply to those items that are usually considered normal maintenance and upkeep services: including, but not limited to, normal lubrication or proper adjustment of minor auxiliary pumps or reels.

This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on our part. We neither assume nor authorize any person to assume for us any liability in connection with the sales of our apparatus unless made in writing by ROSENBAUER AMERICA, LLC.



01-19-0250

ALUMINUM BODY WARRANTY - FIVE YEAR

Rosenbauer America, LLC warrants to the original purchaser only, that the all aluminum body, fabricated by Rosenbauer America, LLC, under normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of FIVE (5) years.

This warranty does not apply to the following items that are covered by a separate warranty: paint finish, hardware, moldings, and other accessories attached to this body. In addition, this warranty does not apply to any part or accessory manufactured by others and attached to this body.

ROSENBAUER AMERICA, LLC MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE ALUMINUM BODY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND HEREBY DISCLAIMED.

Rosenbauer America, LLC will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If Rosenbauer America, LLC elects to repair this body, the extent of such repair shall be determined solely by Rosenbauer America, LLC, and shall be performed solely at the Rosenbauer America, LLC factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

Rosenbauer America, LLC will not be liable for damages and under no circumstances will its liability exceed the price for a defective body. The remedies set forth herein are exclusive and in substitution for all other remedies to which the purchaser would otherwise be entitled.

Rosenbauer America, LLC will be given a reasonable opportunity to investigate all claims. The purchaser must commence any action arising out of, based upon or relating to agreement or the breach hereof, within twelve months from the date the cause of the action occurred.

Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.

01-20-0250

PAINT WARRANTY FIVE YEAR

The PPG paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of FIVE (5) years beginning the day the vehicle is delivered to the purchaser.



The full apparatus body, manufactured and painted by Rosenbauer America, LLC, shall be covered for the following paint failures as outlined on the guarantee certificate:

- Peeling or delaminating of the topcoat and/or other layers of paint.
- Cracking or checking.
- Loss of gloss caused by cracking, checking, or hazing.
- Any paint failure caused by defective PPG Fleet Finishes, which are covered by this guarantee.

All guarantee exclusions, limitations, and methods of claims are covered in the full certificate provided to the original purchaser.

Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.

09-01-0210

FREIGHTLINER M2 CONVENTIONAL CHASSIS

A Freightliner chassis shall be supplied per attached specifications.

09-01-4200

Chassis Cab Step Trim Pkg 2-Dr Comm Chassis

09-01-4202

CAB STEPS

The existing cab steps on the left side of the commercial 2 door chassis shall be covered with slip resistant aluminum tread plate for compliance to applicable NFPA standards.

09-01-4204

CAB STEPS

The existing cab steps on the right side of the commercial 2 door chassis shall be covered with slip resistant aluminum tread plate for compliance to applicable NFPA standards.

09-01-6100

HORIZONTAL CHASSIS EXHAUST

The chassis exhaust system shall be extended to the front of the right rear wheel.

10-02-1100 10

FLUID DATA PLAQUE

One (1) fluid data plaque containing required information shall be provided based on the applicable components for this apparatus, compliant with NFPA Standards:

- Engine oil
- Engine coolant
- Chassis transmission fluid



- Drive axle lubricant
- Power steering fluid
- Pump transmission lubrication fluid
- Other NFPA applicable fluid levels or data as required

Location shall be in the driver's compartment or on driver's door.

10-02-1200 10

DATA & WARNING LABELS

HEIGHT LENGTH & WEIGHT

A highly visible label indicating the overall height, length, and weight of the vehicle shall be installed in the cab dash area.

CAB SEATING POSITION LIMITS

The label shall also include 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.

10-02-1300 10

NO RIDE LABEL

One (1) "NO RIDERS" label shall be applied on the vehicle at the rear step area or other applicable areas. The label shall warn personnel that riding in or on these areas, while the vehicle is in motion is prohibited.

10-02-2100 10

CAB SEATING POSITION LIMITS

One (1) label shall be installed in the cab to indicate seating positions for firefighters. A weight allowance of 250 pounds for each shall be factored into the gross vehicle weight rating of the chassis.

10-02-2500 10

HELMET WARNING TAG

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.

10-03-6010

REAR TOWING PROVISIONS

There shall be two tow eyes furnished under the rear of the body and attached directly to each chassis frame rail. There shall be a reinforcement spreader bar connecting the two tow eyes. Tow eyes are to be constructed of 3/8" plate steel with a 4" I.D. hole, large enough for passing through a tow chain end hook.



80-43-2400

The tow plates shall be painted black.

10-06-1600 10

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.

19-03-1000

DARLEY PSM SINGLE STAGE PUMP

A Darley model PSM single stage split-drive shaft driven fire pump shall be provided and installed.

The pump shall be midship mounted and designed to operate through an integral transmission, including a means for power selectivity to the driving axle or to the pump. The pump shall be driven by a driveline from the chassis transmission. The engine, transmission and driveline components shall provide sufficient horsepower and RPM to enable the pump to meet and exceed its rated performance.

The pump shall contain a cored heating jacket feature that, if selected, can be connected into the vehicle antifreeze system to protect the pump from freezing in cold climates, and to help reject engine heat from engine coolant, providing longer life for the engine.

Pump Shaft

The pump shaft shall be precision ground stainless steel with long wearing Chromium Oxide hard coating under the packing glands with a hardness level of Rockwell C72. The shaft shall be splined to receive broached impeller hubs, for greater resistance to wear, torsion vibration, and torque imposed by engine, as well as ease of maintenance and repair.

The bearings provided shall be heavy duty, deep groove, radial type ball bearings. Sleeve bearings on any portion of the pump or transmission shall be prohibited due to wear, deflection, and alignment concerns. The bearings shall be protected at all openings from road dirt and water splash with oil seals and water slingers.

Impeller

The impeller shall be a high strength bronze alloy of mixed flow design, splined to the pump shaft for precision fit, durability, and ease of maintenance. Impeller shall be vacuum cast designed for maximum lift and highest capacity. The seal rings shall be renewable, double labyrinth, wrap around bronze type.



Impeller shaft oil seals shall be constructed to be free from steel components except for the internal lip spring. The impeller shaft oil seals shall carry a lifetime warranty against damage from corrosion from water and other fire-fighting fluids.

Pump Transmission

The transmission case shall be heavy duty cast iron. A magnetic drain plug shall be provided. Transmission case shall include a dip stick for checking oil level. Transmission case interior shall be powder coated to reduce oil contamination. Transmission case shall be equipped with a removable plate for quick inspection of gears, shafts, and bearings inside the transmission.

The pump drive shaft shall be precision ground, heat treated alloy steel, with a minimum 2-1/2" x 10" spline. The net through-torque rating of the gearbox shall exceed 19,000 foot pounds. Gears shall be helical design, and shall be precision ground for quiet operation and extended life. The gears shall be manufactured from alloy steel and carburized for surface hardness and strength.

The pump clutch gear shall be a heat treated alloy-steel splined spur gear to engage either the pump drive gear or the truck drive shaft gear, and shall have bullet-nosed teeth to reduce the possibility of a butt-tooth condition. The pump clutch gear shall be separate from the main drive gear in order to maintain the greatest precision for driving the pump gear train. The pump transmission shall require no further lubrication beyond that provided by the intrinsic action of the gears, to reduce the likelihood of failure due to loss of auxiliary lubrication.

Driveline Installation

The chassis drivelines shall be sized for intended application and torque requirements. The installation shall comply with driveline manufacturer's guidelines.

Manuals

Two (2) manuals covering the fire pump transmission and fire pump shall be provided with the apparatus.

01-17-0150

FIRE PUMP WARRANTY

A six (6) year warranty for the Darley fire pump shall be provided.



19-03-1050

1250 GPM FIRE PUMP SPECIFICATIONS

The centrifugal type fire pump shall be a Darley model PSM midship mounted with a rated capacity of 1250 GPM. The pump shall meet NFPA 1901 requirements.

The pump shall be certified to meet the following deliveries:

- 250 GPM @ 150 PSI
- 1250 GPM @ 165 PSI
- 875 GPM @ 200 PSI
- 625 GPM @ 250 PSI

22-03-1650

LEFT SIDE -- 6" UNGATED INTAKE

One (1) 6" un gated suction intake shall be installed on the left side pump panel to supply the fire pump from an external water supply. The threads shall be 6" NST. The intake shall be provided with a removable screen.

22-41-6000

One (1) 6" chrome plated cap shall be provided. The threads shall be NST and the cap shall be equipped long handles.

22-03-2650

RIGHT SIDE -- 6" UNGATED INTAKE

One (1) 6" un gated suction intake shall be installed on the right side pump panel to supply the fire pump from an external water supply. The intake shall be provided with a removable screen.

22-41-6000

One (1) 6" chrome plated cap shall be provided. The threads shall be NST and the cap shall be equipped long handles.

27-10-6000

PRESSURE GOVERNOR AND ENGINE-PUMP MONITORING

One (1) Fire Research InControl series TGA300 pressure governor and monitoring display kit shall be installed. The kit shall include a control module, intake pressure sensor, discharge pressure sensor, and cables. The control module case shall be waterproof and have dimensions not to exceed 5 1/2" high by 10 1/2" wide by 2" deep. 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.

The following continuous displays shall be provided:

- Pump discharge; shown with four daylight bright LED digits more than 1/2" high
- Pump Intake; shown with four daylight bright LED digits more than 1/2" high
- Pressure / RPM setting; shown on a dot matrix message display
- Pressure and RPM operating mode LEDs
- Throttle ready LED

- 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.

The 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. All LED intensity shall be automatically adjusted for day and night time operation.

The program shall store the accumulated operating hours for the pump and engine to be displayed with the push of a button. It shall monitor inputs and support audible and visual warning alarms for the following conditions:

- High Battery Voltage
- Low Battery Voltage (Engine Off)
- Low Battery Voltage (Engine Running)
- High Transmission Temperature
- Low Engine Oil Pressure
- High Engine Coolant Temperature
- Out of Water (visual alarm only)
- No Engine Response (visual alarm only).

The program features shall be accessed via push buttons located on the front of the control panel. There shall be an USB port located at the rear of the control module to upload future firmware enhancements.

Inputs to the control panel from the pump discharge and intake pressure sensors shall be electrical. The discharge pressure display shall show pressures from 0 to 600 psi. The intake pressure display shall show pressures from -30 in. Hg to 600 psi.

The governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A throttle ready LED shall light when the interlock signal is recognized. The governor shall start in pressure mode and set the engine RPM to idle. In pressure mode the governor shall automatically regulate the discharge pressure at the level set by the operator. In RPM mode the governor shall maintain the engine RPM at the level set by the operator except in the event of a discharge pressure increase. The governor shall limit a discharge pressure increase in RPM mode to a maximum of 30 psi. Other safety features shall include recognition of no water conditions with an automatic programmed response and a push button to return the engine to idle.



The pressure governor, monitoring and master pressure display shall be programmed to interface with a specific engine.

20-05-2100

ADJUSTABLE INJECTION STYLE PACKING SPECIFICATION

The stuffing box is to be a single-plunger injection style, utilizing a plastallic, graphite composite packing that equalizes pressure around the shaft.

Packing renewal is performed by removing the plunger and inserting a pellet form of packing as needed.

Replacement of packing, or adjustment, should be able to be made within 15 minutes. This type of packing gland is desired in order to minimize friction, heat generation and apparatus down-time. Shaft seals or rope/braid-type packing gland design do not meet this requirement.

20-05-3150

ELECTRIC/PNEUMATIC PUMP SHIFT SPECIFICATIONS

An air powered pump shift shall be installed in the cab driver's area where not subject to accidental engagement. The pump shift shall be air operated and shall incorporate an air cylinder with an electric actuated switch to shift from road to pump and back. The apparatus pump shift shall be engaged only when apparatus is in a stationary position and the parking brake is engaged.

The following indicator lights shall be included with pump shift.

1. A green indicator light, labeled "PUMP ENGAGED" shall indicate pump shift has successfully been completed.
2. A green indicator light, labeled "OK TO PUMP" shall indicate the chassis transmission is in pump gear and parking brake is engaged.
3. Pump shift and interlocks shall comply with applicable sections of NFPA standards.
4. The pump shift shall have an instruction label and nameplate to indicate function and proper operation.

20-05-5150

ELECTRIC PRIMER SPECIFICATIONS

A 12 volt electrically driven positive displacement fire pump primer system shall be installed. The priming pump shall be constructed of heat treated aluminum and hard coat anodized and shall not use oil in the operation. The system shall perform in compliance to applicable NFPA standards.



A single, push-pull control shall be located on the pump operator's panel with a "Pull to Prime - Push to Close" label.

20-30-5100

FIRE PUMP SPLIT SHAFT DRIVESHAFTS AND INSTALLATION

The mid-ship split shaft fire pump shall be installed and shall include installation of the fire pump, modification and/or fabrication of new drivelines and all pump-mounting brackets. The drive shaft(s) shall be spin balanced prior to final installation.

20-31-6100

FIRE PUMP COOLING

The fire pump shall be equipped with 3/8" cooling line from the pump to the water tank. This re-circulation line shall be controlled by a pump panel control valve with nameplate label noting it as the "fire pump bypass cooler".

20-31-6200

CHASSIS ENGINE HEAT EXCHANGER COOLING SYSTEM

The apparatus shall be equipped with a heat exchanger for supplementary chassis engine cooling during fire pump operations. A manually opened valve, mounted at the operator's panel, shall direct water from the fire pump to the heat exchanger that is mounted in the engine radiator cooling hose. The system shall provide cooling water from the fire pump to circulate around the engine radiator coolant without mixing or coming in direct contact with the engine coolant. The complete installation shall be done by the fire apparatus manufacturer.

A nameplate label shall be installed on the pump panel noting "engine cooling system" with "on-off" opening directions noted.

20-31-1600

UNDERWRITERS LABORATORIES FIRE PUMP TEST

The pump shall undergo an Underwriters Laboratories Incorporated test per applicable sections of NFPA standards, prior to delivery of the completed apparatus.

The UL acceptance certificate shall be furnished with the apparatus on delivery.

20-31-1550

FIRE PUMP TEST LABEL

A fire pump performance and rating label shall be installed on the fire apparatus pump panel. The label shall denote levels of pump performance and testing completed at factory. These shall include GPM at net pump pressure, RPM at such level, and other pertinent data as required by applicable NFPA standards. In addition, the pressure control device, tank to pump flow tests, and other required testing shall be completed.

In addition, the entire pump, suction and discharge passages shall be hydrostatically tested to a pressure as required by applicable NFPA standards. The pump shall be fully tested at the pump



manufacturer's factory to the performance specifications as outlined by applicable NFPA standards. Pump shall be free from objectionable pulsation and vibration.

If applicable, the fire pump shall be tested and rated as follows:

- 100% of rated capacity at 150 pounds net pressure.
- 70% of rated capacity at 200 pounds net pressure.
- 50% of rated capacity at 250 pounds net pressure.
- 100% or rated capacity at 165 pounds net pressure.

21-00-0250

STAINLESS STEEL PUMP PLUMBING

01-17-1100

STAINLESS STEEL PLUMBING WARRANTY

Subject to the provisions, limitations and conditions set forth in this warranty, Rosenbauer America, LLC (hereby referred to as "seller"), hereby warrants to each original purchaser only that stainless steel plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system shall be warranted for a period of ten (10) years. This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of the delivery and shall terminate upon the transfer of possession or ownership by original purchaser.

This warranty is conditioned upon normal use and reasonable maintenance of such plumbing; prompt written notice of all defects to seller or one of the seller's then authorized dealers in the area; no repair or additions there to except by seller or authorized by it; said defect not resulting from misuse, negligence, accident, remount, overloading beyond applicable weight rating by customer or third parties. If any such conditions are not complied with, this warranty shall become void and unenforceable.

Should repairs become necessary under the terms or the warranty, the extent of that repair shall be determined solely by the seller and shall be performed solely at Rosenbauer America, LLC or a repair facility designated by the seller. The expense of any transportation to or from such repair facility shall be that of the purchaser and is not an item covered by this warranty.

Seller reserves the unrestricted right at any time from time to time to make changes in the design of and/or improvements on its products without thereby imposing any obligation on itself to make corresponding changes or improvements in or on its products theretofore manufactured.

EXCLUSIONS AND LIMITATIONS: THIS MANUFACTURER'S WARRANTY IS PROVIDED IN PLACE OF ANY AND ALL OTHER REPRESENTATIONS OR IMPLIED WARRANTIES. NO PERSON IS AUTHORIZED TO MAKE ANY REPRESENTATIONS OR WARRANTY ON BEHALF OF ROSENBAUER AMERICA, LLC OR ANY OF ITS

DISTRIBUTORS OTHER THAN SET FORTH IN THIS MANUFACTURER'S WARRANTY. YOUR RIGHT TO SERVICE AND REPLACEMENT OF PARTS ON THE TERMS EXPRESSLY SET FORTH HERIN ARE YOUR EXCLUSIVE REMEDIES AND NEITHER THE MANUFACTURER NOR ANY OF ITS DISTRIBUTORS SHALL BE LIABLE FOR DAMAGES, WHETHER ORDINARY, INCIDENTAL OR CONSEQUENTIAL.

21-00-1100

PUMP PLUMBING SYSTEM

The fire pump plumbing system shall be of rigid or flexible piping with stainless steel fittings. Victaulic couplings shall be installed to permit flexing of the plumbing system and allow for quick removal of piping or valves for service. Flexible hose couplings shall be threaded stainless steel or Victaulic connections.

The fire pump and plumbing shall be hydrostatically tested in compliance to applicable sections of NFPA standards, with test results submit with the delivery documentation.

21-01-5650

STAINLESS STEEL INTAKE MANIFOLD

The suction manifold assembly shall be fabricated with Schedule #10 type 304 stainless steel. All threaded fittings shall be a minimum of Schedule 10 stainless steel. The suction manifold assembly shall have radiused sweep elbows to minimize water turbulence into the suction volute. The suction manifold shall be welded and pressure tested prior to installation. The stainless steel manifold assembly shall be attached to the pump intake volute with a heavy-duty, flexible Victaulic coupling.

The stainless steel manifold assembly shall have a ten (10) year warranty.

21-01-6650

STAINLESS STEEL DISCHARGE MANIFOLD

The discharge manifold assembly shall be fabricated with minimum of Schedule #10 Type 304 stainless steel. All threaded fittings shall be a minimum of Schedule #40 stainless steel. The discharge manifold assembly shall have radiused sweep elbows to minimize water turbulence. The manifold shall be welded and pressure tested prior to installation. The stainless steel manifold inlet shall be attached to the pump discharge and have additional brackets as required to support the discharge manifold, valves and related components.

The stainless steel manifold assembly shall have a ten (10) year warranty.

21-00-2050

PUMP ANODES

There shall be sacrificial, zinc anodes in the pump steamer ports which shall protect the pump and piping from electrolysis. These anodes shall also act as screens.

21-01-0250

FIRE PUMP MASTER DRAIN

The fire pump plumbing system and fire pump shall be piped to a single push-pull type master pump drain assembly.

ADDITIONAL LOW POINT DRAINS

The plumbing system shall be equipped with additional low point manually operated drain valves to allow total draining of the fire pump plumbing system. These valves shall be accessible from the side of the vehicle and labeled.

21-01-7300

PLUMBING SYSTEM

The plumbing system shall be unpainted.

21-01-8100

HOSE THREADS

The hose threads shall be National Standard Thread (NST) on all base threads on the apparatus intakes and discharges.

22-52-0100

WATER TANK TO PUMP LINE

One (1) 3" water tank to fire pump line shall be provided with a full flow quarter turn ball valve, 4" piping, and with flex hose and stainless steel hose clamps. The tank to pump line shall be equipped with a check valve to prevent pressurization of the water tank.

The line shall be flow tested during the fire pump testing and shall meet applicable requirements of NFPA standards.

22-55-2360

The valve shall be equipped with one (1) manually operated, swing-type control at the top mount pump panel console. The control handle shall be equipped with quarter-turn locking feature. The valve shall be equipped with a color-coded name plate.

24-61-1860

The specified valve shall be a three-inch (3") valve with a stainless ball.

23-02-2300

FIRE PUMP TO WATER TANK FILL LINE

One (1) 2" fire pump to water tank refill and pump bypass cooler line shall be provided. The valve shall be a full flow quarter turn ball valve with 2" piping and flex hose to tank. The valve control handle shall have a nameplate located near the valve control.

24-51-1250

One (1) manually operated swing type valve, with control at the top mount pump panel console shall be installed on the specified discharge. The up and down movement control handle shall be



equipped with quarter turn locking feature. The valve shall be equipped color-coded nameplate label.

24-61-1820

The specified valve shall be a two-inch (2") valve with a stainless ball.

22-09-1100

LEFT SIDE -- 2-1/2" GATED INTAKE

One (1) 2-1/2" gated suction intake shall be installed on the left side of the pump panel to supply the fire pump from an external water supply. The control valve shall be a quarter turn ball valve and shall have 2-1/2" NST female thread of chrome plated brass.

21-01-2502

An Innovative Controls 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a recessed ID label provision. The handle shall lift to open and push down to close.

22-41-1150

One (1) 2-1/2" chrome plated plug shall be provided. The threads shall be NST and the plug shall be equipped rocker lugs and chain or cable securement.

22-55-2150

The valve shall be equipped with one (1) manually operated swing type manual control located adjacent the intake. The valve shall be equipped a color-coded name plate.

23-06-2250

TWO (2) 1-1/2" CROSSLAY DISCHARGES

Two (2) pre-connect 1-3/4" hose crosslays shall be installed over pump enclosure, with quarter turn 2" diameter ball valves. The outlets shall be a 2" NPT female swivel x 1-1/2" male NST hose threads.

The crosslay hosebeds shall have smooth aluminum sides. The hosebed decking shall be constructed with slots integrated into the hosebed floor.

Each hosebed shall provide for a minimum capacity of 200 feet of 1-3/4" diameter double jacket hose with nozzle, for hose provided by the fire department.

21-01-2550

An Innovative Controls 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a recessed ID label provision. The handle shall lift, to open and push down, to close.

24-51-1250

Two (2) manually operated swing type valve, with control at the top mount pump panel console shall be installed on the specified discharge. The up and down movement control handle shall be



equipped with quarter turn locking feature. The valve shall be equipped color-coded nameplate label.

24-61-1820

The specified valve shall be a two-inch (2") valve with a stainless ball.

27-02-1150

Two (2) 2-1/2" discharge pressure gauge (30"-0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.

23-08-3150

CROSSLAY HINGED COVER

The crosslay hosebed shall be equipped with a single aluminum diamond plate hinged cover. The cover shall have rubber bumpers, latching devices, and lift up handle on each end of the cover.

23-08-4150

ROLLERS FOR CROSSLAY HOSE BED

The crosslay hosebed shall be equipped stainless steel "U" shaped roller system, one on each end of the hosebed.

23-09-4200

LEFT SIDE PUMP PANEL -- 2-1/2" DISCHARGE

One (1) 2-1/2" discharge shall be installed on the left side pump panel area and shall be controlled by a quarter turn ball valve. The discharge shall have 2-1/2" NST male hose threads and a chrome plated elbow with rocker lugs with 2-1/2" NST swivel female x 2-1/2" NST male hose threads. A color coded nameplate label shall be provided adjacent the control handle.

21-01-2550

An Innovative Controls 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a recessed ID label provision. The handle shall lift, to open and push down, to close.

24-02-3200

One (1) chrome plated elbow with rocker lugs shall be provided with 2-1/2" NST swivel female x 2-1/2" NST male hose threads.

24-03-3400

One (1) 2-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.

24-51-1250

One (1) manually operated swing type valve, with control at the top mount pump panel console shall be installed on the specified discharge. The up and down movement control handle shall be equipped with quarter turn locking feature. The valve shall be equipped color-coded nameplate label.

24-61-1850

The specified valve shall be a two and one half-inch (2-1/2") valve with a stainless ball.

10174-0004



27-02-1150

One (1) 2-1/2" discharge pressure gauge (30"-0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.

23-10-4200

RIGHT SIDE PUMP PANEL -- 2-1/2" DISCHARGE

One (1) 2-1/2" discharge shall be installed on the right side pump panel area and shall be controlled by a quarter turn ball valve. The outlet shall have 2-1/2" NH male hose threads. A chrome plated elbow with rocker lugs shall be provided with 2-1/2" NST swivel female x 2-1/2" NH male hose threads. A color coded nameplate label shall be provided adjacent the control handle.

21-01-2550

An Innovative Controls 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a recessed ID label provision. The handle shall lift, to open and push down, to close.

24-02-3200

One (1) chrome plated elbow with rocker lugs shall be provided with 2-1/2" NST swivel female x 2-1/2" NST male hose threads.

24-03-3400

One (1) 2-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.

24-51-1250

One (1) manually operated swing type valve, with control at the top mount pump panel console shall be installed on the specified discharge. The up and down movement control handle shall be equipped with quarter turn locking feature. The valve shall be equipped color-coded nameplate label.

24-61-1850

The specified valve shall be a two and one half-inch (2-1/2") valve with a stainless ball.

27-02-1150

One (1) 2-1/2" discharge pressure gauge (30"-0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.

23-10-5400

RIGHT SIDE PUMP PANEL -- 3" DISCHARGE

One (1) 3" discharge shall be installed on the right side pump panel area and shall be controlled by a quarter turn ball valve. The discharge shall have 3" NST male hose threads. A color coded nameplate label shall be provided adjacent the control handle.

21-01-2550

An Innovative Controls 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve

10174-0004

complete with a recessed ID label provision. The handle shall lift, to open and push down, to close.

24-02-3400

One (1) chrome plated elbow with rocker lugs shall be provided with 3" NST swivel female x 3" NST male hose threads.

24-03-3500

One (1) 3" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.

24-53-0710

One (1) Akron valve with a manually operated swing type and control at the top mount pump panel console shall be provided on the specified discharge. The up and down movement control handle shall be equipped with quarter-turn locking feature. The discharge shall be equipped with a slow-close device. The valve shall be equipped color-coded name plate.

24-61-1860

The specified valve shall be a three-inch (3") valve with a stainless ball.

27-02-1150

One (1) 2-1/2" discharge pressure gauge (30"-0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.

23-13-3250

REAR RIGHT SIDE -- 2-1/2" DISCHARGE

One (1) 2-1/2" discharge shall be installed on the right side rear panel of the apparatus body and shall be controlled by a quarter turn ball valve on the pump panel. The discharge shall have 2-1/2" NPT x 2-1/2" NST male hose threads adapter with 30 degree slant. The outlet shall be equipped with an engraved nameplate label shall be installed adjacent the valve control handle.

21-01-2550

An Innovative Controls 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a recessed ID label provision. The handle shall lift, to open and push down, to close.

24-02-3200

One (1) chrome plated elbow with rocker lugs shall be provided with 2-1/2" NST swivel female x 2-1/2" NST male hose threads.

24-03-3400

One (1) 2-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.

24-51-1250

One (1) manually operated swing type valve, with control at the top mount pump panel console shall be installed on the specified discharge. The up and down movement control handle shall be equipped with quarter turn locking feature. The valve shall be equipped color-coded nameplate label.

24-61-1850

The specified valve shall be a two and one half-inch (2-1/2") valve with a stainless ball.



27-02-1150

One (1) 2-1/2" discharge pressure gauge (30"-0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.

24-11-6200

3" MONITOR DISCHARGE

One (1) 3" discharge shall be piped to the area over the pump enclosure with 3" NPT male threads provided. The pipe shall be equipped with Victaulic couplings (if necessary) and shall be properly secured to prevent movement when a monitor or deck gun is attached. The quarter turn ball valve shall be controlled on pump panel.

A color coded nameplate label shall be provided adjacent the valve control handle.

21-01-2550

An Innovative Controls 3/4" cast bronze quarter-turn drain/bleeder valve shall be installed. The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a recessed ID label provision. The handle shall lift, to open and push down, to close.

24-53-0710

One (1) Akron valve with a manually operated swing type and control at the top mount pump panel console shall be provided on the specified discharge. The up and down movement control handle shall be equipped with quarter-turn locking feature. The discharge shall be equipped with a slow-close device. The valve shall be equipped color-coded name plate.

24-61-1860

The specified valve shall be a three-inch (3") valve with a stainless ball.

27-02-1150

One (1) 2-1/2" discharge pressure gauge (30"-0-400 PSI) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.

24-14-1000

PORTABLE MONITOR

One (1) Task Force Tips Crossfire model # XFC-12 portable lightweight monitor package consisting of monitor top and base shall be supplied.

PORTABLE DECK GUN MONITOR TOP

Task Force Tips Crossfire, model # XFT-NJ portable monitor shall be provided. This top only portion with quick release swivel joint shall be designed for use on truck mounted risers and TFT Safe-Tak or Stow-A-Way 800 series portable bases. The monitor shall include safety devices that include a locking button which locks the quick release lever when monitor is pressurized, and a 1/4 turn rotational lever lock that secures the horizontal rotation and provides a visual indication that the monitor rotation is locked.



The monitor shall have a 3-1/4" waterway for delivery of up to 1250 GPM with low friction loss. Vertical elevation shall be controlled through use of a handwheel controlled stainless steel worm gear which allows full travel to the safety stop point of 35 degrees above horizontal with seven rotations of the wheel. When positioned on a truck mounted riser the monitor shall be able to be used below the 35 degree stop point through release of the spring loaded safety pin.

An automatic drain to remove remaining water and avoid freezing shall be included. Integral stainless steel stream straightener and pressure gauge shall be included. The monitor shall be configured with a Crossfire inlet and 2-1/2" male NH outlet.

MONITOR STORAGE BRACKET

Task Force Tips model # XF-B storage bracket and mounting screws shall be supplied. The bracket shall be constructed from stainless steel include a quick release retention strap and be designed for horizontal or vertical installation. The bracket is designed for storage of the Task Force Tips Crossfire SAFE-TAK and STOWAWAY 800 series portable monitor base with or without monitor top attached.

24-14-1800

SAFE-TAK PORTABLE MONITOR BASE

Task Force Tips Safe-Tak 1250, model # XFH-2NJ portable monitor base shall be provided. The monitor shall include a Safe-Tak, spring loaded butterfly valve designed to rapidly reduce the water flow by 90 percent in the event that contact with the ground is lost. The device shall include an integral carrying handle, four folding stainless steel legs with replaceable tungsten carbide spikes and an anchoring strap (attached to a protective cap) designed to be stored inside the waterway. The butterfly valve shall have a reset handle located near the inlet to allow the water flow to be reestablished once the base is properly stabilized.

The base shall be constructed from hardcoat anodized aluminum and have a red powder coat interior and exterior finish. The inlet shall be configured with two (2) 2-1/2" female NH swivel rocker lug couplings with two-way clapper valve.

24-14-2020

MONITOR STORAGE BRACKET

Task Force Tips model # XF-B storage bracket and mounting screws shall be supplied. The bracket shall be constructed from stainless steel include a quick release retention strap and be designed for horizontal or vertical installation. The bracket is designed for storage of the Task Force Tips Crossfire SAFE-TAK and STOWAWAY 800 series portable monitor base with or without monitor top attached.



25-25-0200

WATER TANK - 1000 GALLON

The apparatus shall be equipped with a one-thousand (1000) gallon polypropylene water tank. The tank shall be equipped with a four-inch (4") overflow pipe.

25-44-1300

WATER TANK FILL TOWER

A fill tower measuring approximately 10" x 10" square shall be provided on the water tank up to and including 1500 gallons total capacity.

26-12-0000

PUMP ENCLOSURE - PUMP PANELS - OPTIONS

26-18-1000

TOP MOUNT PUMP ENCLOSURE

The top mount pump enclosure shall be removable and supported from the chassis frame rails. This enclosure will allow independent flexing of the pump enclosure from the body and allow for quick removal. The support structure shall be constructed of extruded aluminum tubing and angle. All pump intake discharge controls are to be mounted above the fire pump at a top mounted operator's control panel to provide around-the-truck visibility.

Access to the top mounted control panel shall be provided from both sides of the truck with a large full width walkway ahead of the control panel. The walkway and running boards shall be bolted in place and shall be constructed of slip-resistant NFPA compliant surfaces. There shall be four (4) rubber shock mounted lights furnished in the lower forward facing panel to illuminate the walkway.

Access to the plumbing area shall be provided from both sides of the truck with a large full width walkway ahead of the control panel. The fire pump, valves and controls shall be accessible for service and maintenance as required by applicable sections of NFPA standards. In addition, a removable aluminum tread plate panel shall be provided on vertical surface on the front surface of the pump enclosure.

Access handrails shall be 1-1/4" in diameter extruded aluminum with chrome plated end brackets shall be provided and installed on each side, for easy access to the walkway.

Engine gauges and master pump gauges shall be mounted on the upper incline plane of the gauge and valve control panel. Both the upper gauge panel and lower valve control panel to be full width and completely removable for access to the pump compartment. The valve controls and individual pressure gauges to be located on the lower flat surface of the valve control panel.

All valves and control handles shall have removable escutcheons for easy valve service without removing the entire panel.



The following controls and equipment shall be provided on the pump panel or within the pump enclosure:

- Electric primer.
- Pump and plumbing area service lights.
- Pressure control device and throttle control.
- Fire pump and engine instruments.
- Pump intakes and discharge controls.
- Master intake and discharge gauges.
- Tank fill control.
- Tank suction control.
- Water tank level gauge.
- Pump panel lights.

Crosslay Installation

The dunnage area atop the pump enclosure shall be notched for the installation of a crosslay hose bed. The hosebed shall have smooth sides and removable grating under the hose area. Provisions shall be provided to secure hose and equipment per requirements of applicable NFPA standards.

26-30-1500

LEFT SIDE RUNNING BOARD

The left pump panels shall be equipped with a side running board. The running board will extend along the width of the pump enclosure from the forward end of the body module to behind the chassis cab.

The running board shall be constructed of aluminum tread plate, bolted in place with stainless steel fasteners. The step surfaces shall be in compliance with applicable sections of NFPA requirements.

26-30-1550

RIGHT SIDE RUNNING BOARD

The right pump panel shall be equipped with a side running board. The running board will extend along the width of the pump enclosure from the forward end of the body module to behind the chassis cab.

The running board shall be constructed of aluminum tread plate, bolted in place with stainless steel fasteners. The step surfaces shall be in compliance to applicable sections of NFPA requirements.



26-31-5200

PUMP ENCLOSURE ACCESS DOOR -- RIGHT SIDE UPPER

A pump panel access door shall be provided on the upper right side of the side mount pump enclosure. The door shall be constructed of aluminum tread plate with push button type latches.

26-35-1100

LEFT SIDE PUMP PANEL -- BOLTED

The pump panel installed on the left hand side of the pump enclosure shall be fastened to the pump enclosure with 1/4" stainless steel bolts.

26-35-1200

RIGHT SIDE PUMP PANEL -- BOLTED

The pump panel installed on the right hand side of the pump enclosure shall be fastened to the pump enclosure with 1/4" stainless steel bolts.

26-35-7100

PUMP PANEL -- TOP MOUNT

The left hand, right hand, and top mount pump panels shall be constructed of black thermoplastic coating aluminum material and be fastened to the pump enclosure with 1/4" stainless steel bolts.

26-35-1100

LEFT SIDE PUMP PANEL -- BOLTED

The pump panel installed on the left hand side of the pump enclosure shall be fastened to the pump enclosure with 1/4" stainless steel bolts.

26-35-1200

RIGHT SIDE PUMP PANEL -- BOLTED

The pump panel installed on the right hand side of the pump enclosure shall be fastened to the pump enclosure with 1/4" stainless steel bolts.

26-55-5000

LABELS

Safety, information, data, and instruction labels for apparatus shall be provided and installed at the operator's instrument panel.

The labels shall include rated capacities, pressure ratings, and engine speeds as determined by the certification tests. The no-load governed speed of the engine, as stated by the engine manufacturer, shall also be included.

The labels shall be provided with all information and be attached to the apparatus prior to delivery.



26-55-5100

COLOR CODED PUMP PANEL LABELING AND NAMEPLATES

Discharge and intake valve controls shall be color coded in compliance to guidelines of applicable sections of NFPA standards.

Permanent type nameplates and instruction panels shall be installed on the pump panel for safe operation of the pumping equipment and controls.

26-56-5105

MIDSHIP PUMP PANEL LIGHTS -- LEFT SIDE

Two (2) Weldon #2025 or equal lights with clear lenses shall be installed under an instrument panel light hood on the left side pump panel. The lights shall be controlled by a switch located on the operator's instrument panel.

26-56-5110

MIDSHIP PUMP PANEL LIGHTS -- RIGHT SIDE

Two (2) Weldon #2025 or equal lights with clear lenses shall be installed under an instrument panel light hood on the right side pump panel. The lights shall be controlled by a switch located on the operator's instrument panel.

26-56-5150

PUMP PANEL LIGHTS -- TOP MOUNT

Three (3) Weldon #2025 or equal lights with clear lenses shall be installed under an instrument panel light hood along the full width of the top mount pump panel. Each side the pump enclosure shall be two (2) lights with light hood, controlled by the switch on pump panel.

26-56-5500

PUMP PANEL LIGHTS

One (1) of the pump panel lights shall be illuminated at the time the fire pump is engaged into operation. The remaining lights shall be controlled by a switch located on the operator's instrument panel.

27-01-4150

TEST TAPS

Test taps for pump intake and pump pressure shall be provided on the pump instrument panel and be properly labeled.

27-35-2050

WATER TANK GAUGE

The apparatus shall be equipped with one (1) Class1 "Intelli-Tank" water tank level gauge and shall be installed on the pump panel. The tank level gauge shall indicate the liquid level on an easy to read LED display and show increments of 1/8 of a tank.



Each tank level gauge system shall include:

- A pressure transducer mounted on the outside of the tank in an easily accessible area. Sealed foam tanks will require zero pressure vacuum vents.
- Super bright LED 4-light display with a visual indication at nine accurate levels.

Weather resistant connectors to connect to the digital display, to the pressure transducer and to the apparatus power.

43-00-4105

HOSEBED WIDTH

The width of the hosebed shall be 70".

43-00-4150

ALUMINUM HOSEBED GRATING SINGLE AXLE

The hose bed compartment deck shall be constructed entirely from maintenance-free, extruded aluminum slats. The slats shall have an anodized, radiused ribbed top surface. The slats shall be of widths approximately 3/4" high x 6" wide and shall be welded into a one-piece grid system to prevent the accumulation of water and allow ventilation to assist in drying hose.

43-00-4300

VINYL HOSEBED COVER SINGLE AXLE

The apparatus shall be equipped with a vinyl hosebed cover with a weighted rear flap.

The cover, approximately 74" wide, shall be secured utilizing a Velcro fastening system at the front and sides of the hosebed body.

The color shall be: red

43-01-1012

MODULAR BODY

The apparatus body shall be designed and built using a computer aided drafting and three dimensional modeling program. This engineering program shall have finite element analysis capability, so the design can be studied and stress points identified. This will allow for a total design review to ensure the strongest and most durable body possible. The use of this engineering system will ensure accuracy and repeatability for service parts in the event of accidental damage. The body components shall be fabricated using CNC equipment to cut and bend the individual body parts.

1/8" ALUMINUM BODY

The compartment modules shall be fabricated using .125 5052H32 aluminum sheets. The individual compartment pieces shall be cut using a CNC high definition plasma or large cutting equipment. The pieces shall incorporate a "notch and tab" design. This design will ensure that



all parts fit accurately. These compartment modules shall bolt to the subframe creating a completely independent modular body.

43-00-0350

SUB-FRAME

The apparatus shall be designed using a structural subframe, designed as an independent assembly, separate of the chassis frame. This will allow for a totally modular body, capable of being remounted to a different chassis if the need arises. Designs which do not use a modular subframe assembly will not be allowed.

This subframe shall be designed using heavy duty 7 gauge steel and 5/8" steel plates to form a subframe capable of carrying the loads designated by the Fire Department. The subframe shall be designed to carry a minimum of 500 lbs per compartment, distributed. The subframe shall be powder coated before assembly to prevent corrosion. Subframes that are painted or undercoated will not be acceptable.

The subframe shall be assembled with "Huck" bolts to ensure maximum tightening and clamping force at all joints. It shall be bolted securely at the rear with a minimum of four (4) 5/8" grade 8 bolts on each side and mounted at the front using four (4) spring loaded assemblies and lateral guides to allow for maximum twist, yet keeping the body aligned on the chassis.

The subframe shall consist of formed 7 gauge cross members, spaced no more than 16-inches apart, to adequately support the water tank. There shall be 1/4" thick hard rubber channel pads covering the cross members, which will help prevent tank damage due to road shock. The tank shall be held in place by four (4) formed angle brackets, at least 3" high. These four brackets will prevent fore and aft and lateral movement of the tank. These cross members shall be attached to two (2) longitudinal 3x3 angles. These angles shall be at the ends of the cross members to allow the compartment to be attached and supported by these pieces. There shall be at least two down and out compartment supports under each compartment, ahead of and behind the rear wheels.

43-00-0352

SUB-FRAME

The subframe shall have a powder coat finish.

43-00-0420

SINGLE AXLE WHEEL WELL AREA

For ease of accessibility and maintenance, wheel well panels shall be double break formed painted smooth plate that is welded in place.

To fully protect the wheel well area from road debris and to aid in cleaning, a full depth (minimum of 25") radius wheel well liner shall be provided. Wheel well liner shall be smooth aluminum to prevent corrosion.



The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with concealed stainless steel fasteners.

43-00-5130

LADDER RACK, LADDERS AND PIKE POLES

An electric ladder rack shall be installed on the right side of the apparatus body, to carry the ladders in a horizontal position above the side compartments. Each electric cylinder shall be 12-volt operated and installed in an area that provides proper protection of the electric components.

Ladder rack shall be of the dual pivot arm design with stabilizing arms at the front and rear. Ladder rack assembly shall be located on the right side of the body, above the compartment area. There shall be an air operated safety lock provided with control switch on the right side pump operator's panel. The ladder rack actuator control switch shall be weatherproof type and located on the right side pump panel in full view of the rack. A safety interlock will be supplied to prevent operation of the rack when the upper compartment doors are open.

Flashing lights facing front and rear shall be installed on the rack and shall be illuminated whenever the rack is in the lowered position. The outward side of the equipment rack that protrudes beyond the body of the apparatus shall be striped or painted with reflective material.

Cast aluminum ladder brackets with chrome plated quick release type mounting clamps shall be provided which hold the ladders to the pivot arm assembly.

A red warning light shall be provided and mounted in the cab to warn the driver when ladder rack is not in the stowed position.

43-08-0512

ROLLUP DOORS

The rollup doors shall be ROM manufacturing roll up doors.

43-10-0000

LEFT SIDE BODY COMPARTMENTS

The left side body compartmentation shall be as follows:

43-10-1200

LEFT FRONT COMPARTMENT

There shall be one (1) full height compartment located ahead of the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:



55-02-2200

COMPARTMENT LIGHTS

One (1) incandescent light fixture shall be installed in each exterior compartment of the apparatus. The light shall have a clear lens.

55-06-1150

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

43-10-3300

LEFT OVERWHEEL COMPARTMENT

There shall be one (1) compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

The compartment shall be equipped with the following:

55-02-2200

COMPARTMENT LIGHTS

One (1) incandescent light fixture shall be installed in each exterior compartment of the apparatus. The light shall have a clear lens.

55-06-1150

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

43-10-5000

LEFT REAR COMPARTMENT

There shall be one (1) full height compartment located behind the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:

55-02-2200

COMPARTMENT LIGHTS

One (1) incandescent light fixture shall be installed in each exterior compartment of the apparatus. The light shall have a clear lens.

55-06-1150

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

43-12-0000

RIGHT SIDE BODY COMPARTMENTS

The right side body compartmentation shall be as follows:



43-12-1300

RIGHT FRONT COMPARTMENT

There shall be one (1) full height compartment located ahead of the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:

55-02-2200

COMPARTMENT LIGHTS

One (1) incandescent light fixture shall be installed in each exterior compartment of the apparatus. The light shall have a clear lens.

55-06-1150

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

43-12-3300

RIGHT OVERWHEEL COMPARTMENT

There shall be one (1) compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

The compartment shall be equipped with the following:

55-02-2200

COMPARTMENT LIGHTS

One (1) incandescent light fixture shall be installed in each exterior compartment of the apparatus. The light shall have a clear lens.

55-06-1150

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

43-12-5000

RIGHT REAR COMPARTMENT

There shall be one (1) full height compartment located behind the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:

55-02-2200

COMPARTMENT LIGHTS

One (1) incandescent light fixture shall be installed in each exterior compartment of the apparatus. The light shall have a clear lens.

55-06-1150

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

10174-0004



43-14-1000

REAR CENTER COMPARTMENT

There shall be one (1) full height compartment located at the rear of the apparatus. The compartment shall be equipped with a full height natural finish roll up door.

The compartment shall be equipped with the following:

55-02-2200

COMPARTMENT LIGHTS

One (1) incandescent light fixture shall be installed in each exterior compartment of the apparatus. The light shall have a clear lens.

55-06-1150

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

43-18-0600

EXTRUDED ALUMINUM RUB RAILS

Full body length polished aluminum rub rails shall be bolted in place on the right and left body sides and in the pump panel area. The rub rails shall extend outward beyond the body sides for protection of the compartments and doors. There shall be a bolt on aluminum corner casting on each rear corner to blend the rear tailboard assembly with the side rub rails.

The side rub rails shall be a heavy extruded aluminum "C" channel.

43-18-0700

SIDE AND REAR OVERLAYS

Overlay panels shall be constructed of 3003 polished aluminum treadplate. Polished aluminum overlay shall be provided and installed in all required areas of the apparatus body.

Overlay shall be installed with "Aluminized" stainless steel bolts to prevent corrosion.

The rear of the apparatus shall be smooth finish, for the installation of chevron striping.

43-18-1000

REAR STEP/TAILBOARD

A single piece .188 rear step/tailboard shall be furnished that is a minimum of 12.00" deep and full width of the apparatus body, from rub rail to rubrail. The tailboard shall be provided with a removable casting on each corner for a pleasing appearance.

43-19-2000

AIR CYLINDER COMPARTMENT IN WHEELWELL

Four (4) breathing air cylinder storage compartments shall be provided and located in the rear wheel well area of the apparatus body.



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.

Compartment shall be provided with SCBA cylinder scuff protection. A brushed aluminum door with push button trigger latch shall be provided.

43-19-3100

HANDRAIL REAR STEP

Two (2) extruded aluminum non-slip handrails, approximately 48" in length, shall be provided and mounted on the rear of the apparatus, one (1) on each side of the body.

43-19-4100

FOLDING STEP REAR

Three (3) 8" square folding steps of chrome plated die cast aluminum shall be provided. The step shall comply to NFPA #1901 non-slip standards and shall be installed on the rear left side of the body.

50-00-5000

12-VOLT ELECTRICAL SYSTEM

50-03-1050

LOW VOLTAGE ELECTRICAL SYSTEM SPECIFICATIONS

The electrical system shall include all panels, electrical components, switches and relays, wiring harnesses and other electrical components. The electrical equipment installed by the apparatus manufacturer shall conform to current automotive electrical system standards, the latest Federal DOT standards, and the requirements of the applicable NFPA standards.

All wiring shall be stranded copper or copper alloy conductors of a gauge rated to carry 125 percent of the maximum current for the protected circuit. Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. The wiring and wiring harness and insulation shall be in conformance to applicable SAE and NFPA standards. The wiring harness shall conform to SAE J-1128 with GXL temperature properties. All exposed wiring shall be protected in a loom with a minimum 289 degree Fahrenheit rating. All wiring looms shall be properly supported and attached to body members. The electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

The wiring connections and terminations shall use a method that provides a positive mechanical and electrical connection and shall be installed in accordance with the device manufacturer's instructions. Electrical connections shall be with mechanical type fasteners and large rubber grommets where wiring passes through metal panels.

The wiring between the cab and body shall be joined using Deutsche type connectors or an enclosed in a terminal junction panel area. This system will permit body removal with minimal impact on the apparatus electrical system. All connections shall be crimp-type with insulated shanks to resist moisture and foreign debris such as grease and road grime. Weather-resistant connectors shall be provided throughout to ensure the integrity of the electrical system.

Any electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions. In addition, the main body junction panel shall house the automatic reset breakers and relays where required.

There shall be no exposed electrical cabling, harnesses, or terminal connections located in compartments, unless they are enclosed in a junction box or covered with a removable electrical panel. The wiring shall be secured in place and protected against heat, liquid contaminants and damage. Wiring shall be uniquely identified every three-inches (3") by color coding or permanent marking with a circuit function code and identified on a reference chart or electrical wiring schematic per requirements of applicable NFPA #1901 standards.

The electrical circuits shall be provided with low voltage overcurrent protective devices. Such devices shall be accessible and located in required terminal connection locations or weather resistant enclosures. The overcurrent protection shall be suitable for electrical equipment and shall be automatic reset type and meet SAE standards. All electrical equipment, switches, relays, terminals, and connectors shall have a direct current rating of 125 percent of maximum current for which the circuit is protected. The system shall have electro-magnetic interference suppression provided as required in applicable SAE standards.

The electrical system shall include the following:

- Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied. A corrosion preventative compound shall be applicable to all terminal plugs located outside of the cab or body.
- The electrical wiring shall be harnessed or be placed in a protective loom.
- Holes made in the roof shall be caulked with silicone. Large fender washers shall be used when fastening equipment to the underside of the cab roof.
- Any electrical component that is installed in an exposed area shall be mounted in a manner that will not allow moisture to accumulate in it.
- A coil of wire must be provided behind an electrical appliance to allow them to be pulled away from mounting area for inspection and service work.
- All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.

The warning lights shall be switched in the chassis cab with labeled switches in an accessible location. Individual rocker switches shall be provided only for warning lights provided over the minimum level of warning lights in either the stationary or moving modes. All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the operator. The warning light switches shall be of the rocker type. For easy nighttime operation, an integral indicator light shall be provided to indicate when the circuit is energized. All switches shall be appropriately identified as to their function.

A single warning light switch shall activate all required warning lights. This switch will allow the vehicle to respond to an emergency and "call for the right of way". When the parking brake is applied, a "blocking right of way" system shall automatically activate per requirements of the applicable NFPA standards. All "clear" warning lights shall be automatically turned off upon application of the parking brake.

NFPA REQUIRED TESTING OF ELECTRICAL SYSTEM

The apparatus shall be electrically tested upon completion of the vehicle and prior to delivery. The electrical testing, certifications, and test results shall be submitted with delivery documentation per requirements of the applicable NFPA standards. The following minimum testing shall be completed by the apparatus manufacturer:

1. Reserve capacity test:

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 ten (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 failed test.

2. Alternator performance test at idle:

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.

3. Alternator performance test at full load:

The total continuous electrical load shall be activated with the engine running up to the engine manufacturer's governed speed. The test duration shall be a minimum of two (2) hours.



Activation of the load management system is permitted during this test. However, if an alarm sounds due to excessive battery discharge, as detected by the system requirements in the NFPA standards, or a system voltage of less than 11.7 volts dc for more than 120 seconds is present, the test has failed.

4. Low voltage alarm test:

Following the completion of the above 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 activates. The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts dc for a 12 volt system shall be considered a test failure. The battery system shall then be able to restart the engine. Failure to restart the engine shall be considered a test failure.

NFPA REQUIRED DOCUMENTATION

The following documentation shall be provided on delivery of the apparatus:

- a. Documentation of the electrical system performance tests required above.
- b. A written load analysis, including:
 - 1. The nameplate rating of the alternator.
 - 2. The alternator rating under the conditions.
 - 3. Each specified component load.
 - 4. Individual intermittent loads.

50-12-5200

ROCKER SWITCH CONSOLE

One (1) switch console with individual rocker switches to control electrical equipment and emergency lighting shall be installed in the chassis cab dash area.

50-15-3500

MASTER ELECTRIC SWITCH

One (1) master battery disconnect switch shall be located conveniently to the driver of the apparatus. The switch shall disconnect the 12 volt power supply from the battery system.

A green "Master On" light shall be provided. This light shall illuminate anytime the master switch is in the "ON" position.



51-05-7100

ENGINE COMPARTMENT LIGHT

One (1) 12 volt incandescent light with switch shall be mounted in the engine enclosure.

51-05-7200

PUMP ENCLOSURE LIGHTS

One (1) incandescent work light shall be provided in the pump enclosure. The control switch shall be mounted on the light head.

52-01-1800

BACK-UP ALARM

One (1) an automatic electric back-up alarm shall be wired to the back-up light circuit, and mounted under the rear of the apparatus body.

53-01-1500

MARKER LIGHTS

Incandescent marker lights shall be installed on the vehicle in conformance to the Department of Transportation requirements.

53-02-1500

LICENSE PLATE BRACKET

One (1) stainless steel license plate bracket shall be provided at the rear bumper. The bracket shall have a LED light.

54-02-1700

CAB GROUND LIGHTS

Incandescent ground lights shall be installed under the cab doors.

54-03-1150

PUMP PANEL GROUND LIGHTS

Two (2) incandescent ground lights shall be installed under the pump panel running boards. One (1) light shall be located on the driver's side and one (1) light located on the officer's side of the apparatus.

54-03-1550

REAR STEP GROUND LIGHTS

Two (2) incandescent ground lights shall be installed under rear step of the apparatus.

54-04-1999

The ground lights shall automatically activate when the parking brake is applied.

54-10-1600

STEP LIGHT

One (1) incandescent step light with clear lens shall be installed on the rear step of the apparatus body.



54-11-2100

The step/walkway light switch shall be installed and wired to the parking brake.

54-12-2000

DECK LIGHTS

One (1) Unity Model #AG spotlight and one (1) Unity Model #AG floodlight, with 50 watt bulbs shall be installed. The lights shall have an "on-off" switch.

54-12-2020

DECK LIGHT MOUNTING

The deck lights shall be installed at the rear of the hose bed.

55-11-2000

DOOR OPEN/HAZARD WARNING LIGHT

A red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The warning light shall also be attached to folding equipment racks and light towers as specified. The light shall be a flashing rectangular incandescent marker light with a red lens and shall be properly marked and identified.

53-03-2650

TAIL LIGHTS

One (1) pair of Whelen LED tail/brake lights shall be provided. The rectangular 4"x6" lights shall be red.

53-04-2450

TURN SIGNALS

One (1) pair of Whelen turn signals shall be provided. The rectangular LED lights shall be 4"x6" in dimension.

53-06-3350

BACKUP LIGHTS

One (1) pair of Whelen LED backup lights shall be installed on the rear of the apparatus body. The dimensions shall be 4" x 6" and the lens color shall be clear.

56-01-3000

ELECTRIC SIREN AND CONTROL

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

56-01-3010

SPEAKER

One (1) Whelen Model #SA315P, speaker, with a non-corrosive nylon composite housing, shall be installed. The speaker shall be wired to the electric siren located in the cab.



57-02-7000

LIGHTBAR

One (1) Whelen Justice series light bar shall be included with the apparatus cab. The light bar shall be a model JE2NFPA and shall be mounted on the roof of the cab, towards the front, above the windshield.

The light bar shall feature:

- A 56" light bar designed for high performance
- Four (4) red Linear Super LED corner modules
- Four (4) red CON3 LED hinged modules
- Two (2) white CON3 LED hinged modules with exterior clear optic lenses
- Clear hard coated lenses to provide extended life/luster protection against UV & chemical stresses
- Designed in accordance with NFPA Zone A requirements

58-03-4000

LOWER FRONT WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side one the front of the chassis cab. The dimensions of the lights shall be 2" x 4".

58-01-1300

There shall be chrome bezels supplied and installed on the warning lights.

58-09-4000

INTERSECTION WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed one each side of the chassis cab. The dimensions of the lights shall be 2" x 4".

58-01-1300

There shall be chrome bezels supplied and installed on the warning lights.

58-36-4000

LOWER REAR SIDE WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side of the apparatus body, towards the rear of the body. The dimensions of the lights shall be 2" x 4".

58-01-1300

There shall be chrome bezels supplied and installed on the warning lights.

58-71-3000

UPPER REAR WARNING LIGHTS

One (1) pair of Whelen model #RB6T Rota-Beam warning lights shall be installed, one each side on the upper rear of the apparatus body. The unit shall have dual rotators with total dimensions of 7" high x 8" deep and shall have red lenses.



58-74-5300

REAR WARNING LIGHT MOUNTING

The upper rear lights shall be mounted on cast aluminum stanchions attached to the apparatus body, one on each side.

58-81-4000

LOWER REAR WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side on the lower rear of the apparatus body. The dimensions of the lights shall be 2" x 4".

58-01-1300

There shall be chrome bezels supplied and installed on the warning lights.

80-06-1000

BODY PAINT PROCESS

All bright metal fittings, if unavailable in stainless steel shall be heavily chrome plated. Iron fittings shall be copper plated prior to chrome plating.

All seams shall be caulked both inside and along the exterior edges with a urethane automotive sealant to prevent moisture from entering between any body panel.

The body and all parts shall be thoroughly washed with a grease cutting solvent (PPG DX330) prior to any sanding. After the body has been sanded and the weld marks and minor imperfections are filled and sanded, the body shall be washed again with (PPG DX330) to remove any contaminants on the surface.

The first coating to be applied is a pre-treat self etching primer (PPG DX1787) (.5 to 1.0 dry film build) for maximum adhesion to the body material. The next two to four coats (depending on need) shall be an acrylic urethane primer surfacer (PPG K36). The film build shall be 4-6 mils when dry. The primer surfacer coat, after appropriate dry time, shall be sanded with 320-600 grit sandpaper to ensure maximum gloss of the paint. The last step is the application of at least three coats of PPG Delfleet polyurethane two-component color (single stage). The film build being 2-3 mils dry. The single stage polyurethane, when mixed with corresponding catalyst shall provide a UV barrier to prevent fading and chalking.

All products and technicians are certified by PPG every two (2) years.

80-06-1100

APPARATUS COLOR

The apparatus body shall be painted red to match the chassis.



80-30-5000

INTERIOR COMPARTMENT FINISH

The apparatus side compartment interiors are to be painted with a spatter finish material. The compartments shall be cleaned with a grease remover, and then the surface sanded and prepared for painting. The compartment shall be provided with two (2) coats of white epoxy. The compartments are then coated with a splatter paint top coat.

Compartment interiors that are wrinkle finished or are topcoat web painted do not meet the intent nor durability of this requirement and are not acceptable.

80-40-2000

WHEEL PAINTING

The front and rear wheels shall be finish painted to match the apparatus body. Wheels shall be properly prepared and finished with primer coats and top coats as specified.

80-44-1600

UNDERCOATING

The entire underside of the single axle apparatus body is to be cleaned and properly prepared for application of a sprayed on automotive type undercoating for added corrosion resistance. Undercoating is to be a solvent based, rubberized coating, black in color.

80-51-2000

CAB AND BODY STRIPE

A straight Scotchlite reflective stripe, 4" minimum in width, shall be applied horizontally around the cab and body in compliance with applicable NFPA 1901 standards. The purchaser shall specify the color and location of the stripe.

80-51-3000

CHEVRON STRIPING

The entire rear portion of the body shall have a 3M red/amber reflective chevron style striping, applied at a 45-degree upward angle pointing towards the center upper portion of the rear panel.

City of Bisbee - Fire Truck / Pumper Bid

Bid due 12/15/15 by 4:00 p.m.

City of Bisbee

City Clerk

118 Arizona St.

Bisbee, AZ 85603

Exceptions / Clarification

The specifications state a maximum overall length of 24'.

Due to the June 1, 2016 deadline, Rosenbauer can only provide a stock/demo unit currently in production. We have supplied information on the shortest overall unit and we are outside the maximum 24'.