



**AGREEMENT FOR PURCHASE OF FIRE ENGINE/PUMPER TRUCK**

**THIS AGREEMENT FOR PURCHASE OF FIRE ENGINE/PUMPER TRUCK**  
("Agreement") is dated this 23 day of May, 2017 by and between:

**THE CITY OF PEMBROKE PINES**, a municipal corporation organized and operating under the laws of the State of Florida, with an address of 601 City Center Way, Pembroke Pines, Florida 33025, hereinafter referred to as "CITY",  
and

**REV RTC D/B/A HALL-MARK RTC**, a Florida corporation, with a business address of 725 SW 46<sup>th</sup> Avenue, Ocala, FL 34474 (hereinafter referred to as the "CONTRACTOR"). CITY and CONTRACTOR may hereinafter be referred to collectively as the "Parties."

**RECITALS:**

**WHEREAS**, the CITY advertised its invitation to bid No. **IFB #FI-16-01** entitled **Fire Engine/Pumper Truck** (hereinafter "ITB") which set forth the CITY's desire to hire a firm to provide the Fire Department with a Fire Engine/Pumper Truck that meets the needs specified in the bid package:

**WHEREAS**, on **February 14, 2017**, the responses to the ITB were opened at the offices of the City Clerk; and,

**WHEREAS**, on **April 5, 2017**, the CITY awarded the ITB to CONTRACTOR and authorized the proper City officials to enter into this Agreement with CONTRACTOR to render provide the goods as required in the IFB; and,

**WHEREAS**, CITY and CONTRACTOR wish to enter into this Agreement to provide for the delivery of a **fire engine/pumper truck** to the CITY by CONTRACTOR; and,

**WHEREAS**, CONTRACTOR shall act as the primary provider of **fire engine/pumper trucks** to the CITY for the term of this Agreement;

**NOW THEREFORE**, in consideration of the mutual promises detailed herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

**ARTICLE 1**  
**PURCHASE OF GOODS**

- 1.1 CITY agrees to purchase and CONTRACTOR agrees to provide **fire engine/pumper truck** (the "Commodities") subject of this Agreement.



- 1.2 CONTRACTOR shall provide the Commodities as identified herein and the CITY's IFB and CONTRACTOR's response thereto, collectively incorporated herein as **Exhibit "A"** and made a specific part hereof, according to the estimated quantities and schedule contained in **Exhibit "A"**.
- 1.3 The Parties acknowledge that this Agreement is a term contract and that CITY shall purchase and CONTRACTOR shall provide the Commodities on an as-needed basis upon written request of the CITY. Nothing contained herein or in any exhibit or amendment hereto, shall require the CITY to purchase the quantity of Commodities identified in **Exhibit "A"**.
- 1.4 As needed, the CITY shall submit a purchase order to the CONTRACTOR for a specified amount of Commodities. CONTRACTOR shall then provide the specified amount of Commodities in accordance with the purchase order, and submit to the CITY an invoice for those Commodities.
- 1.5 CITY agrees that CONTRACTOR shall be the primary provider of the Commodities, as further described on **Exhibit "A"**, and that CITY shall submit to CONTRACTOR a purchase order for the Commodities. By acceptance of CONTRACTOR's bid, CONTRACTOR agrees that it shall provide such Commodities upon receipt of purchase order from CITY and has the ability to fulfill such orders as CITY requires.
- 1.6 CONTRACTOR acknowledges that it has the capacity, ability and/or inventory to provide the Commodities to the CITY on an as-needed basis and in accordance with the estimated schedule and quantities listed in **Exhibit "A"**.

## ARTICLE 2 TERM AND TERMINATION

- 2.1 CONTRACTOR shall provide the Commodities as identified herein and in **Exhibit "A"** attached hereto and made part hereof, for an initial **three (3) year period** commencing on the **April 5, 2017** and ending on **April 4, 2020** and according to the estimated schedule contained in **Exhibit "A"**.
- 2.2 *Termination for Convenience:* CITY may terminate this Agreement for convenience, upon **thirty (30) business days** of written notice by the terminating party to the other party for such termination.
- 2.3 In the event CONTRACTOR abandons or terminates this Agreement or causes it to be terminated by CITY for any reason, CONTRACTOR shall indemnify CITY against any loss pertaining to this termination.

For purposes of this Agreement, termination by CITY for cause includes, but is not limited to, any of the following circumstances:



- 2.3.1 CONTRACTOR's failure to keep, perform and observe each and every provision of this Agreement and such failure continues for a period of more than **ten (10) days** after CITY's delivery of a written notice to CONTRACTOR's of such breach or default;
- 2.3.2 CONTRACTOR becomes insolvent;
- 2.3.3 CONTRACTOR takes the benefit of any present or future insolvency statute;
- 2.3.4 CONTRACTOR makes a general assignment for the benefit of creditors,
- 2.3.5 CONTRACTOR files a voluntary petition in bankruptcy or a petition or answer seeking an arrangement of its reorganization or the readjustment of its indebtedness under the Federal Bankruptcy laws or under any other law or statute of the United States or any state thereof;
- 2.3.6 CONTRACTOR consents to the appointment of a receiver, trustee or liquidator of all or substantially all of its property;
- 2.3.7 A petition under any present or future insolvency laws or statute is filed against CONTRACTOR and such petition is not dismissed within **thirty (30) days** after its filing; or
- 2.3.8 Any assignment of this Agreement in whole or in part, or any of CONTRACTOR's rights and obligations hereunder.

### ARTICLE 3 COMPENSATION AND METHOD OF PAYMENT

- 3.1 Unless stated otherwise on attached **Exhibit "A"**, CITY's sole compensation to CONTRACTOR for the provision of Commodities hereunder shall be **FOUR HUNDRED SIXTY-EIGHT THOUSAND FOUR HUNDRED AND EIGHTY DOLLARS (\$468,480.00)** per each fire engine/pumper truck for any orders prior to **May 14, 2017**. For orders between **May 15, 2017 and February 14, 2018**, CITY shall agree to an economic price escalation of **1.5%**. Future years beyond the initial year shall have an economic price escalation of **3%** as a normal course of business:

Description	Order Information	Cost
Fire Engine/Pumper Truck	Orders prior to May 14, 2017	\$468,480.00
Fire Engine/Pumper Truck	Orders between May 15, 2017 and February 14, 2018	\$475,507.20
Fire Engine/Pumper Truck	Orders between February 15, 2018 and February 14, 2019	\$489,772.42



Fire Engine/Pumper Truck	Orders between February 15, 2019 and February 14, 2020	\$504,465.59
Fire Engine/Pumper Truck	Orders between February 15, 2020 – April 4, 2020	\$519,599.56
Pre-payment Discount	Per vehicle	(\$13,114.00)
Trade-In Value Option	1997 E-One Hush XLT (VIN # 4ENBAAA81V1007640)	(\$5,500.00)

Upon delivery, the CITY shall make final inspection of the Commodities. If this inspection shows that the Commodities have been delivered in a satisfactory manner and in accordance with the specifications of this Agreement or purchase order submitted by the CITY, the CITY shall receive the same. Final payment due the CONTRACTOR shall be withheld until inspection is made by the CITY and merits of performance evaluated. This total acceptance will be done in a reasonable and timely manner. Upon acceptance, CONTRACTOR shall submit to CITY an invoice for the Commodities provided and CITY, upon approval of the invoice, shall pay the same within **thirty (30) days**.

- 3.2 If any of the Commodities has to be rejected for any reason, the CONTRACTOR shall be required to repair or replace the Commodities to the satisfaction of the CITY. Warranty repairs may be accomplished on CITY property if space is available, at the discretion of the CITY. Title to or risk loss or damage to all Commodities shall be the responsibility of the CONTRACTOR until acceptance of the Commodities by the CITY, unless such loss or damages have been proven to be the result of negligence by the CITY.
- 3.3 Should the Parties renew the term of this Agreement pursuant to Section 2.2 herein, in the event that CONTRACTOR shall provide adequate evidence to CITY to substantiate a price increase, the purchase price of the Commodities contained in Section 3.1 above may be adjusted no more than on an amount equal to the increase in the "Consumer Price Index" or "CPI" for the current year as of two (2) months prior to the beginning of any renewal term of this Agreement. However, in no event shall the increase be greater than **three percent (3%)** for each year subsequent to the initial term. The purchase price shall be subject to an annual CPI increase for each year of any renewal term. The purchase price due from the CITY shall never decrease.

The term "Consumer Price Index" is defined as the Consumer Price Index for all Urban Consumers, U.S. City Average (1982-84=100) All Items, published by the United States Department of Labor, Bureau of Labor Statistics. The increase in the CPI shall be computed by subtracting the CPI used to calculate the purchase price for the current year from the CPI reported on the U.S. Department of Labor, Bureau of Statistic's website available at <http://data.bls.gov/cgi-bin/surveymost?cu> for the month that is one hundred twenty (120) days prior to the first day of the upcoming year.



#### **ARTICLE 4 WARRANTY OF COMMODITIES**

- 4.1 The Commodities, and each individual good or item, including all components and all installed accessories and equipment, shall be guaranteed by the CONTRACTOR to be free of defective parts and workmanship. This warranty shall be for a period of **one (1) year**, or as specified Exhibit A, or the time designated in the standard factory warranty, whichever is longer. The warranty will be the same as that offered to the commercial trade and shall be honored by any of the manufacturer's authorized dealers. The warranty will cover parts, labor and any necessary shipping for repair or replacement of the Commodities, or each individual good or item, including all components and all installed accessories and equipment. The warranty shall start at the time of acceptance by the CITY.
- 4.2 CONTRACTOR warrants and guarantees that the Commodities, and each individual good or item, including all components and all installed accessories and equipment, shall be fit for the intended use of the Commodities and CONTRACTOR shall provide a warranty as to fitness of the Commodities for a period of **three hundred sixty-five (365) days**, or as specified Exhibit A, or the time designated in the standard factory warranty, whichever is longer. The warranty will cover parts, labor and any necessary shipping for repair or replacement of the Commodities, or each individual good or item, including all components and all installed accessories and equipment.

#### **ARTICLE 5 INDEMNIFICATION**

- 5.1 CONTRACTOR shall indemnify and hold harmless the CITY, its trustees, elected and appointed officers, agents, servants, assigns and employees, from and against any and all claims, demands, or causes of action whatsoever, and the resulting losses, costs, expenses, reasonable attorneys' fees, including paralegal expenses, liabilities, damages, orders, judgments, or decrees, sustained by the CITY or any third party arising out of, by reason of, or resulting from the CONTRACTOR's acts, errors, or omissions or consequence of the goods and/or Commodities furnished pursuant to this Agreement or those of any subcontractor, agents, officers, employees, or independent contractor retained by CONTRACTOR.
- 5.2 CONTRACTOR shall indemnify and hold harmless the CITY, its trustees, elected and appointed officers, agents, servants, assigns and employees, from and against any and all claims, demands, or causes of action whatsoever, and the resulting losses, costs, expenses, reasonable attorneys' fees, including paralegal expenses, liabilities, damages, orders, judgments, or decrees, sustained by the CITY or any third party arising out of, by reason of, or resulting from any alleged infringement of copyrights, patent rights and/or the unauthorized or unlicensed use of any invention, process, material, property or other work manufactured or used in connection with the performance of the Agreement, including the use of the Commodities by the City.



- 5.3 CITY reserves the right to select its own legal counsel to conduct any defense in any such proceeding and all costs and fees associated therewith shall be the responsibility of CONTRACTOR.
- 5.4 Upon completion of all Services, obligations and duties provided for in this Agreement, or in the event of termination of this Agreement for any reason, the terms and conditions of this Article shall survive indefinitely.
- 5.5 Nothing contained herein is intended nor shall be construed to waive City's rights and immunities under the common law or §768.28, Florida Statutes, as may be amended from time to time.

## **ARTICLE 6 INSURANCE**

- 6.1 CONTRACTOR shall not commence performance hereunder until it has obtained all insurance required under this paragraph and such insurance has been approved by the Risk Manager of the CITY nor shall the CONTRACTOR allow any subcontractor to commence work on his subcontract until all similar such insurance required of the subcontractor has been obtained and similarly approved.
- 6.2 Certificates of Insurance reflecting evidence of the required insurance shall be filed with the City's Risk Manager prior to the commencement of this Agreement. These Certificates shall contain a provision that coverages afforded under these policies will not be cancelled until at least thirty days (30) prior written notice has been given to the CITY. Policies shall be issued by companies authorized to do business under the laws of the State of Florida. Financial Ratings must be not less than "A-VI" in the latest edition of "Best Key Rating Guide", published by A.M. Best Guide.
- 6.3 Insurance shall be in force until the obligations required to be fulfilled under the terms of the Agreement are satisfied. In the event the insurance certificate provided indicates that the insurance shall terminate and lapse during the period of this Agreement, then in that event, the CONTRACTOR shall furnish, at least forty-five (45) days prior to the expiration of the date of such insurance, a renewed certificate of insurance as proof that equal and like coverage for the balance of the period of the Agreement and extension thereunder is in effect. The CONTRACTOR shall not commence nor continue to provide any service pursuant to this Agreement unless all required insurance remains in full force and effect. CONTRACTOR shall be liable to CITY for any lapses in service resulting from a gap in insurance coverage.
- 6.4 **REQUIRED INSURANCE**
  - 6.4.1 Comprehensive General Liability insurance to cover liability bodily injury and property damage. Exposures to be covered are premises, operations, products/completed operations, and certain contracts. Coverage must be written on an occurrence basis, with the following limits of liability:



- A. Bodily Injury
  - 1. Each Occurrence \$1,000,000
  - 2. Annual Aggregate 1,000,000
- B. Property Damage
  - 1. Each Occurrence 1,000,000
  - 2. Annual Aggregate 1,000,000
- C. Personal Injury
  - Annual Aggregate 1,000,000
- D. Completed Operations and Products Liability shall be maintained for two (2) years after the final payment.
- E. Property Damage Liability Insurance shall include Coverage for the following hazards: X - explosion, C - Collapse, U - underground.

6.4.2 Worker's Compensation Insurance shall be maintained during the life of this contract to comply with statutory limits for all employees. The following limits must be maintained:

- A. Worker's Compensation Statutory
- B. Employer's Liability
  - \$100,000 each accident
  - \$500,000 Disease-policy limit
  - \$100,000 Disease-each employee

If CONTRACTOR claims to be exempt from this requirement, CONTRACTOR shall provide CITY proof of such exemption along with a written request for CITY to exempt CONTRACTOR, written on CONTRACTOR letterhead.

6.4.3 Comprehensive Auto Liability – coverage shall include owned, hired and non-owned vehicles.

- A. Bodily Injury
  - 1. Each Occurrence \$1,000,000
  - 2. Annual Aggregate \$1,000,000
- B. Property Damage
  - 1. Each Occurrence \$1,000,000
  - 2. Annual Aggregate \$1,000,000

6.5 CONTRACTOR shall name the CITY, as an additional insured on each of the policies required herein and shall hold the CITY, its agents, officers and employees harmless on account of claims for damages to persons, property or premises arising out of the services provided hereunder.



- 6.6 Any insurance required of CONTRACTOR pursuant to this Agreement must also be required by any subcontractor in the same limits and with all requirements as provided herein, including naming the CITY as an additional insured, in any work that is subcontracted unless such subcontractor is covered by the protection afforded by the CONTRACTOR and provided proof of such coverage is provided to CITY. The CONTRACTOR and any subcontractors shall maintain such policies during the term of this Agreement.

#### **ARTICLE 7**

##### **NON-DISCRIMINATION & EQUAL OPPORTUNITY EMPLOYMENT**

- 7.1 During the performance of the Agreement, neither CONTRACTOR nor its subcontractors shall discriminate against any employee or applicant for employment because of race, religion, color, gender, national origin, sex, age, marital status, political affiliation, familial status, sexual orientation, or disability if qualified. CONTRACTOR will take affirmative action to ensure that employees are treated during employment, without regard to their race, religion, color, gender, national origin, sex, age, marital status, political affiliation, familial status, sexual orientation, or disability if qualified. Such actions must include, but not be limited to, the following: employment, promotion; demotion or transfer; recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. CONTRACTOR shall agree to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause. CONTRACTOR further agrees that he/she/it will ensure that subcontractors, if any, will be made aware of and will comply with this nondiscrimination clause.

#### **ARTICLE 8**

##### **INDEPENDENT CONTRACTOR**

- 8.1 This Agreement does not create an employee/employer relationship between the parties. It is the intent of the parties that the CONTRACTOR is an independent CONTRACTOR under this Agreement and not the CITY's employee for all purposes, including but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, the State Workers' Compensation Act, and the State unemployment insurance law. The CONTRACTOR shall retain sole and absolute discretion in the judgment of the manner and means of carrying out CONTRACTOR activities and responsibilities hereunder provided, further that administrative procedures applicable to services rendered under this Agreement shall be those of CONTRACTOR which policies of CONTRACTOR shall not conflict with CITY, State, H.U.D., or United States policies, rules or regulations relating to the use of CONTRACTOR Funds provided for herein. The CONTRACTOR agrees that it is a separate and independent enterprise from the CITY, that it has full opportunity to find other business, that it has made its own investment in its business, and that it will utilize a high level of skill necessary to perform the work. This



Agreement shall not be construed as creating any joint employment relationship between the CONTRACTOR and the CITY and the CITY will not be liable for any obligation incurred by CONTRACTOR including but not limited to unpaid minimum wages and/or overtime premiums.

#### **ARTICLE 9 SIGNATORY AUTHORITY**

- 9.1 CONTRACTOR shall provide CITY with copies of requisite documentation evidencing that the signator for CONTRACTOR has the authority to enter into this Agreement.

#### **ARTICLE 10 MERGER; AMENDMENT**

- 10.1 This Agreement constitutes the entire Agreement between CONTRACTOR and CITY, and negotiations and oral understandings between the parties are merged herein. This Agreement can be supplemented or amended only by a written document executed by both CONTRACTOR and CITY with the same formality and equal dignity herewith.

#### **ARTICLE 11 DEFAULT OF CONTRACT & REMEDIES**

- 11.1 CITY reserves the right to recover any ascertainable actual damages incurred as a result of the failure of CONTRACTOR to perform in accordance with the requirements of this Agreement, or for losses sustained by CITY resultant from CONTRACTOR failure to perform in accordance with the requirements of this Agreement.

#### **ARTICLE 12 BANKRUPTCY**

- 12.1 It is agreed that if CONTRACTOR is adjudged bankrupt, either voluntarily or involuntarily, then this Agreement shall terminate effective on the date and at the time the bankruptcy petition is filed.

#### **ARTICLE 13 DISPUTE RESOLUTION**

- 13.1 In addition to any other remedy provided hereunder, CITY, at its option, may use arbitration to resolve any controversy or claim arising out of or relating to this Agreement if arbitration is elected by CITY. Any controversy or claim arising out of or relating to this Agreement, or breach thereof, may be settled by arbitration in accordance with the rules of the American Arbitration Association and judgment upon the award rendered by the arbitrators may be entered into by any court having jurisdiction thereof. In the event arbitration is elected by CITY, such controversy or claim shall be submitted to one arbitrator selected by the CITY from the National Panel of The American Arbitration Association.



**13.2 Operations During Dispute.**

13.2.1 In the event that a dispute, if any, arises between CITY and CONTRACTOR relating to this Agreement, performance or compensation hereunder, CONTRACTOR shall continue to provide the Commodities in full compliance with all terms and conditions of this Agreement as interpreted by CITY regardless of such dispute.

13.2.2 Notwithstanding the other provisions in this Section, CITY reserves the right to terminate the Agreement at any time, whenever the subject goods and/or commodities provided by CONTRACTOR fail to meet reasonable standards of the trade or any warranty, express or implied contained herein, after CITY gives written notice to the CONTRACTOR of the deficiencies as set forth in Section 2.4.1 of this Agreement.

**ARTICLE 14  
PUBLIC RECORDS**

14.1 The City of Pembroke Pines is public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law. Specifically, the Contractor shall:

14.1.1 Keep and maintain public records required by the CITY to perform the service;

14.1.2 Upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in chapter 119, Fla. Stat., or as otherwise provided by law;

14.1.3 Ensure that public records that are exempt or that are confidential and exempt from public record disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and, following completion of the contract, CONTRACTOR shall destroy all copies of such confidential and exempt records remaining in its possession after the CONTRACTOR transfers the records in its possession to the CITY; and

14.1.4 Upon completion of the contract, CONTRACTOR shall transfer to the CITY, at no cost to the CITY, all public records in CONTRACTOR's possession. All records stored electronically by the CONTRACTOR must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology systems of the CITY.

14.2 The failure of Contractor to comply with the provisions set forth in this Article shall constitute a Default and Breach of this Agreement and the CITY shall enforce the Default in accordance with the provisions set forth in **Article 11**.



**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT**

**CITY CLERK  
10100 PINES BOULEVARD, 5<sup>th</sup> FLOOR  
PEMBROKE PINES, FL 33026  
(954) 450-1050  
[mgraham@ppines.com](mailto:mgraham@ppines.com)**

**ARTICLE 15  
MISCELLANEOUS**

- 15.1 **Ownership of Documents.** Reports, surveys, studies, and other data provided in connection with this Agreement are and shall remain the property of CITY, whether or not the project for which they are made is completed.
- 15.2 **Legal Representation.** It is acknowledged that each party to this agreement had the opportunity to be represented by counsel in the preparation of this Agreement, and accordingly, the rule that a contract shall be interpreted strictly against the party preparing same shall not apply herein due to the joint contributions of both parties.
- 15.3 **Records.** CONTRACTOR shall keep such records and accounts and require any and all subcontractors to keep records and accounts as may be necessary in order to record complete and correct entries as to the provision of Commodities or purchases hereunder for which CONTRACTOR. Such books and records will be available at all reasonable times for examination and audit by CITY and shall be kept for a period of **three (3) years** after the completion of all work to be performed pursuant to this Agreement, or as otherwise required by Florida law. Incomplete or incorrect entries in such books and records will be grounds for disallowance by CITY of any fees or expenses based upon such entries.
- 15.4 **Assignments; Amendments.** This Agreement, and any interests herein, shall not be assigned, transferred or otherwise encumbered, under any circumstances, by CONTRACTOR without the prior written consent of CITY. For purposes of this Agreement, any change of ownership of CONTRACTOR shall constitute an assignment which requires CITY approval. However, this Agreement shall run to the benefit of CITY and its successors and assigns.



It is further agreed that no modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

- 15.5 **No Contingent Fees.** CONTRACTOR warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for CONTRACTOR to solicit or secure this Agreement, and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for CONTRACTOR any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Agreement. For the breach or violation of this provision, CITY shall have the right to terminate the Agreement without liability at its discretion, to deduct from the contract price, or otherwise recover the full amount of such fee, commission, percentage, gift or consideration.
- 15.6 **Notice.** Whenever any party desires to give notice unto any other party, it must be given by written notice, sent by certified United States mail, with return receipt requested, addressed to the party for whom it is intended and the remaining party, at the places last specified, and the places for giving of notice shall remain such until they shall have been changed by written notice in compliance with the provisions of this section. For the present, CONTRACTOR and CITY designate the following as the respective places for giving of notice:

CITY                      Charles F. Dodge, City Manager  
City of Pembroke Pines  
10100 Pines Boulevard  
Pembroke Pines, Florida 33025  
Telephone No.            (954) 431-4884  
Facsimile No.            (954) 437-1149

Copy To:                Samuel S. Goren, City Attorney  
Goren, Cherof, Doody & Ezrol, P.A.  
3099 East Commercial Boulevard, Suite 200  
Fort Lauderdale, Florida 33308  
Telephone No.            (954) 771-4900  
Facsimile No.            (954) 771-4923

CONTRACTOR:        Dee Daniels, Director of Sales  
Rev RTC d/b/a Hall-Mark RTC  
725 SW 46<sup>th</sup> Ave  
Ocala, FL 34474  
Telephone No:            (352) 629-6305  
Facsimile No:            (352) 629-2108  
E-Mail:                    dee.daniels@revrtc.com

- 15.7 **Binding Authority.** Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf



of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.

- 15.8 **Headings.** Headings herein are for the convenience of reference only and shall not be considered in any interpretation of this Agreement.
- 15.9 **Exhibits.** Each Exhibit referred to in this Agreement forms an essential part of this Agreement. The exhibits if not physically attached should be treated as part of this Agreement and are incorporated herein by reference.
- 15.10 **Severability.** If any provision of this Agreement or application thereof to any person or situation shall to any extent, be held invalid or unenforceable, the remainder of this Agreement, and the application of such provisions to persons or situations other than those as to which it shall have been held invalid or unenforceable, shall not be affected thereby, and shall continue in full force and effect, and be enforced to the fullest extent permitted by law.
- 15.11 **Extent of Agreement and Conflicts.** This Agreement represents the entire and integrated agreement between CITY and CONTRACTOR and supersedes all prior negotiations, representations or agreements, either written or oral.
- 15.12 **Waiver.** Failure of CITY to insist upon strict performance of any provision or condition of this Agreement, or to execute any right herein contained, shall not be constructed as a waiver or relinquishment for the future of any such provision, condition, or right, but the same shall remain in full force and effect.
- 15.13 **Disputes.** Any claim, objection, or dispute arising out of the terms of this Agreement shall be litigated in Broward County, Florida.
- 15.14 **Attorney's Fees.** In the event that either party brings suit for enforcement of this Agreement, each party shall bear its own attorney's fees and court costs, except as otherwise provided under the indemnification provisions set forth herein above.

**THE REMAINDER OF THIS PAGE  
HAS BEEN INTENTIONALLY LEFT BLANK.**



City of Pembroke Pines

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first written above.

CITY:

CITY OF PEMBROKE PINES, FLORIDA

ATTEST:



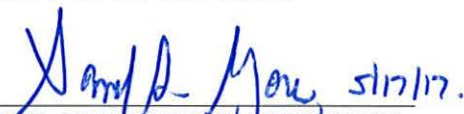
MARLENE D. GRAHAM, CITY CLERK

5/23/17

By: 

CHARLES F. DODGE, CITY MANAGER

APPROVED AS TO FORM:

  
OFFICE OF THE CITY ATTORNEY

CONTRACTOR:

REV RTC d/b/a Hall-Mark RTC

By: 

Name: William D. Alm


Title: V.P. / GENERAL MANAGER



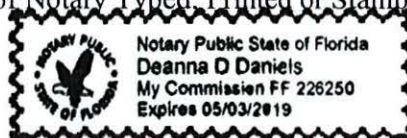
STATE OF Florida  
COUNTY OF Marion

BEFORE ME, an officer duly authorized by law to administer oaths and take acknowledgments, personally appeared William D. Alm as VP/CM of **REV RTC D/B/A HALL-MARK RTC**, a company authorized to conduct business in the State of Florida, and acknowledged execution of the foregoing Agreement as the proper official of **REV RTC D/B/A HALL-MARK RTC** for the use and purposes mentioned in it and affixed the official seal of the corporation, and that the instrument is the act and deed of that corporation.

IN WITNESS OF THE FOREGOING, I have set my hand and official seal at in the State and County aforesaid on this 21 day of April, 2017.

  
NOTARY PUBLIC

(Name of Notary Typed, Printed or Stamped)





# Fire Engine / Pumper Truck

## Invitation for Bids # FI-16-01

General Information		
Project Cost Estimate	Not Applicable	Not Applicable
Evaluation of Proposals	Staff	See Section 1.19
Mandatory Pre-Bid Meeting	Not Applicable	Not Applicable
Question Due Date	January 30, 2017	See Section 1.20
Proposals will be accepted until	2:00 p.m. on February 14, 2017	See Section 1.20
Proposal Security / Bid Bond	Not Applicable	Not Applicable
Payment and Performance Bonds	Not Applicable	Not Applicable

THE CITY OF PEMBROKE PINES  
PURCHASING DIVISION  
8300 SOUTH PALM DRIVE  
PEMBROKE PINES, FLORIDA 33025  
(954) 518-9020



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#### ATTACHMENTS

Attachment A: Contact Information Form

Attachment B: Vendor Information Form and a W-9

Attachment C: Non-Collusive Affidavit

Attachment D: Sworn Statement on Public Entity Crimes Form

Attachment E: Local Vendor Preference Certification

Attachment F: Veteran Owned Small Business Preference Certification

Attachment G: Equal Benefits Certification Form

Attachment H: Proposer’s Qualification Statement

Attachment I: Sample Insurance Certificate

Attachment J: Specimen Contract

Attachment K: Reference Form



## **SECTION 1 – INSTRUCTIONS**

### **1.1 NOTICE**

Notice is hereby given that the City Commission of the City of Pembroke Pines is seeking sealed proposals for:

#### **IFB # FI-16-01 Fire Engine/Pumper Truck**

Solicitations may be obtained from the City of Pembroke Pines website at <http://www.ppines.com/index.aspx?NID=667> and on the [www.BidSync.com](http://www.BidSync.com) website.

If you have any problems downloading the solicitation, please contact the BidSync Support line at 1-800-990-9339.

If additional information help is needed with downloading the solicitation package please contact the Purchasing Office at (954) 518-9020 or by email at [purchasing@ppines.com](mailto:purchasing@ppines.com). The Purchasing Office hours are between 7:00 a.m. - 6:00 p.m. on Monday through Thursday and is located at 8300 South Palm Drive, Pembroke Pines, Florida 33025.

The City requires all questions relating to the solicitation be entered through the “Ask a Question” option tab available on the BidSync website. Responses to the questions will be provided online at [www.bidsync.com](http://www.bidsync.com). Such request must be received by the “Question Due Date” stated in the solicitation. The issuance of a response via BidSync is considered an Addendum and shall be the only official method whereby such an interpretation or clarification will be made.

**Proposals will be accepted until 2:00 p.m., Tuesday, February 14, 2017.** Proposals must be **submitted electronically at [www.BidSync.com](http://www.BidSync.com)**. The sealed electronic proposals will be publicly opened at 2:30 p.m. by the City Clerk’s Office, in the City Hall Administration Building, 3<sup>rd</sup> Floor Conference Room located at 10100 Pines Boulevard, Pembroke Pines, Florida, 33026.

### **1.2 PURPOSE**

The City of Pembroke Pines is seeking proposals to provide the Fire Department with a Fire Engine / Pumper Truck that will meet their needs.

### **1.3 GENERAL INFORMATION**

- a. The proposal form shall include a Pre-Payment Discount Option
- b. The proposal form shall include a Trade-In Option for a 1997 E-ONE Hush with 61,000 miles and 1,900 hours. (Vehicle # 7757)



- c. The awarded proposer shall allow two trips for four people to the plant; one trip for a pre-build meeting and the other trip for final inspection.

### **1.3.1 DELIVERY**

The completed apparatus shall be driven under its own power to the fire department. An operational demonstration shall also be provided at the time of delivery.

### **1.3.2 WARRANTIES**

The following warranties shall be supplied:

1. The apparatus shall be warranted to be free from mechanical defects in workmanship for a period of one (1) year. The apparatus shall be covered for parts and labor costs associated with repairs for a period one (1) year.
2. Life-time warranty on the frame.
3. Seven (7) year warranty on paint.
4. Ten (10) body structural warranty
5. Ten (10) year cab structural warranty
6. Manufacturers Warranties for all major components.

Detailed warranty documents shall be included for complete coverage on each of these warranties.

### **1.3.3 MANUFACTURING & LOCATIONS**

The apparatus will be manufactured in facilities wholly owned and operated by the company. A complete stock of service parts, and service shall be provided on a 24 hours around the clock basis. The company shall maintain parts and service for a minimum period of twenty (20) years on each apparatus model manufactured.

## **1.4 SPECIFICATIONS**

### **1.4.1 INTENT OF SPECIFICATIONS**

It is the intent of these specifications to cover the furnishing and delivery to the purchaser a complete apparatus equipped as hereinafter specified. With a view of obtaining the best results and the most acceptable apparatus for service in the fire department, these specifications cover only the general requirements as to the type of construction and tests to which the apparatus must conform, together with certain details as to finish, equipment and appliances with which the successful bidder must conform. Minor details of construction and materials where not otherwise specified are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features. The apparatus shall conform to the requirements of the current (at the time of bid) National Fire Protection Association Pamphlet #1901 for Motor Fire Apparatus unless otherwise specified in these specifications.



Bids shall only be considered from companies which have an established reputation in the field of fire apparatus construction and have been in business for a minimum of ten (10) years.

Each bid shall be accompanied by a set of "Contractor's Specifications" consisting of a detailed description of the apparatus and equipment proposed and to which the apparatus furnished under contract must conform. Computer run-off sheets are not acceptable as descriptive literature.

The specifications shall indicate size, type, model and make of all component parts and equipment.

#### **1.4.2 STATEMENT OF EXCEPTIONS TO NFPA 1901**

If, at the time of delivery, the apparatus manufacturer is not in compliance, a statement of exceptions must be provided as follows:

The specific standard affected. A statement describing why the manufacturer is not in compliance. A description of the remedy, and who the responsible party is.

The document must be signed by an officer of the company, and an authorized agent of the purchaser.

#### **1.4.3 QUALITY AND WORKMANSHIP**

The design of the apparatus must embody the latest approved automotive engineering practices.

The workmanship must be the highest quality in its respective field. Special consideration shall be given to the following points: Accessibility to various areas requiring periodic maintenance, ease of operation (including both pumping and driving) and symmetrical proportions.

Construction must be rugged and ample safety factors must be provided to carry loads as specified and to meet both on and off road requirements and speed as set forth under "Performance Test and Requirements."

#### **1.4.4 PERFORMANCE TESTS AND REQUIREMENTS**

A road test shall be documented with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles shall run quietly and free from abnormal vibration or noise throughout the operating range of the apparatus. The apparatus, when loaded, shall be approximately 66% on the rear axle. The successful bidder shall furnish a weight



certification showing weight on the front and rear axle, and the total weight of the completed apparatus at the time of delivery.

- a. The apparatus must be capable of accelerating to 30 MPH from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed engine RPM.
- b. The service brakes shall be capable of stopping the fully loaded vehicle within 35 feet from a speed of 25 MPH on a level concrete highway.
- c. The apparatus, fully loaded, shall be capable of obtaining a speed of 50 MPH on a level highway with the engine not exceeding 95% of its governed RPM (full load).
- d. The apparatus shall be tested and approved by a qualified testing agency in accordance with their standard practices for pumping engines.
- e. The contractor shall furnish copies of the Pump Manufacturer's Certification of Hydrostatic Test (if applicable), the Engine Manufacturer's current Certified Brake Horsepower Curve and the Manufacturer's Record of Construction Details.

#### **1.4.5 FAILURE TO MEET TESTS**

In the event the apparatus fails to meet the test requirements of these specifications on the first trial, a second trial may be made at the option of the bidder within thirty (30) days of the date of the first trials. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Permission to keep and/or store the apparatus in any building owned or occupied by the purchaser shall not constitute acceptance of same.

#### **1.4.6 EXCEPTIONS TO SPECIFICATIONS**

The following specifications shall be strictly adhered to. Exceptions shall be considered if they are deemed equal to or superior to the specifications, provided they are fully explained on a separate page entitled "EXCEPTIONS TO SPECIFICATIONS." Exceptions shall be listed by page and paragraph.

Failure to denote exceptions in the above manner may result in immediate rejection of the proposal. In addition a general statement taking "TOTAL EXCEPTION" to the specifications shall result in immediate rejection of bid.

#### **1.4.7 GENERAL CONSTRUCTION**

The apparatus shall be designed and the equipment mounted with due consideration to distribution of load between the front and rear axles so that all specified equipment, including filled water tank, a full complement of personnel and fire hose shall be carried without injury to the apparatus. Weight balance and distribution shall be in accordance with the recommendations of the International Association of Fire Chiefs and National Fire Association (or American Insurance Association). Certified Laboratories certificate



shall be submitted by the manufacturer. Weight of apparatus shall meet all federal axle load laws.

#### **1.4.8 DELIVERY REQUIREMENTS**

The apparatus shall be completely equipped as per these specifications upon arrival and on completion of the required tests shall be ready for immediate service in the fire department of the purchaser. Any and all alterations required at the scene of delivery to comply with these specifications must be done at the contractor's expense.

#### **1.4.9 U.S.A. MANUFACTURER**

The entire apparatus shall be assembled within the borders of the Continental United States to insure more readily available parts (without added costs and delays caused by tariffs and customs) and service, as well as protecting the purchaser should legal action ever be required.

#### **1.4.10 MANUFACTURER'S EXPERIENCE**

- a. Each manufacturer shall have been in business making similar apparatus for a minimum of forty-five (45) years.
- b. Pembroke Pines Fire Rescue will not accept any "prototype" apparatus.
- c. The manufacturer must have built at least thirty (30) of similar units in the last five years.
- d. The manufacturer must provide a list of at least five (5) departments in Florida with similar units.
- e. The manufacturer must have a licensed Full Service Center in Florida, preferably within Broward County and within (2.5) hours from the City of Pembroke Pines.
- f. The service center must have mobile warranty service provided from the main service center.

#### **1.4.11 ELIMINATION OF DIVIDED RESPONSIBILITY**

It is required that each bidder produce both the chassis and complete apparatus. To eliminate divided responsibility and service, the chassis and body must be manufactured by the same Company. Manufacturer shall state the number of years the Company has been producing their own chassis and body. Manufacturer shall state compliance with the paragraph. NO EXCEPTIONS.

#### **1.4.12 FAMA COMPLIANCE**

Manufacturer must be a current member of the Fire Apparatus Manufacturer's Association.



#### **1.4.13 FUTURE PURCHASES AND “TAG ON” ORDERS**

The successful bidder shall accept “tag on” orders to this bid proposal for a period not to exceed three (3) years from the bid opening date. The successful bidder shall honor the priced quoted for a period of 90 days from the date of the bid opening. For the remainder of the year (275 days), the bidder shall agree to an economic price escalation of 1.5%. Future years beyond the initial first year shall have an economic price escalation of 3% as a normal course of business. Items outside the normal course shall include changes legislated by Federal, State or Local Governments that impact the cost to manufacture the truck. In addition, changes to NFPA 1901 that require additional cost shall be borne by the purchaser. These may include, but are not limited to changes that affect the major vendors of the fire apparatus industry such as pump manufacturer, seat manufacturer, electrical power supplies (generators) and power-train (engine & transmission).

The bidder shall honor the “tag on” order from any municipality within the United States or Canada.

#### **1.4.14 CONFIGURATION OF “TAG ON” ORDERS**

In many cases the entity wishing to “tag on” to an existing order may require their apparatus to be configured differently from the original proposed apparatus. The bidder shall allow changes to the configuration within good engineering guidelines. The changes will be subject to current pricing in effect at the time of order. For example, a different engine may be required. This shall be considered a “change order” and the purchase price shall be adjusted up or down depending on the current option price.

### **1.5 WIRING SCHEMATIC**

A CD containing wiring diagrams of the apparatus shall be provided at the time of delivery.

### **1.6 CHASSIS SPECIFICATIONS**

#### **1.6.1 CUSTOM CHASSIS**

A Severe Duty Cab and Chassis system shall be provided. The chassis shall be manufactured in the factory of the bidder. The chassis shall be designed and manufactured for heavy duty service with adequate strength and capacity of all components for the intended load to be sustained and the type of service required. The cab and chassis system, shall be considered the bidders “Top of the Line”.

There shall be no divided responsibility in the production of the apparatus.



### **1.6.2 DOUBLE FRAME RAILS**

The chassis frame shall be of a ladder type design utilizing industry accepted engineering best practices. The frame shall be specifically designed for fire apparatus use.

Each frame rail shall be constructed of two .375" thick-formed channels. The outer channel shall be 10.188" x 3.50" x .375" and the inner channel (liner) shall be 9.31" x 3.13" x .375".

Over the entire length of the frame rail, the section modulus shall be 31.8 in.<sup>3</sup>. The resistance to bending moment (RBM) shall be 1,590,000 in./lbs.

The cross-members shall be constructed of minimum .375" formed channels and have formed gusseted ends at the frame rail attachment. Single axle rear suspensions will utilize 3 piece bolt assembled cross-members at each suspension hanger.

Each rail is media blasted to remove scale, oil, and contaminants. This blasting also ensures paint adhesion. Each rail will be primed with Cathacoat 302HB, a high performance, two component, reinforced inorganic zinc-rich primer with proven cathodic protection of steel structures, prior to assembly.

.625 inch, grade 8 flange, Huck bolt fasteners shall be used on all permanently attached brackets to the frame to eliminate the need for bolt re-tightening.

A lifetime warranty shall be provided, per manufacturer's written statement.

### **1.6.3 FRONT TOW EYES, BELOW BUMPER**

There shall be two front tow eyes with 3" diameter holes attached directly to the chassis frame, accessible below the front bumper.

### **1.6.4 TOW EYES, PAINTED FINISH**

The front tow eyes shall be painted to match the color of the chassis frame.

### **1.6.5 REAR TOW EYES**

There shall be two tow eyes attached directly to the chassis frame rail and shall be chromate acid etched for superior corrosion resistance and painted to match the chassis.

### **1.6.6 STEERING**

The steering system shall be a TRW wheel to wheel steering system that is tested and certified by TRW, consisting of a heavy duty TRW/Ross Model TAS-85 power steering gear, TRW PS36 steering pump, miter box, drag links, and a thermostatic controlled fan cooled system (set point 185 deg. F to 170 deg. F). The steering gear shall be bolted to



the frame at the cross-member for steering linkage rigidity. Four (4) turns from lock to lock with an 18" diameter slip resistant rubber covered steering wheel. Steering column shall have six-position tilt and 2" telescopic adjustment. The cramp angle shall be 45 degrees with 315mm tires or 43 degrees with 425mm tires providing very tight turning ability.

#### **1.6.7 DRIVELINE**

The driveline shall consist of Spicer 1710 series dual grease fitting universal joints with "Half-Round" end yokes. The drive shaft shall be built with a heavy-duty steel tube 4.095" outside diameter x .180 wall thickness. The shafts shall be dynamically balanced prior to installation into the chassis. A splined slip joint shall be provided in each shaft assembly. Universal joints shall be extended life. There shall be two (2) Zerk fittings in each universal joint assembly so the joint can be greased without turning the shaft.

#### **1.6.8 FRONT AXLE**

A Meritor™ MFS-20-133A non-driving, front steer axle with a capacity 19,840 pounds or higher shall be provided. The axle shall have a 3.74" dropped I-beam, be 10 bolt hub piloted, and furnished with oil seals.

#### **1.6.9 SUSPENSION (FRONT)**

The front suspension shall be a variable rate taper-leaf design, 54" long and 4" wide. Long life, maintenance free, urethane bushed spring shackles shall be utilized. All spring and suspension mounting shall be attached directly to frame with high strength Huck bolts and self-locking round collars. Spring shackles and pins that require grease shall not be acceptable. Or Equal.

#### **1.6.10 ENHANCED FRONT SUSPENSION SYSTEM**

The front suspension shall have the handling, stability, and ride quality enhanced by the use of a Ride Tech auxiliary spring system and Koni high performance shock absorbers. This system shall utilize three stage, urethane auxiliary springs, and high performance gas filled shock absorbers to control the deflection of the leaf springs, and dampen vibration normally transmitted to the chassis. This maintenance free system will be custom tuned to the apparatus gross weight rating for maximum performance, while maintaining a soft compliant ride. Or Equal. A (3) three year 36,000 mile warranty will be provided by the manufacturer.

#### **1.6.11 FRONT TIRES**

Front tires shall be Goodyear 385/65R22.5, load range J, G296 highway tread, single tubeless type with a GAWR of 20,000 pounds. Wheels shall be disc type, hub piloted, 22.5 x 12.25 10 stud 11.25 bolt circle.



#### **1.6.12 REAR AXLE**

The rear axle shall be a Meritor™ RS-26-185 Single reduction drive axle with a capacity of 27,000 lbs. The axles shall be hub piloted, 10 studs, furnished with oil seals.

#### **1.6.13 TOP SPEED**

The top speed shall be approximately 68 MPH.

#### **1.6.14 SUSPENSION (REAR)**

##### **27,000 LB AIR RIDE**

A Hendrickson FIREMAAX model FMX272 air ride rear suspension shall be provided. The suspension shall be a dual air spring design equipped with dual height control valves to maintain proper ride height. To reduce axle stress and maintain axle position and pinion angle the suspension design shall incorporate three torque rods. The ground rating of the suspension shall be 27,000 pounds.

#### **1.6.15 REAR TIRES**

Rear tires shall be Goodyear 12R22.5, load range H, G661 highway tread, dual tubeless type with a GAWR up to 27,000 pounds. Wheels shall be disc type, hub piloted, 22.5 x 8.25 10 stud with 11.25" bolt circle.

#### **1.6.16 TIRE PRESSURE MONITOR**

A Real Wheels LED tire pressure sensor shall be provided for each wheel. The pressure sensor shall indicate if a particular tire is not properly inflated. A total of six (6) indicators shall be provided.

#### **1.6.17 WHEELS**

The front and rear wheels shall be ACCURIDE® brand aluminum.

#### **1.6.18 HUB COVERS**

Polished stainless steel hub covers shall be provided for the front and rear axle.

#### **1.6.19 LUG NUT CAPS**

Chrome plated lug nut caps shall be provided for the front and rear wheels.

#### **1.6.20 FRONT MUD FLAPS**

Hard rubber mud flaps shall be provided for front tires.



### **1.6.21 REAR MUD FLAPS**

Hard rubber mud flaps shall be provided for rear tires.

## **1.7 ENGINE SPECIFICATIONS**

### **1.7.1 ENGINE**

- a. Cummins Diesel ISL 9, 450 H.P. @ 2100 R.P.M., 1250 ft. lb. Torque @ 1400 R.P.M.
- b. Displacement: 8.9 liter displacement.
- c. Cylinders: 6
- d. Bore: 4.49" (114mm) Stroke: 5.69" (145mm)
- e. The engine shall have a five year or 100,000 mile warranty and approval by Cummins.
- f. Diesel for installation in the chassis.
- g. The engine shall be equipped with the following: Air cleaner
- h. Air compressor - 18.7 CFM
- i. Exhaust - single with discharge right side, ahead of rear wheels
- j. Primary & secondary fuel filters (remoted mounted) Lube oil cooler
- k. Lube oil filter - full flow
- l. Starting motor - 12 volt

### **1.7.2 EXHAUST SYSTEM**

The engine exhaust system shall include the following components:

- Diesel Particulate Filter (DPF)
- Diesel Oxidation Catalyst (DOC)
- Diesel Exhaust Fluid (DEF)
- Selective Catalytic Reduction Filter (SCR)

The SCR catalyst utilizes the DEF fluid, which consists of urea and purified water, to convert NOx into nitrogen and water. This will meet or exceed 2013 EPA emissions requirements.

The engine exhaust system shall be horizontal design constructed from heavy-duty truck components. The exhaust tubing shall be stainless steel to the DPF through to the SCR aluminized steel from the SCR to the exhaust tip. A heavy duty stainless steel bellows tube shall be used to isolate the exhaust system from the engine. The system shall be equipped with single canister consisting of a Diesel Oxidation Catalyst (DOC) and a Diesel Particulate Filter (DPF), and shall be mounted under the right side frame rail, meeting the specific engine manufacturer's specifications and current emission level



requirements. The outlet shall be directed to the forward side of the rear wheels, exiting the right side with a heavy duty heat diffuser. The heat diffuser shall prevent the exhaust temperature from exceeding 851 deg. F during a regeneration cycle. A heat-absorbing sleeve shall be provided on the exhaust pipe in the engine compartment area to reduce the heat, protect the alternator, and also to protect personnel while servicing the engine compartment.

### **1.7.3 AFTER TREATMENT SYSTEM**

To meet EPA requirements of Particulate output, a DPF (Diesel Particulate Filter) is used. To meet EPA requirements of Nitrous Oxide output an SCR (Selective Catalytic Reduction) system utilizing DEF (Diesel Exhaust Fluid) is used.

### **1.7.4 ON-BOARD DIAGNOSTIC (OBD) SYSTEM**

The engine shall be equipped with an on-board diagnostic (OBD) system which shall monitor emissions- related engine systems and components and alert the operator of any malfunctions. The OBD system is designed to further enhance the engine and operating system by providing early detection of emission- related faults. The engine control unit (ECU) will manage smart sensors located throughout the engine and after-treatment system. The system shall monitor component verification and sensor operation. There shall be warning lights located in the dash instrument panel to alert the operator of a malfunction. A data port shall be provided under the driver's side dash for the purpose of code reading and troubleshooting. All communication shall be provided through the J1939 data link.

### **1.7.5 AIR CLEANER/INTAKE**

The engine air intake and filter shall be designed in accordance with the engine manufacturer's recommendations. It shall be 99.9% effective in removing airborne contaminants when tested per the industry standard SAE J726 procedure and offer a dirt holding capacity of at least 3.0 gm/cfm of fine dust (tested per SAE J726) offering superior engine protection.

The air filter shall be located at the front of the apparatus and shall be at least 66" above the ground, to allow fording deep water in an emergency situation.

An ember separator shall be provided in the engine air intake meeting the requirements of NFPA 1901. An Air Restriction warning light shall be provided and located on the cab dash.

### **1.7.6 FUEL/WATER SEPARATOR**

A Cummins approved FleetGuard FH230 Fuel Pro filter will be remote mounted to the Chassis frame rail.



### **1.7.7 COOLING SYSTEM**

The cooling system shall be designed to keep the engine properly cooled under all conditions of road and pumping operations. The cooling system shall be designed and tested to meet or exceed the engine and transmission manufacturer's requirements, and EPA regulations.

The complete cooling system shall be mounted in a manner to isolate the system from vibration and stress. The individual cores shall be mounted in a manner to allow expansion and contraction at various rates without inducing stress to the adjoining core(s).

The cooling system shall be comprised of a charge air cooler to radiator serial flow package that provides the maximum cooling capacity for the specified engine as well as serviceability. The main components shall include a surge tank, a charge air cooler, bolted to the top of the radiator to maximize cooling, recirculation shields, a shroud, a fan, and required tubing. All components shall consist of an individually sealed system.

### **1.7.8 RADIATOR**

The radiator shall be a cross-flow design constructed completely of aluminum with welded side tanks. The radiator shall be bolted to the bottom of the charge air cooler to allow a single depth core, thus allowing a more efficient and serviceable cooling system.

The radiator shall be equipped with a drain cock to drain the coolant for serviceability. The drain cock shall be located at the lowest point of the aluminum cooling system to maximize draining of the system.

### **1.7.9 CHARGE AIR COOLER**

The charge air cooler shall be of a cross-flow design and constructed completely of aluminum with extruded tanks. The charge air cooler shall be bolted to the top of the radiator to allow a single depth core.

### **1.7.10 COOLANT**

The cooling system shall be filled with a 50/50 mix. The coolant makeup shall contain ethylene glycol and de-ionized water to prevent the coolant from freezing to a temperature of -34 degrees F.

### **1.7.11 HOSES & CLAMPS**

Silicone hoses shall be provided for all engine coolant lines.

All radiator hose clamps shall be spring loaded stainless steel constant torque hose clamps for all main hose connections to prevent leaks. Recirculation shields shall be



installed where required to prevent heated air from reentering the cooling package and affecting performance.

#### **1.7.12 FAN**

The engine cooling system shall incorporate a heavy-duty composite 11- blade Z-series fan. It shall provide the highest cooling efficiently while producing the lowest amount of noise. This robust yet light-weight fan results in less wear and stress on motors and bearings.

A shroud and recirculation shield system shall be used to ensure air that has passed through the radiator is not drawn through again.

The fan tip to radiator core clearance shall be kept at a minimal distance to increase the efficiency of the fan and reduce fan blast noise.

#### **1.7.13 FAN CLUTCH**

A fan clutch shall be provided that shall allow the cooling fan to operate only when needed. The fan shall remain continuously activated when the truck is placed in pump gear.

#### **1.7.14 SURGE TANK**

The cooling system shall be equipped with an aluminum surge tank mounted to the officer's side of the cooling system core. The surge tank shall house a low coolant probe and sight glass to monitor the coolant level. Low coolant shall be alarmed with the check engine light. The surge tank shall be equipped with a dual seal cap that meets the engine manufacturer's pressure requirements, and system design requirements.

The tank shall allow for expansion and to remove entrained air from the system. There shall also be an extended fill neck to prevent system overfill and encroachment of expansion air space. Baffling shall be installed in the tank to prevent agitated coolant from being drawn into the engine cooling system.

#### **1.7.15 FUEL TANK**

The chassis shall be equipped with a 65-gallon rear mounted, behind the rear axle, rectangular fuel tank that shall be constructed of steel with stamped heads. The fuel tank shall be certified to meet FMVSS 393.67 tests. It shall also maintain engine manufacturer's recommended expansion room of 5%.

The tank shall be removable by means of six (6) bolted connections and dropped. One (1) tank baffle shall be used.



Dual pick-up and return ports with a single 3/4" tank drawtube shall be provided for diesel generators if required.

The fuel lines shall be nylon braid reinforced fuel hose with brass fittings. The lines shall be carefully routed along the inside of the frame rails. All fuel lines are covered in high temperature rated split plastic loom. Single suction and return fuel lines shall be provided.

The fuel tank shall be mounted in a saddle with 1/4" rubber, contact cemented to the saddle. The bottom of the fuel tank shall contain a 1/2" drain plug.

#### **17.16 FUEL FILL**

The fuel tank shall be equipped with a 2-1/4" filler neck assembly with a 3/4" vent located on the driver's side of the truck. A fuel fill cap attached with a lanyard shall be provided.

#### **1.7.17 FUEL COOLER**

Installed on the apparatus fuel system shall be an Air-To-Liquid aluminum fuel cooler. The fuel cooler shall be located in the lowest module of the cooling system.

#### **1.7.18 DIESEL EXHAUST FLUID TANK**

The exhaust system shall include a molded cross linked polyethylene tank. The tank shall have a capacity of 5 usable gallons and shall be mounted on the left side of the chassis frame.

The DEF tank fill neck shall accept only a 19mm dispensing nozzle versus the standard 22mm diesel fuel dispensing nozzle to prevent cross contamination. The DEF tank cap shall be blue in color to further prevent cross contamination.

A placard shall accompany fill location noting DEF specifications.

#### **1.7.19 ALTERNATOR**

A 320 ampere Prestolite/Leece Neville alternator with serpentine belt shall be provided the alternator shall generate 260 amperes at idle.

A low voltage alarm, audible and visual, shall be provided.

#### **1.7.20 BATTERIES**

The battery system shall be a single system consisting of four negative ground, 12 volt Interstate Group 31 MHD batteries, cranking performance of 950 CCA each with total of



3800 amps, 185 minute reserve capacity with 25 ampere draw at 80 degrees Fahrenheit. Each battery shall have 114 plates. Warranty shall be accepted nationwide.

The batteries shall be installed in a vented 304 stainless steel battery box with a removable aluminum cover to protect the batteries from road dirt and moisture. The battery cover shall be secured with four "T" handle rubber hold downs to provide easy access for maintenance and inspection. Stainless steel hardware will be used for installation. The batteries are to be placed on dri-deck and secured with a fiberglass hold down.

The batteries shall be wired directly to starter motor and alternator.

The battery cables shall be 3/0 gauge. Battery cable terminals shall be soldering dipped, color-coded and labeled on heat shrink tubing with a color-coded rubber boot protecting the terminals from corrosion. There shall be a 350-ampere fuse protecting the pump primer and a 250-ampere fuse protecting the electric cab tilt pump and other options as required.

#### **1.7.21 BATTERY JUMPER TERMINAL**

There shall be one set (two studs) of battery jumper terminals located by the battery box under the cab. The terminals shall have plastic color-coded covers. Each terminal shall be tagged to indicate positive/negative.

#### **1.7.22 BATTERY CHARGING**

A Kussmaul Auto Charge 1200 battery system charger shall be provided. The Auto Charge 1200 is a fully automatic battery charger with a very high output for vehicles with a single battery system. A single bar graph display is provided to indicate the state of charge of the battery system. The rated output shall be 40 amps for the vehicle battery system.

A 120 volt Auto Pump air compressor shall also be provided to maintain air within the air brake system.

A miniature air filter that mounts in the output pressure line of the air pump to trap moisture shall be provided. The micron filter element removes contaminants from the air line. A transparent bowl permits easy monitoring of water collected and a manual purge valve allows the operator to conveniently drain the bowl. A Bendix DV2 heated automatic drain valve shall be provided.

#### **1.7.23 SHORELINE**

A shoreline connection shall be provided and located on the driver's side of the cab between the front and rear doors.



### **1.7.24 AUTO-EJECT**

A Kussmaul Model 091-55-20-120 super electric auto-eject with weatherproof cover and power interrupt shall be provided.

## **1.8 TRANSMISSION SPECIFICATIONS**

### **1.8.1 TRANSMISSION**

The chassis shall be equipped with a Generation 5 Allison EVS3000 six (6) speed automatic transmission. It shall be programmed five (5) speed, sixth gear locked out, for fire apparatus vocation, in concert with the specified engine.

The transmission is communicated on the J-1939 through the communication port. The fifth gear shall be an overdrive ratio, permitting the vehicle to reach its top speed at the engine's governed speed. The dipstick is dipped in a rubber coating for ease in checking oil level when hot.

The chassis to transmission wiring harness shall utilize Metri-Pack 280 connectors with triple lip silicone seals and clip-type positive seal connections to protect electrical connections from contamination without the use of coatings.

- Ratings: Max Input (HP) 450
- Max Input (Torque) 1255 (lb. ft.) Max Turbine (Torque) 1700 (lb. ft.)
- Mechanical Ratios:
  - 1st - 3.49:1
  - 2nd - 1.86:1
  - 3rd - 1.41:1
  - 4th - 1.00:1
  - 5th - 0.75:1
  - Reverse - -5.03:1

### **1.8.2 ENGINE BRAKE**

The engine shall be equipped with a Jacobs compression engine brake. An "On/Off" switch shall be provided on the instrument panel within easy reach of the driver.

The engine brake shall interface with the Wabco ABS brake controller to prevent engine brake operations during adverse braking conditions.

A pump shift interlock circuit shall be provided to prevent the engine brake from activating during pumping operations.

The brake light shall activate when the engine brake is engaged.



### **1.8.3 TRANSMISSION COOLER**

The apparatus transmission shall be equipped with a Liquid-To-Liquid remote mounted cooler with aluminum internal components. The cooler shall be encased in an aluminum housing and mounted to the outside of the officer's side frame rail for accessibility and ease of service.

### **1.8.4 TRANSMISSION FLUID**

The transmission shall come filled with Castrol TranSynd™ Synthetic Transmission Fluid or approved equal meeting the Allison TES-295 specification. NO EXCEPTION.

### **1.8.5 TRANSMISSION SHIFTER**

An Allison "Touch Pad" shift selector shall be mounted to the right of the driver on the engine cover accessible to the driver. The shift position indicator shall be indirectly lit for nighttime operation.

## **1.9 BRAKES**

### **1.9.1 BRAKES, FRONT**

The front brakes shall be Arvin Meritor DiscPlus EX225 Air Disc Brakes. Each disc brake assembly shall include one (1) 17" vented rotor, one (1) lightweight hub, one (1) twin-piston caliper, and two (2) quick-change pads.

### **1.9.2 BRAKES, REAR**

The rear brakes shall be Meritor S-cam style. They shall be 16.5" x 7" with heavy duty return springs, and a double anchor pin design. They shall also have quick change shoes for fast easy brake relining.

### **1.9.3 AIR BRAKE SYSTEM**

The vehicle shall be equipped with air-operated brakes. The system shall meet or exceed the design and performance requirements of current FMVSS-121 and test requirements of current NFPA 1901 standards.

Each wheel shall have a separate brake chamber. A dual treadle valve shall split the braking power between the front and rear systems.

All main brake lines shall be color-coded nylon type protected in high temperature rated split plastic loom. The brake hoses from frame to axle shall have spring guards on both ends to prevent wear and crimping as they move with the suspension. All fittings for brake system plumbing shall be brass.



A Meritor Wabco System Saver 1200 air dryer shall be provided.

The air system shall be provided with a rapid build-up feature, designed to meet current NFPA 1901 requirements. The system shall be designed so the vehicle can be moved within 60 seconds of startup. The quick build up system shall provide sufficient air pressure so that the apparatus has no brake drag and is able to stop under the intended operating conditions following the 60-second buildup time. The vehicle shall not be required to have a separate on-board electrical air compressor or shoreline hookup to meet this requirement.

Four (4) supply tanks shall be provided. One air reservoir shall serve as a wet tank and a minimum of one tank shall be supplied for each the front and rear axles. A Schrader fill valve shall be mounted in the front of the driver's step well.

A spring actuated air release emergency/parking brake shall be provided on the rear axle. One (1) parking brake control shall be provided and located on the engine hood next to the transmission shifter within easy reach of the driver. The parking brake shall automatically apply at  $35 \pm 10$  PSI reservoir pressure. A Meritor WABCO IR-2 Inversion Relay Valve, supplied by both the Primary and Secondary air systems, shall be used to activate the parking brake and to provide parking brake modulation in the event of a primary air system failure.

Accessories plumbed from the air system shall go through a pressure protection valve and to a manifold so that if accessories fail they shall not interfere with the air brake system.

#### **1.9.4 AIR BRAKING ABS SYSTEM**

A Wabco ABS system shall be provided to improve vehicle stability and control by reducing wheel lock-up during braking. This braking system shall be fitted to axles and all electrical connections shall be environmentally sealed from water and weather and be vibration resistant.

The system shall constantly monitor wheel behavior during braking. Sensors on each wheel transmit wheel speed data to an electronic processor, which shall sense approaching wheel lock and instantly modulate brake pressure up to 5 times per second to prevent wheel lock-up. Each wheel shall be individually controlled. To improve field performance, the system shall be equipped with a dual circuit design. The system circuits shall be configured in a diagonal pattern. Should a malfunction occur, that circuit shall revert to normal braking action. A warning light at the driver's instrument panel shall indicate malfunction to the operator.

The system shall consist of a sensor clip, sensor, electronic control unit, and solenoid control valve. The sensor clip shall hold the sensor in close proximity to the tooth wheel. An inductive sensor consisting of a permanent magnet with a round pole pin and coil shall produce an alternating current with a frequency proportional to wheel speed. The



unit shall be sealed, corrosion-resistant and protected from electro- magnetic interference. The electronic control unit shall monitor the speed of each wheel sensor and a microcomputer shall evaluate wheel slip in milliseconds.

### **1.9.5 MISCELLANEOUS CHASSIS EQUIPMENT**

- a. Fluid capacity plate affixed below driver's seat.
- b. Chassis filter part number plate affixed below driver's seat. Maximum rated tire speed plaque near driver.
- c. Tire pressure label near each wheel location.
- d. Cab occupancy capacity label affixed next to transmission shifter. Do not wear helmet while riding plaque for each seating position. NFPA compliant seat belt and standing warning plates provided.

### **1.9.6 BRAKE AIR FITTING**

The fitting for the air brake will be compression style, Push on fittings are not acceptable.

### **1.9.7 FUEL SHUT OFF**

There will be a fuel shut off valve just ahead of the filter.

## **1.10 FIRE ENGINE CAB**

### **1.10.1 ALUMINUM CAB**

The cab shall be a full tilt 6-person cab designed specifically for the fire service and manufactured by the chassis builder. Apparatus cabs that are not manufactured by the apparatus manufacturer shall not be acceptable.

### **1.10.2 CAB DESIGN**

The apparatus chassis shall be of an engine forward, fully enclosed tilt cab design. There shall be four (4) side entry doors.

The cab shall be of a fully open design with no divider wall or window separating the front and rear cab sections. The cab shall be designed in a manner that allows for the optimum forward facing vision for crew. Cab designs that utilize roof mounted air conditioning units, are not desired.

The cab shall be constructed of high strength 5052H32 aluminum plate welded to 6061-T6 extruded aluminum framing or Equal.

The cab roof shall utilize 5" x 5" honeycomb re-enforced 6061 T6 aluminum extrusion or equal, with fully radiused outer corner rails with integral drip channel and 6061 T6 ¾" x



2" x 3/16" aluminum box tubing type cross brace supports. Structures that do not include an integral drip channel will not be accepted. The box tubing type cross brace supports shall be installed in a curved fashion beginning from the midline of the apparatus cab and curving toward the exterior corner rails. This curvature will allow for increased strength in the event of a roll over while not allowing for rainwater buildup on the apparatus cab roof.

The cab sides shall be constructed from 1 1/2" x 3" x 3/16" 6061 T6 extruded door pillars, or equal and posts that provide a finished door opening, extruded and formed wheel well openings supports, formed aluminum wheel well liners and box tubing type support braces.

The cab floor and rear cab wall shall utilize 1 3/4" x 4" x 3/16" 6061 T6 extruded box tubing or equal type framing and support bracing.

The framework shall be of a welded construction that fully unitizes the structural frame of the cab.

The structural extrusion framework shall be overlaid with interlocked aluminum alloy sheet metal panels to form the exterior skin of the cab. The cab sides shall be constructed of 3/16" thick 5052H32 aluminum plate that slides into an integral channel of the extrusion framework. The plate is then skip welded into that channel to allow for tolerable flex while the apparatus travels down the roadway. Cab designs that utilize 1/8" thick aluminum for the cab sides shall not be acceptable.

The structural extrusion framework shall support and distribute the forces and stresses imposed by the chassis and cab loads and shall not rely on the sheet metal skin for any structural integrity.

The cab face extrusion framework shall be overlaid with 1/8" thick 5052H32 aluminum plate to allow for an aesthetically pleasing radiused cab face.

### **1.10.3 CAB SUB-FRAME**

The cab shall be mounted to a 4" x 4" x 3/8" steel box tube or aluminum sub-frame, and shall be isolated from the chassis, through the use of no less than six (6) elastomeric bushings. This substructure shall be completely independent of the apparatus cab. The sub frame shall be painted to match the primary chassis color.

The sub-frame shall be mounted to the chassis through the use of lubricated Kaiser Bushings for the front pivot point, and two (2) hydraulically activated cab latches, to secure the rear.

Cab mounting that does not include a sub-frame shall not be considered. NO EXCEPTIONS.



#### **1.10.4 CAB DIMENSIONS**

The cab shall be designed to satisfy the following minimum width and length dimensions:

- Cab Width (excluding mirrors) 96" or Higher
- Cab Length (from C/L of front axle)
- To front of cab (excluding bumper) 68" To rear of cab 62"
- Total Cab Length (excluding bumper) 130"

#### **1.10.5 ROOF DESIGN**

The cab shall be of a flat roof design with side drip rails and shall satisfy the following minimum height dimensions:

- Cab Dimensions Interior Front 59" Rear 55"
- Cab Dimensions Exterior Front 65" Rear 65"

#### **1.10.6 FENDER CROWNS**

Polished stainless steel front axle fenderettes with full depth radiused wheel well liners shall be provided.

#### **1.10.7 CAB INSULATION**

The exterior walls, doors, and ceiling of the cab shall be insulated from the heat and cold, and to further reduce noise levels inside the cab. The cab interior sound levels shall not exceed 90 decibels at 45 mph in all cab seat positions. NO EXCEPTIONS

#### **1.10.8 EXTERIOR GLASS**

The cab windshield shall be of a two piece curved design utilizing tinted, laminated, automotive approved safety glass. The window shall be held in place by an extruded rubber molding. The cab shall be finished painted prior to the window installation.

#### **1.10.9 SUN VISORS**

The sun visors shall be made of dark smoke colored transparent polycarbonate. There shall be a visor located at both the driver and officer positions, recessed in a molded form for a flush finish.

#### **1.10.10 CAB STEPS**

The lower cab steps shall be no more than 22" from the ground. An intermediate step shall be provided, midway between the lower cab step, and the cab floor.



The intermediate step shall be slightly inset to provide for safer ingress and egress. All steps shall be covered with material that meets or exceeds the NFPA requirements for stepping surfaces.

#### **1.10.11 STEP LIGHTS**

A white LED strip light shall illuminate each interior cab step. These lights shall illuminate whenever the battery switch is on and the cab door is opened.

#### **1.10.12 CAB STRUCTURAL INTEGRITY**

The cab of the apparatus shall be designed and attached to the vehicle as to eliminate, to the greatest possible extent, the risk of injury to the occupants in the event of an accident.

The apparatus cab shall be tested to specific load and impact tests with regard to the protection of occupants of a commercial vehicle.

A test shall be conducted to evaluate the frontal impact strength of the apparatus cab to conform to the test J2420 and the "United Nations Regulation 29, Annex 3, paragraph 4, (Test A). A second test shall be conducted to evaluate the roof strength of the apparatus cab to conform to the Society of Automotive Engineers (SAE) SAE J2422/SAE J2420 and "United Nations Regulation 29, Annex 3, paragraph 5, (Test B) and SAE J2420. The evaluation shall consist of the requirements imposed by ECE Regulation 29, Paragraph 5. The test shall be conducted by a certified independent third party testing institution.

A letter stating successful completion of the above test on the brand of cab being supplied shall be included in the bid. There shall be "no exception" to this requirement.

#### **1.10.13 SEAT BELT TESTING**

The seat belt anchorage system shall be tested to meet FMVSS 207 Section 4.2a and FMVSS 210 section 4.2. Testing shall be conducted by an independent third party product evaluation company.

A copy of the certification letter shall be supplied with the bid documents.

#### **1.10.14 CAB TILT SYSTEM**

An electrically powered hydraulic cab tilt system shall be provided, and shall lift the cab to an angle of 45 degrees, exposing the engine and accessories for fluid checks and service work. The system shall be interlocked to only operate when the parking brake is set.

The lift system shall be comprised of two (2) hydraulic lift cylinders, an electrically driven hydraulic pump, and a control switch. The hydraulic pump shall be located on the



exterior of the frame rail on the driver's side of the chassis that can be easily accessible when the cab is tilted. A mechanical locking system consisting of an air operated actuator and a heavy radiused wall 3" x 3" aluminum extrusion will be provided to ensure the cab remains in the raised position in the event of a hydraulic failure. Additionally, each of the hydraulic lift cylinders shall incorporate a check valve, and velocity fuses that will activate should a sudden drop in pressure be detected. The cab tilt controls shall be interlocked to the parking brake to ensure the cab will not move, unless the parking brake is set. The cab tilt controls will consist of a momentary raise/lower switch and a two position cab safety lock switch.

The hydraulic lift cylinders will be connected to a steel or aluminum cab sub-frame, and not directly to the cab.

#### **1.10.15 MANUAL CAB LIFT**

There shall be a manually operated hydraulic pump for tilting the cab in case the main pump should fail. Access to the pump shall be located under the left corner of the front bumper.

#### **1.10.16 CAB DOORS**

The cab doorframes shall be constructed from 6061 T6 aluminum extrusions fitted with a 5052 H32 aluminum sheet metal skin and shall be equipped with dual weather seals. The outside cab door window opening shall be framed by a black anodized aluminum trim, to provide a clean appearance. The cab doors shall be equipped with heavy-duty door latching hardware, which complies with FMVSS 206. The door latch mechanism shall utilize control cable linkage for positive operation. A rubber coated nylon web doorstop shall be provided.

The doors shall be lap type with a 10 gauge full-length stainless steel flange and 3/8" diameter hinge pin and shall be fully adjustable.

All openings in the cab shall be grommeted or equipped with rubber boots to seal the cab from extraneous noise and moisture.

The cab doors shall be designed to satisfy the following minimum opening and step area dimensions: Door Opening:

- Front 36.5" x 73"
- Rear 36.5" x 73"

#### **1.10.17 POWER WINDOWS**



All four cab entry doors shall have power windows. Each door shall be individually operated and the driver's position shall have master control over all windows. All four windows shall roll down completely.

#### **1.10.18 SIDE WINDOWS**

Fixed position side window shall be provided on each side of the cab between the forward cab area and the crew cab area. The windows shall be approximately 20.5" high x 16.50" wide to provide maximum visibility. The side windows shall be held in place by an extruded rubber molding with a chrome plated decorative locking bead.

#### **1.10.19 WINDOW TINTING**

The crew cab windows and doors, with the exception of the driver's and officer's doors, and the windshield, shall be tinted with deep "limo" tint. The tint shall be incorporated into the window glass with eight percent (8%) light transmittance. Film tinting shall not be acceptable.

#### **1.10.20 WINDSHIELD WIPERS**

Two (2) black anodized finish two speed synchronized electric windshield wiper system. Dual motors with positive parking. System includes large dual arm wipers with built in washer system. One (1) master control works the wiper, washer and intermittent wipe features. Washer bottle is a remote fill with a 4 quart capacity. Washer fill is located just inside of officer cab door.

#### **1.10.21 CAB HANDRAILS**

There shall be a 24" long, handrail provided and installed, at each cab entrance. The handrails shall be constructed of type 304 stainless steel 1.25 inch diameter tubing with bright finish and knurled gripping surface. Mounting flanges shall be constructed from 7 gauge, .180 thick, stainless steel. Each grab rail shall have 90 degree returns to flanges. The ends of grab rail shall pass through the flanges and be welded to form one structural unit. The handrails shall be mounted using 1.25" SS Hex bolts, with a barrier rubber gasket at each flange.

Sufficient space shall allow for a gloved hand to firmly grip the rail.

There shall be two (2) rubber coated grab handles provided and mounted on the interior of the cab, one each side, on the windshield post for ingress assistance. The handrail on the driver's side shall be approximately 11" long and the handrail on the officer's side shall be approximately 18" long.

#### **1.10.22 COAT HOOKS FOR GRAB HANDLES**



There shall be a coat hook installed at the top of each exterior cab handrail, for hanging of coats, turnout gear, etc.

#### **1.10.23 CAB DOOR HANDRAILS**

Two (2) 1.25" diameter knurled stainless steel handrails shall be provided on the inside of the rear crew doors just above the windowsill.

#### **1.10.24 MIRRORS**

The mirrors will be Ramco Cowl mounted remote controlled mirrors or equal. The convex mirror will be above the main mirror.

#### **1.10.25 GRILLE**

The front of the cab shall be equipped with a polished stainless steel grille with sufficient area to allow proper airflow into the cooling system and engine compartment. Plastic chrome plated grilles shall not be acceptable.

#### **1.10.26 BUMPER**

There shall be a 12" high double rib polished stainless steel wrap-around bumper provided at the front of the apparatus. Laser cut perforated grilles shall be incorporated into the bumper and located at the outboard of the frame rails for the air horns and at the center for the siren speaker. The bumper shall be mounted to a reinforcement plate constructed of 1/4" x 10" x 70" carbon steel. A gravel shield shall be provided, constructed of .188" aluminum diamond plate. The bumper extension shall be approximately 24".

#### **1.10.27 STORAGE WELL COMPARTMENT**

There shall be a hose well compartment located in the center of the front bumper. The compartment shall run 3/4 the width of the bumper and measure approximately 60" wide x 16" long x 6" deep at the ends and 12" deep in the center. The compartment shall be constructed of .125" smooth aluminum plate.

#### **1.10.28 DIAMOND PLATE BUMPER LID**

There shall be a 1/8" diamond plate cover with latches provided for the front bumper trough. The cover shall have a 4" rise to accommodate the storage well requirements.

#### **1.10.29 AIR HORNS**

Two (2) Grover 2040 Stuttertone rectangular, chrome plated, air horns shall be recess mounted, one each side behind the perforated grille of the bumper.



#### **1.10.30 HORNS WIRED TO STEERING WHEEL**

The air horns shall be wired through the steering wheel button. A selector switch shall be provided on the instrument panel to switch between functions.

#### **1.10.31 MOMENTARY SWITCH ON DASH, OFFICER SIDE**

A momentary switch for the air horns shall be provided on the officer's side dash.

#### **1.10.32 ELECTRONIC SIREN**

One (1) Whelen 295HFS2 electronic siren shall be installed at the cab instrument panel complete with noise canceling microphone. The remote control head shall be flush mounted in a location specified by the fire department.

#### **1.10.33 SIREN SPEAKER**

Two Cast Products SA4201-6B-A weatherproof siren speakers shall be provided and mounted in the grille.

#### **1.10.34 FEDERAL Q2B SIREN**

There shall be a Federal Q2B-NN siren installed in the center of the cab grille. The siren shall be securely mounted and activated by means of a solenoid and shall include a brake.

#### **1.10.35 FOOT SWITCH, DRIVER'S SIDE**

A foot switch for the mechanical siren shall be provided on the driver's side.

#### **1.10.36 MOMENTARY SWITCH ON DASH**

A momentary switch for the mechanical siren shall be provided on the officer's side dash.

#### **1.10.37 LIGHTING CAB EXTERIOR**

Exterior lighting and reflectors shall meet or exceed Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements in effect at the time the apparatus is manufactured. There shall be dual high/low sealed beam LED rectangular headlights in custom housings one each side of the front of the cab. There shall be two red front facing warning lights on the cab, one each side, mounted below the headlight housings.

#### **1.10.38 FRONT TURN SIGNALS**

There shall be two Whelen 400 Series LED rectangular amber turn signal lights mounted one each side in the front of the headlight housing.



#### **1.10.39 CAB REAR WALL COVERING**

The rear outside wall of the cab shall be covered with 1/8" aluminum diamond plate.

#### **1.10.40 CAB INTERIOR**

The metal surfaces of the cab interior shall be coated and sealed with MultiSpec gray speckle, urethane modified, mar resistant paint. The textured coating shall provide paramount durability and wear resistance against foreign objects and normal wear and tear.

The front and rear headliners, as well as the rear cab wall, shall be finished in Gray-Black Durawear covered padded panels.

#### **1.10.41 INTERIOR DOOR PANELS**

The interior of the cab entry doors shall have a 304 brushed stainless steel scuff plate, contoured to the door, from the door window sill down.

#### **1.10.42 REFLECTIVE MATERIAL, CHEVRON STRIPING, INTERIOR CAB DOOR**

The apparatus shall have reflective Orafol Reflexite Chevron striping affixed to the inside of each cab door. The striping shall be plainly visible to oncoming traffic when the doors are in the open position.

#### **1.10.43 CAB FLOOR COVERING**

The cab interior floor shall be covered with a 5/16" thick, gray rubberized material to provide a rugged but cosmetically pleasing stepping surface throughout the cab. The floor covering shall provide superior durability and resistance against foreign objects as well as normal wear and tear.

#### **1.10.44 ENGINE ENCLOSURE**

An integral, formed aluminum and composite engine enclosure shall be provided. The engine enclosure shall be contoured and blended in an aesthetically pleasing manner with the interior dash and flooring of the cab. The enclosure shall be kept as low as possible, to maximize space and increase crew comfort.

The enclosure shall be constructed from 5052 H2 aluminum plate or equal, and GRP composite materials, providing high strength, low weight, and superior heat and sound deadening qualities.

Additionally, the underside of the engine enclosure shall be coated in with a ceramic spray on insulation and sound control. This coating is an environmentally-friendly



coating that is applied seamlessly and rapidly while providing superior thermal insulation and protection against vibration and noise, and will prevent future corrosion from forming by sealing the substrate. Or Equal

#### **1.10.45 ENGINE ENCLOSURE COVERING**

The top of the engine enclosure shall be covered with heavy duty, black polyurethane blended coating. The textured coating shall provide paramount durability and wear resistance against foreign objects and normal wear and tear as well as sound deadening and insulation. The rubberized cab floor covering shall extend up the lower exterior sides of the engine enclosure to aid in sound deadening and heat resistance.

#### **1.10.46 TOOL MOUNTING PLATE**

There shall be a 3/16" smooth aluminum plate installed on the engine enclosure between the driver and the officer for use in mounting of equipment. The mounting plate shall feature beveled edges on the front and sides for a finished appearance. The plate shall be coated with the same finish as the engine enclosure and shall be secured to the engine cover with screws for easy replacement.

#### **1.10.47 ENGINE HOOD LIGHTS**

An LED work light shall be installed in the engine enclosure with an individual switch located on the base of the light.

#### **1.10.48 WORK SURFACE**

There shall be a flat work surface in front of the officer's seat.

#### **1.10.49 CUSTOM MAP BOX**

There will be an aluminum map holder box mounted on the back wall of the cab. It will hold (4) 3-ring binders.

#### **1.10.50 GUARD FOR PARKING BRAKE**

There will be a guard provided over the parking brake knob in the cab.

#### **1.10.51 AUDIBLE ALARM**

There will be an audible alarm provided in the cab for an open cab door and open compartment door.

#### **1.10.52 INSTRUMENT PANEL**



The main dash shroud, which covers the area directly in front of the driver from the doorpost to the engine hood, shall be custom molded and covered with a non-glare black vinyl. The dash shall be a one-piece hinged panel that tilts outward for easy access to service the internal components. The gauge panel shall be constructed of durable aesthetically pleasing light gray polymer material, placed over a heavy duty steel backing plate, for added strength and durability.

The gauges shall be Beede Instruments, NexSys Link gauges with built-in self-diagnostics and red warning lights to alert the driver of any problems. All gauges and controls shall be backlit for night vision and identified for function. All main gauges and warning lights shall be visible to the driver through the steering wheel.

#### **1.10.53 MASTER BATTERY & IGNITION SWITCH**

The vehicle shall be equipped with a keyless ignition, with a three (3)-position Master Battery rocker switch, "Off/ACC/On" and a two (2)-position Engine Start rocker switch, "Off/Start".

#### **1.10.54 DIESEL PARTICULATE FILTER CONTROLS**

There shall be two (2) controls for the diesel particulate filter. One control shall be for regeneration and one control shall be to inhibit engine regeneration. These shall be located below the steering wheel in the kick panel.

#### **1.10.55 INSTRUMENTATION & CONTROLS**

Instrumentation on dash panel in front of the driver:

- Tachometer/hourmeter with high exhaust system regeneration temperature, and instrument malfunction indicators.
- Speedometer/odometer with built in turn signal, high beam, and re-settable trip odometer.
- Voltmeter
- Diesel fuel gauge
- DEF (Diesel Exhaust Fluid) gauge
- Engine oil pressure
- Transmission temperature
- Engine temperature
- Primary air pressure
- Secondary air pressure

Indicators and warning lights in front of the driver:



- Parking brake engaged
- Low air with buzzer
- Antilock brake warning
- Check transmission
- Transmission temperature
- Upper power indicator
- Seat belt
- Engine temperature
- Low oil indicator
- Low voltage indicator
- Air filter restriction light
- Low coolant indicator
- High idle indicator
- Power on indicator
- Check engine
- Stop engine
- Check engine MIL lamp
- DPF indicator
- High exhaust temperature
- Wait to start

Other indicator and warning lights (if applicable):

- Differential locked
- PTO (s) engaged
- Auto-slip response
- Retarder engaged
- Retarder temperature
- ESC indicator

Controls located on main dash panel in front of the driver:

- Master power disconnect with ignition switch
- Engine start switch
- Headlight switch
- Windshield wiper/washer switch
- Differential lock switch (if applicable)
- Dimmer switch for backlighting



Controls included in steering column:

- Horn button
- Turn signal switch
- Hi-beam low-beam switch
- 4-way flasher switch
- Tilt-telescopic steering wheel controls

#### **1.10.56 CENTER CONTROL CONSOLE**

There shall be an ergonomically designed center control console. The console shall be constructed of 1/8" smooth aluminum and shall be mounted on the engine hood between the driver and officer. The console shall have a durable coating to match the color of the engine hood covering and shall feature surfaces on each side that are contoured to face the driver and the officer for easy viewing and accessibility. The switches and other customer specified electrical items shall be mounted in removable 1/8" smooth aluminum panels with a black wrinkle finish. The console shall have an aluminum lift-up lid with quick release latch. The lid shall be held in the open position with a gas strut to allow for easy access and serviceability.

Controls located in the console conveniently accessible to the driver:

- Transmission shifter
- Pump shift control with OK TO PUMP and PUMP ENGAGED lights
- Remote mirror control
- Illuminated rocker switches to control high idle, Jacob's brake, siren/horn, siren brake, master emergency, and other customer specified components
- 12V power point (if applicable)

Controls located in the console conveniently accessible to the driver and the officer (center):

- Parking brake control with a guard to prevent accidental engagement.

Controls located in the console conveniently accessible to the officer:

- Illuminated rocker switches to control customer specified components that are easily reachable to the officer and do not allow for compromise of the driver's view, and eliminate the need for foot switches.
- Surface to recess siren head, radio head, or other desired items as space permits.
- 12V power point (if applicable)



Driving compartment warning labels shall include:

- Height of vehicle
- Occupants must be seated and belted when apparatus is in motion.
- Do not use auxiliary braking systems on wet or slippery roads.
- Exit warnings

Additional labels included:

- Computer code switch
- Abs code switch
- Fluid data tag
- Chassis data tag

#### **1.10.57 OVERHEAD CONTROL CONSOLE**

An ergonomically designed overhead console shall be provided above the driver and officer, running the full width of the cab. The overhead console shall be constructed from 1/8" aluminum plate and shall be painted with a durable finish to match the inside of the cab. There shall be seven (7) removable 1/8" smooth aluminum plates with a black wrinkle finish to house switches and other electrical items.

Directly above the driver there shall be two (2) panels with no cutouts, unless otherwise specified by the customer.

There shall be a panel located to the right of the driver that shall be designated for defroster, heat, and air conditioning controls (if specified).

The center overhead panel shall be designated for up to seven (7) door ajar indicators. Upon releasing the apparatus parking brake, one or more of these lights shall automatically illuminate (flash) when any of the following conditions occur that may cause damage if the apparatus is moved: cab or compartment door is open; ladder or equipment rack is not stowed; stabilizer system deployed; any other device has not been properly stowed.

There shall be a panel to the left of the officer as well as two (2) directly above the officer. These panels shall have no cutouts, unless otherwise specified by the customer.

#### **1.10.58 ENGINE WARNING SYSTEM**

An engine warning system shall be provided to monitor engine conditions such as low oil pressure, high engine temperature and low coolant level. Warning indication shall include a STOP ENGINE (red) light with audible buzzer activation and a CHECK ENGINE (amber) light



**Note:** (Some engine configurations may also include a fluid warning light.)

There shall be a master information light bar with 24 lights located across the center of the dash panel that covers up to 24 functions. These are defined under Indicators and Warning Lights above.

#### **1.10.59 PUMP SHIFT MODULE**

A pump shift module with indicating lights shall be located within easy reach of the driver. A gear lockup shall be provided to hold the transmission in direct drive for pump operation.

#### **1.10.60 HIGH IDLE**

The engine shall have a "high idle" switch on the dash that shall maintain an engine RPM of 1,000. The switch shall be installed at the cab instrument panel for activation/deactivation. The "high idle" mode shall become operational only when the parking brake is on and the truck transmission is in neutral.

#### **1.10.61 VEHICLE DATA RECORDER**

An Akron / Weldon vehicle data recorder as required by the 2009 edition of NFPA 1901 shall be installed. Vehicle data shall be sampled at the rate of 1 second per 48 hours, and 1 minute per 100 engine hours.

Free software is available to allow the fire department to collect the data as needed.

#### **1.10.62 LIGHTING CAB INTERIOR**

Interior lighting shall be provided inside the front of the cab for passenger safety. Two (2) ceiling mounted combination red/clear LED dome lights with a push button on/off switch in the light lens. One light shall be located over each the officer and driver's position. The lights shall also activate from the open door switch located in each cab doorjamb.

#### **1.10.63 LIGHTING CREW CAB INTERIOR**

Interior lighting shall be provided inside the crew cab for passenger safety. Two (2) ceiling mounted combination red/clear LED dome lights with a push button on/off switch in the light lens shall be provided. The lights shall also activate from the open door switch located in each cab doorjamb.

#### **1.10.64 MAP LIGHT**

A Sunnex 20" "goose neck" LED map light shall be provided on the officer's side of the cab dash.



#### **1.10.65 HAND HELD SPOTLIGHT**

One Optronics Blue Eye Model KB-4003, 400,000-candle power hand-held spotlight shall be provided, installed at officer's side of cab or Equal.

#### **1.10.66 HEAVY DUTY HEATER/DEFROSTER/AIR CONDITIONER**

There shall be a minimum 60,000 cool BTU or higher and 65,000 heat BTU single unit, heater/air conditioner mounted over the engine cover. The unit shall be mounted in center of the cab on the engine hood/enclosure. Unit shall have a shutoff valve at the right side of the frame, next to the engine. Airflow of the heater/air conditioner shall be a minimum 1200 CFM. To achieve maximum cooling, a TM-31 Compressor (19.1 cu. in.) will be used.

The defroster/heater shall be a minimum of 35,000 BTU and shall be a separate unit mounted over the windshield. There shall be eight (8) louvers/diffusers to direct to windshield and door glass. Airflow of the defroster/heater shall be a minimum 350 CFM. The unit shall be painted Zolatone greystone to match the cab ceiling.

The condenser shall be roof mounted and have 80,000 BTU rating. The unit shall include two fan motors. Airflow of the condenser shall be a minimum 2250 CFM. (This roof-mounted condenser shall work at full rated capacity at an idle with no engine heat problems.)

#### **1.10.67 HEATER/DEFROSTER/AIR CONDITIONING CONTROLS**

The heater/defroster/air conditioning shall be located in the overhead console in the center of the apparatus cab within reach of the driver and officer. The controls shall be illuminated for easy locating in dark conditions. The controls shall be located in such a way that the driver will not be forced to turn away from the road to make climate control adjustments. Control of all heater/defroster/air conditioning functions for the entire apparatus cab shall be achieved through these controls.

#### **1.10.68 DEFROSTER DIFFUSER**

A molded diffuser made of durable ABS plastic ductwork system shall be provided. It shall be form fitted and shall attach to the cab's overhead defroster unit to provide temperature controlled air to the windshields.

Air flow of up to 280 cfm is balanced and directed across the entire windshield for optimum defrosting capability in all types of weather.

#### **1.10.69 TOOL MOUNTING PLATE**



There shall be a 3/16" smooth aluminum plate installed on top of the heat/ air conditioning or dog box unit for use in mounting of equipment. The plate shall measure approximately 25" wide x 19.5" long and shall be spaced up 1". The mounting plate shall feature beveled edges on the front and rear for a finished appearance. The plate shall be coated with the same finish as the heat/air conditioning unit and shall be secured with screws for easy replacement.

#### **1.10.70 DRIVER'S SEAT**

A H.O. Bostrom Sierra high back ABTS seat with air suspension shall be provided for the driver. The seat shall be equipped with a red 3-point shoulder harness with lap belt. The seat shall have fore/aft adjustment and shall be upholstered with heavy duty Durawear material.

##### **1.10.70.1 HELMET STORAGE**

The helmet for the above seat shall be stored in a compartment. A placard shall be provided visible to the riding position warning that injury may occur if helmets are worn while seated.

#### **1.10.71 OFFICER'S SEAT**

An H.O. Bostrom Tanker 450 SCBA seat with air suspension shall be provided for the officer. The seat back shall have a SCBA cavity and auto-pivot-and-return padded headrest. The seat shall be equipped with a red 3-point shoulder harness with lap belt. The seat shall have fore/aft adjustment and shall be upholstered with heavy duty Durawear material.

##### **1.10.71.1 HELMET STORAGE**

The helmet for the above seat shall be stored in a compartment. A placard shall be provided visible to the riding position warning that injury may occur if helmets are worn while seated.

#### **1.10.72 CREW SEAT – DRIVER'S SIDE, REAR FACING**

One (1) H.O. Bostrom Tanker 350 ABTS SCBA fixed base seat shall be installed behind the driver. The seat back shall have a SCBA cavity and auto-pivot-and-return padded headrest. The seat shall be equipped with a red 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly. The seat shall be upholstered with heavy duty Durawear material on the main contact surfaces. The sides shall be upholstered with heavy duty vinyl.



#### **1.10.72.1 HELMET STORAGE**

The helmet for the above seat shall be stored in a compartment. A placard shall be provided visible to the riding position warning that injury may occur if helmets are worn while seated.

#### **1.10.73 CREW SEAT – OFFICER’S SIDE, REAR FACING**

One (1) H.O. Bostrom Tanker 350 ABTS SCBA fixed base seat shall be installed behind the officer. The seat back shall have a SCBA cavity and auto-pivot-and-return padded headrest. The seat shall be equipped with a red 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly. The seat shall be upholstered with heavy duty Durawear material on the main contact surfaces. The sides shall be upholstered with heavy duty vinyl.

#### **1.10.73.1 HELMET STORAGE**

The helmet for the above seat shall be stored in a compartment. A placard shall be provided visible to the riding position warning that injury may occur if helmets are worn while seated.

#### **1.10.74 CREW SEAT – DRIVER’S SIDE, FORWARD FACING, INBOARD**

One (1) H.O. Bostrom Tanker 300CT ABTS SCBA flip-up base seat shall be installed in the driver’s side forward-facing inboard position. The seat back shall have a SCBA cavity and auto-pivot-and-return padded headrest. The seat shall be equipped with a red 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly. The seat shall be upholstered with heavy duty Durawear material on the main contact surfaces. The sides shall be upholstered with heavy duty vinyl.

#### **1.10.74.1 HELMET STORAGE**

The helmet for the above seat shall be stored in a compartment. A placard shall be provided visible to the riding position warning that injury may occur if helmets are worn while seated.

#### **1.10.75 CREW SEAT – OFFICER’S SIDE, FORWARD FACING, INBOARD**

One (1) H.O. Bostrom Sierra ABTS high back fixed base seat shall be installed in the officer’s side forward-facing inboard position. The seat shall be equipped with a red 3-point shoulder harness with lap belt and an automatic retractor built into the seat assembly. The seat shall be upholstered with heavy duty Durawear material.

#### **1.10.75.1 HELMET STORAGE**



The helmet for the above seat shall be stored in a compartment. A placard shall be provided visible to the riding position warning that injury may occur if helmets are worn while seated.

#### **1.10.76 SEAT UPHOLSTERY COLOR**

The cab seat upholstery shall be gray in color.

#### **1.10.77 SCBA BRACKETS**

Each SCBA seat in the cab shall feature an H.O. Bostrom SecureAll™ self-contained breathing apparatus (SCBA) locking system. The seat back shall include a bracket which shall be capable of storing most U.S. and international SCBA brands and sizes while in transit or for storage. The bracket shall be easily adjustable for all SCBA brands and cylinder diameters; adjustment points shall utilize similar hardware and adjustments shall be made with one tool.

The bracket shall be adjustable to compensate for different cylinder lengths without the use of tools. The adjustment shall be made by raising a lever and moving the top clamp vertically.

The bracket system shall be free of straps and clamps that may interfere with auxiliary equipment on SCBA units. The center guide fork shall keep the tank in-place for a safe and comfortable fit in seat cavity. Fire fighters shall simply push the SCBA unit against the pivot arm to engage the SecureAll™ patented auto-locking system. Once the lock is engaged, the top clamp shall surround the top of the SCBA tank for a secure fit in all directions.

The locking system shall include a release handle integrated into the seat cushion for quick and easy release and to eliminate the need for straps or pull cords which might interfere with other SCBA equipment.

#### **1.10.78 SEAT BELT WARNING SYSTEM**

An Akron / Weldon seat belt warning system shall be provided, and shall monitor each seating position. Each seat shall be supplied with a sensor that, in conjunction with the display module located on the dash, shall determine when the seat belt was fastened and if the seat is occupied. An icon shall represent that the seat is properly occupied. An audible and visual alarm shall be activated if the seat is occupied and/or the belt is not fastened in the proper sequence.

#### **1.10.79 CREW SEAT COMPARTMENT**

A compartment shall be provided under the forward facing crew seats on the back wall of the cab. Two outward opening doors shall be provided on the front face of the compartment.



### **1.10.80 GO LIGHT**

There will be a remote controlled GO LIGHT provided on the center roof of the cab. It will be installed on a bracket that will be one inch higher than the light bar. The control will be provided on the officer's console.

## **1.11 CHASSIS WIRING**

### **1.11.1 WIRING**

All chassis wiring shall have XL high temperature crosslink insulation. All wiring shall be color-coded, and the function and number stamped at 3" intervals on each wire. All wiring shall be covered with high temperature rated split loom for easy access to wires when trouble shooting. All electrical connectors and main connectors throughout the chassis shall be treated to prevent corrosion.

### **1.11.2 MASTER ELECTRICAL PANEL**

The main chassis breaker panel shall be wired through the master disconnect solenoid and controlled by the three-position ignition rocker switch. The breaker panel shall be located in front of the officer on the interior firewall and shall be protected by a removable aluminum cover. The cover shall have an aluminum notebook holder on the exterior face accessible to the officer. The cover shall be painted with a durable finish to match the interior of the cab and shall be secured with two (2) thumb screws.

The breaker panel shall include up to 22 ground switched relays with circuit breaker protection. An integrated electrical sub-panel shall be provided and interfaced to the body and chassis through an engineered wire harness system.

Twelve (12) 20-ampere relays and one (1) 70-ampere relay shall be provided for cab light bar and other electrical items. If the option for a mechanical siren has been selected two (2) additional relays shall be provided.

Up to two (2) additional relay boards with circuit breaker protection shall be provided for additional loads as required. Each board shall contain four (4) relays. The relay boards shall be configured to trip with input from switch of positive-negative or load manager by moving the connector on the board (no tools required).

All relay boards shall be equipped with a power-on indicator light (red), input indicator light (green) and power output indicator light (red).

Up to twenty-three (23) additional automatic reset circuit breakers for non-switched loads that are remotely switched (i.e.: heater fans, hood lights, etc.) shall be provided.

All relays and circuit breakers on the relay boards shall be pull-out/push-in replaceable.



All circuit breakers on the relay boards shall be 20 ampere automatic reset which can be doubled or tripled for 40 or 60-ampere capacity.

The system shall utilize Deutsch DRC weather resistant connectors at the breaker panel, toe board and main dash connections.

All internal wire end terminals, including locking connectors, shall be mechanically affixed to the wire ends by matching terminal crimping presses to assure the highest quality terminations.

All internal splices shall be ultrasonically welded connections and all internal wiring shall be high temperature GXL type wire that is protected by wiring duct wherever possible. All switches shall be ground controlled; no power going through any rocker switch.

Any switch controlling a relay in the breaker panel shall be capable of being set to function only when the parking brake is set. All relays shall be tagged with the function that the relay is controlling.

### **1.11.3 LOAD MANAGER**

Load manager shall have the ability to sequence loads on and off. It shall also be able to shed 8 loads when the vehicle is stationary, starting at 12.7 volts lowest priority load to be shed, then respectively at 12.6, 12.4, 12.2, 12.0, 11.8, 11.4 and 11.0 volts DC. Any load that has been shed shall be off for a minimum of five minutes, and then if voltage has rebounded above shed voltage, the shed load shall automatically come on. There shall also be an indicator panel alongside the rocker switches, which indicate power is on, battery warning and fast idle. Battery warning indicator shall flash at a rate proportional to the voltage discharge rate.

### **1.11.4 AUTOMATIC HIGH IDLE ACTIVATION**

The load management system shall be capable of activating the apparatus high idle system when the system voltage drops below 12.3 volts DC. The system shall raise engine speed for a minimum of five minutes until voltage exceeds 13.0 volt DC. The load management system shall activate the high idle feature before any devices are automatically shed OFF. The high idle function request from the load management device shall function only if the appropriate interlocks are present; that is, control of the high idle system is monitored and shall be superseded by the state of the interlock control module. The automatic high idle system shall be deactivated whenever the brake pedal is pressed, and shall remain inactive for two minutes thereafter to allow an operator to override the high idle function and return the engine to idle before PTO engagement.

### **1.11.5 AUXILIARY POWER POINT**



One (1) 12-volt 20-ampere auxiliary lighter socket type plug-ins, shall be provided in the cab.

#### **1.11.6 USB POWER POINTS**

Two (2) 12-volt dual port USB power points shall be provided in the cab.

#### **1.11.7 CAB ACCESSORY FUSE PANEL**

A fuse panel shall be located underneath the rear facing seat on the officer's side. The fuse panel shall consist of six (6) battery hot and six (6) ignition switch circuits. Each circuit shall be capable of 10-ampere 12- volt power and total output of 50-amps. The fuse panel shall be capable of powering accessories such as hand held spotlights, radio chargers, hand lantern chargers and other miscellaneous 12-volt electrical components.

#### **1.11.8 POWER & GROUND STUDS, OVERHEAD COMMAND CONSOLE**

There shall be a set three (3) threaded power studs provided in the cab's overhead Command Console for future installation of two-way radios.

The studs shall be wired as follows:

- One (1) 12-volt 60-amp, direct to the battery
- One (1) 12-volt 30-amp controlled by the ignition switch
- One (1) 12-volt 125-amp ground

#### **1.11.9 POWER & GROUND STUDS, UNDER OFFICER'S SEAT**

There shall be a minimum of four (4) threaded power studs provided under the officer's seat to accommodate the future installation of two-way radios.

The studs shall be wired as follows:

- One (1) 12-volt 40-amp controlled by the battery switch
- One (1) 12-volt 60-amp controlled by the ignition switch
- One (1) 12-volt 60-amp, direct to the battery
- One (1) 12-volt 100-amp ground

#### **1.11.10 MASTER ELECTRICAL PANEL**

The main breaker panel shall be wired through the master disconnect solenoid and controlled with a three- position ignition rocker switch. Circuit breakers and flashers shall be located at officer's right side lower interior firewall with removable cover and schematic provided with notebook holder on outside cover.



A deluxe breaker panel with up to 22 ground switched relays with circuit breaker protection shall be provided.

An integrated electrical sub-panel shall be provided and interfaced to the body and chassis through an engineered wire harness system.

Twelve (12) 20-ampere and one (1) 70-ampere relay for cab lightbar and assemblies shall be provided. If the option for a mechanical siren has been selected two (2) additional relays shall be provided.

Additional four relay boards with circuit breaker protection for additional loads. Maximum two boards (8 relays) per breaker panel. All relay boards set up to trip with input from switch of positive-negative or load manager by moving connector on board (no tools needed to do this).

All relay boards shall be equipped with a power-on indicator light (red), input indicator light (green) and power output indicator light (red).

Up to 23 additional automatic reset circuit breakers for non-switched loads that are remotely switched (i.e.: heater fans, hood lights, etc.).

All relays and circuit breakers on the relay boards shall be pull-out/push-in replaceable.

All circuit breakers on the relay boards shall be 20 ampere automatic reset which can be doubled or tripled for 40 or 60-ampere capacity.

The system shall utilize Deutsch DRC weather resistant connectors at the breaker panel, toe board and main dash connections.

All internal wire end terminals, including locking connectors, shall be mechanically affixed to the wire ends by matching terminal crimping presses to assure the highest quality terminations.

All internal splices shall be ultrasonically welded connections and all internal wiring shall be high temperature GXL type wire that is protected by wiring duct wherever possible.

All switches shall be ground controlled; no power going through any rocker switch.

Any switch controlling a relay in the breaker panel shall be capable of being set to function only when the parking brake is set. All relays shall be tagged with the function that the relay is controlling.

#### **1.11.11 BODY ELECTRIC SYSTEM**



All body electrical wiring in the chassis will be XLP cross link-insulated type. Wiring is to be color-coded and include function codes every three (3) inches. Wiring harnesses will be routed in protective, heat resistant loom, securely and neatly installed.

Two power distribution centers will be provided in central locations for greater accessibility. The power distribution centers contain automatic thermal self-resetting breakers, power control relays, flashers, diode modules, daytime driving light module, and engine and transmission data links. All breakers and relays are utilized in circuits which amp loads are substantially lower than the respective component rating thus ensuring long component life.

Power distribution centers will be composed of a system of interlocking plastic modules for ease in custom construction. The power distribution centers are function oriented. The first is to control major truck function and the second controls overhead switching and interior operations. Each module is single function coded and labeled to aid in troubleshooting. The centers also have accessory breakers and relays for future installations. All harnesses and power distribution centers will be electrically tested prior to installation to ensure the highest system reliability.

All external harness interfaces will be of a triple seal type connection to ensure a proper connection. The cab/chassis and the chassis/body connection points will be mounted in accessible locations. Complete chassis wiring schematics will be supplied with the apparatus.

The wiring harness contained on the chassis shall be designed to utilize wires of stranded copper or copper alloy of a gauge rated to carry 125% of maximum current for which the circuit is protected without exceeding 10% voltage drop across the circuit. The wiring shall be uniquely identified by color code or circuit function code, labeled at a minimum of every three (3) inches. The identification of the wiring shall be referenced on a wiring diagram. All wires conform to SAEJ1127 (Battery Cable), SAEJ1128 (Low Tension Primary Cable), SAEJ1560 (Low Tension Thin Wall Primary Cable).

All harnesses shall be covered with moisture resistant loom with a minimum rating of 300 Degrees Fahrenheit and a flammability rating of VW-1 as defined in UL62. The covering of jacketed cable has a minimum rating of 289 degree Fahrenheit. All harnesses are securely installed in areas protected against heat, liquid contaminants and damage. The harness connections and terminations use a method that provides a positive mechanical and electrical connection and are in accordance to the device manufacturer's instructions. No connections within the harness utilize wire nut, insulation displacement, or insulation piercing.

All circuits conform to SAE1292. All circuits are provided with low voltage over current protective devices. These devices are readily accessible and protected against heat in excess of component rating, mechanical damage, and water spray. Star washers are not used for ground connections.



### **1.11.12 ELECTRICAL PROVISION**

Wiring shall be provided in the cab for the future installation of electrical chargers. The location shall be determined during the pre-construction conference.

## **1.12 FIRE PUMP**

### **1.12.1 FIRE PUMP HALE QMAX-2000**

Fire pump shall be midship mounted. The fire pump shall be of the double suction single stage centrifugal type, carefully designed in accordance with good modern practice.

The pump shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI.

The pump body shall be horizontally split, on a single plane, casing type with removable lower casing for easy removal of the entire impeller assembly including wear rings and bearings from beneath the pump without disturbing piping or the mounting of the pump in the chassis.

All moving parts in contact with water shall be of high quality bronze or stainless steel. Easily replaceable bronze labyrinth wear rings shall be provided. Discharge passage shall be designed to accomplish uniform pressure readings as the actual pump pressure. The rated capacity of the fire pump shall be 1750 gallons per minute in accordance with NFPA# 1901.

The pump shaft shall be rigidly supported by three bearings for a minimum deflection. One high lead bronze sleeve bearing shall be located immediately adjacent to the impeller (on side opposite the drive unit). The sleeve bearing shall be lubricated by a force fed, automatic lubrication system, pressure balanced to exclude foreign material. The remaining bearings shall be heavy-duty type, deep groove ball bearings and shall be splash lubricated.

### **1.12.2 PUMP TRANSFER CASE – G SERIES**

The drive unit shall be designed of ample capacity for lubricating reserve and to maintain the proper operating temperature. Pump drive unit shall be of sufficient size to withstand up to 16,000 lbs. ft. torque of the engine in both road and pump operating conditions.

The gearbox drive shafts shall be heat treated chrome nickel steel input and output shafts shall be at least 2-3/4" in diameter, on both the input and output shafts. They shall withstand the full torque of the engine in both road and pump operating conditions.

The engagement of the pump transmission shall be of such design so as to permit transfer of power from road to pump operation only after vehicle is completely stopped. The pump shift shall be air actuated from the cab and have both a green "Pump Engaged"



light, and a green "O.K.-To-Pump" light. A third green light shall be provided on the pump operator's panel for "Throttle Ready".

The pump drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory.

#### **1.12.3 PUMP SEAL**

The pump shaft shall have only one packing gland located on the inlet side of the pump. It shall be of split design for ease of repacking. The packing gland must be a full circle threaded design to exert uniform pressure on the packing to prevent "cocking" and uneven packing load when it is tightened. It shall be easily adjustable by hand with a rod or screwdriver and requiring no special tools or wrenches. The packing rings shall be of a unique combination of braided graphite filament and braided synthetic packing and have sacrificial zinc foil separators to protect the pump shaft from galvanic corrosion.

#### **1.12.4 PUMP ANODE**

A Hale pump anode kit assembly # 529-0050-00-0 shall be provided and installed in the pump body. A minimum of two (2) anodes shall be installed one (1) in the suction side and one (1) in the discharge side of the pump.

#### **1.12.5 PUMP TEST & CERTIFICATION**

The pump shall be tested and certified by Mistras Group, Inc., a third party independent testing agency, in accordance with NFPA 1901. A 3 hour pumping test from draft shall be conducted consisting of 2 hours of continuous pumping at 100% of rated capacity at 150PSI net pump pressure, followed by ½ hour of continuous pumping at 70% of rated capacity at 200PSI net pump pressure, and ½ hour of continuous pumping at 50% of rated capacity at 250PSI net pump pressure. The testing shall also include a pressure control system test, priming system test, vacuum test, a gauge/flowmeter test, and a pumping engine overload test. The apparatus shall be equipped with a water tank, and the water tank-to-pump test shall also be included.

#### **1.12.6 AUXILIARY COOLER**

An auxiliary cooler shall be furnished to provide additional cooling to the engine under extreme pumping conditions. Water from the pump is to be piped to the coils of the heat exchanger allowing the engine fluid to be cooled as required.

#### **1.12.7 PUMP CONNECTIONS**

All suction and discharge lines (except pump manifolds) 1" and larger shall be heavy-duty stainless steel pipe. Where vibration or chassis flexing may damage or loosen piping or where a coupling is necessary for servicing, a flexible connection shall be furnished. All lines shall be drained by a master drain valve or a separate drain provided at the



connection. All individual drain lines for discharges shall be extended with a 90 degree fitting in order to drain below the chassis frame. All water carrying gauge lines shall utilize nylon tubing.

#### **1.12.8 TANK TO PUMP**

The booster tank shall be connected to the intake side of the pump with a check valve. The 3" tank to pump line shall run from a bottom sump into the 3" valve. To prevent damage due to chassis flexing or vibration, a short 3" flexible rubber hose coupling shall be used to connect the tank to the intake valve.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

#### **1.12.9 TANK FILL**

A 2" tank fill line shall be provided, using a quarter turn full flow ball valve controlled from the pump operator's panel.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**



The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

#### **1.12.10 PRESSURE GOVERNOR**

Apparatus shall be equipped with a Class1 Pressure Governor that is connected to the Electronic Control Module (ECM) mounted on the engine. The Governor will operate as a pressure sensor (regulating) governor (PSG) utilizing the engine's data for optimal resolution and response.

Programmable presets for RPM and Pressure settings shall be easily configurable using the menu structure. Engine RPM, system voltage, engine oil pressure and engine temperature with audible alarm output for all shall be provided.

#### **1.12.11 INTAKE RELIEF**

There shall be a Hale stainless steel intake relief valve installed on the intake side of the pump. The surplus water shall be discharged away from the pump operator and terminate with Male NST hose thread. System shall be field adjustable.

#### **1.12.12 6" PUMP INLET (LEFT SIDE)**

A 6" diameter suction port with 6" NST male threads shall be provided, on the left side of vehicle. The inlet shall extend through the side pump panels and come complete with removable strainer and long handle chrome-plated cap.

#### **1.12.13 2.5" LEFT SIDE INLET**

One 2.5" gated inlet valve shall be provided on the left side pump panel. The valve shall be supplied with chrome plate female swivel, plug, chain, and removable strainer. The valve shall attach directly to the suction side of the pump with the valve body behind the pump panel.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.



- **VALVE ACTUATOR**

The valve shall be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90 degree movement.

- **THREAD TERMINATION**

The above shall terminate with National Standard Threads.

#### **1.12.14 6" PUMP INLET (RIGHT SIDE)**

A 6" diameter suction port with 6" NST male threads shall be provided, on the right side of vehicle. The inlet shall extend through the side pump panels and come complete with removable strainer and long handle chrome-plated cap.

#### **1.12.15 2.5" RIGHT SIDE INLET**

A 2.5" gated inlet valve shall be provided on the right side pump panel. The valve shall be supplied with chrome plate female swivel, plug, chain, and removable strainer. The valve shall attach directly to the suction side of the pump with the valve body behind the pump panel.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a swing type handle located at the operator's panel. The handle shall have a full 90 degree movement.

- **THREAD TERMINATION**

The above shall terminate with National Standard Threads.

#### **1.12.16 FRONT SUCTION**



A front suction, with chrome long handle cap, shall be provided. The inlet pipe shall be constructed of 5" stainless steel pipe. An air bleeder line shall be provided to eliminate trapped air.

- **INTAKE VALVE**

A Hale Master Intake valve shall be installed on the additional inlet. It shall be electrically actuated from the pump panel and include a manual override hand wheel on the pump panel. The valve shall include a pressure relief valve to guard against incoming pressure surges.

- **SWIVEL**

A 5" NPT x 6" NST swiveling elbow shall be provided on the front suction. The swivel shall be constructed of cast brass with chrome plating.

### **1.12.17 DISCHARGE #1 - LEFT**

The discharge in position #1 on the left side of the apparatus shall include the following features.

A 2.5" discharge shall be provided on the left side of the apparatus.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

- **2.5" PRESSURE GAUGE**

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus



40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.

To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

- **THREAD TERMINATION**

The above shall terminate with National Standard Threads.

#### **1.12.18 DISCHARGE #2 - LEFT**

The discharge in position #2 on the left side of the apparatus shall include the following features. A 2.5" discharge shall be provided on the left side of the apparatus.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall have a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

- **2.5" PRESSURE GAUGE**

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.



To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

- **THREAD TERMINATION**

The above shall terminate with National Standard Threads.

### **1.12.19 DISCHARGE #3 - RIGHT**

The discharge in position #3 on the right side of the apparatus shall include the following features. A 3" discharge shall be provided on the right side of the apparatus.

- **VALVE, SLOW CLOSE**

The valve shall be an Akron slow close type Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10-year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

- **2.5" PRESSURE GAUGE**

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.

To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed



from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

- **THREAD TERMINATION**

The above shall terminate with National Standard Threads.

- **DISCHARGE ADAPTER**

One (1) Task Force Tips #AA3ST-NL 3" NST female x 5" Storz adapter with #A01ST 5" Storz cap and chain shall be provided for the above discharge.

#### **1.12.20 DISCHARGE #4 - RIGHT**

The discharge in position #4 on the right side of the apparatus shall include the following features. A 2.5" discharge shall be provided on the right side of the apparatus.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

- **2.5" PRESSURE GAUGE**

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.



To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

- **THREAD TERMINATION**

The above shall terminate with National Standard Threads.

**1.12.21 2.5" LEFT REAR DISCHARGE (HOSE BED)**

There shall be a 2.5" gated discharge piped to the left rear. The discharge shall be installed with proper clearance for spanner wrenches or adapters.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

- **2.5" PRESSURE GAUGE**

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.

To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright



metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

- **THREAD TERMINATION**

The above shall terminate with National Standard Threads.

### **1.12.22 REAR DISCHARGE (HOSE BED)**

There shall be a 2.0" gated discharge piped to the front of the left rear hose bed rear. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be 2.0" piping and a full flow 2.0 ball valve and terminate with a 1.5 Male NST fitting with the control at the pump operator's panel.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

- **2.5" PRESSURE GAUGE**

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.

To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and



case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

- **THREAD TERMINATION**

The above shall terminate with National Standard Threads.

### **1.12.23 FRONT BUMPER DISCHARGE**

A 1.5" discharge with 2" plumbing shall be provided at the front bumper. The valve shall be remote controlled at the pump panel.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

- **2.5" PRESSURE GAUGE**

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.

To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.



- **THREAD TERMINATION**

The above shall terminate with National Standard Threads.

#### **1.12.24 DELUGE RISER**

A 3" deluge riser shall be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping shall be rigidly braced. The riser shall be gated and controlled from the pump operator's panel.

- **VALVE, SLOW CLOSE**

The valve shall be an Akron slow close type Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self-locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall have a 10-year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

- **2.5" PRESSURE GAUGE**

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area.

To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

- **DECK GUN TERMINATION**



The deck gun piping shall terminate with NPT threads.

- **FLOWMINDER**

There will be a digital flowminder provided on the deck gun discharge

#### **1.12.25 SPEEDLAYS**

Two (2) speedlays shall be provided under the top mount console. The piping and valves shall be 2", the swivels shall be 1.5". The valves shall be the "drop-out" style, push/pull controlled from the pump panel. Each compartment shall hold 200 ft. of 1.75" double jacket hose.

- **VALVE**

The valve shall be an Akron Heavy-Duty swing out 8000 series brass body with flow optimizing stainless steel ball, and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a self- locking ball feature using an automatic friction lock design and specially designed flow optimizing stainless steel ball. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valve shall a 10- year warranty covered by Akron Brass.

- **VALVE ACTUATOR**

The valve shall be controlled by a Class 1 T-handle located at the operator's panel. The T-handle position shall be locked and unlocked by turning a knob located at the end of the T-handle shaft.

- **GAUGE**

The discharge shall be equipped with 2.5" Class 1 gauge. The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The case shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge shall be mounted adjacent to the corresponding water outlet.

- **THREAD TERMINATION**



The above shall terminate with National Standard Threads.

- **SPEEDLAY COVER**

A vinyl cover shall be provided to enclose the ends of the speedlays.

**1.12.26 MASTER PUMP DRAIN**

A multiport master drain valve shall be provided and plumbed to multiple locations on the main pump body. The valve assembly shall be clearly marked as the Master Drain.

**1.12.27 DRAIN VALVES LIFT UP STYLE**

Vertical lift up style, quarter turn style drain valves shall be provided for each suction inlet, or discharge outlet as specified. Each drain shall be clearly marked and color coded to match the corresponding suction or discharge.

**1.12.28 FOAM SYSTEM**

There will be an Akron 3096 bypass eductor foam system provided with a flush. It will be plumbed to the left rear 2" hose bed discharge.

**1.12.29 FOAM TANK**

There shall be a 50-gallon foam tank. The tank shall be part of the main booster tank. There shall be a 3" PVC fill tower and cap and a tank vent. There shall be a 1-1/2" flanged outlet and drain valve at the lowest point in the tank.

**1.12.30 PUMP AND GAUGE PANELS –TOP MOUNT**

The panels shall be constructed of brushed stainless steel for maximum protection against abrasion caused during normal use. The right and left side panels shall be flush mounted on the aluminum extruded pump module framework. The pump and gauge panels shall be located above the pump compartment providing maximum view to the pump operator. Pump panels on both sides shall be easily removable. The panels shall be two separate panels for ease of maintenance. The upper gauge panel shall be hinged with a full-length stainless steel hinge held closed with a 1/4-turn latch. There shall be a hinged access door as large as possible located over the right side pump panel. This door shall have a stainless steel hinge and latching mechanisms.

The right side pump panel shall be vertically hinged to allow the panel to move away providing complete access to the pump compartment.

**1.12.31 PANEL FINISH**



The panels shall be constructed of brushed stainless steel for maximum protection against abrasion caused during normal use.

#### **1.12.32 COLOR CODING**

Each discharge valve control, outlet, and corresponding line gauge shall be color-coded.

#### **1.12.33 RUNNING BOARD TROUGH (LEFT SIDE)**

A trough shall be provided in the left side running board to hold a 15-foot length of 5" hose. Velcro straps shall be provided to secure the hose.

#### **1.12.34 RUNNING BOARD TROUGH (RIGHT SIDE)**

A trough shall be provided in the right side running board to hold a 15-foot length of 5" hose. Velcro straps shall be provided to secure the hose.

#### **1.12.35 FUEL GAUGE**

There will be a fuel gauge provided on the pump panel.

#### **1.12.36 PUMP PANEL LIGHTS LED**

The pump panel controls and gauges shall be illuminated by a minimum of two (2) LED lights, controlled at the pump panel.

#### **1.12.37 PUMP PANEL GAUGES AND CONTROLS**

The following shall be provided at the pump operator's panel:

- Two (2) certified laboratory test gauge outlets. Push/pull pump primer control.
- Master drain control and additional drains as needed.
- Tank fill and pump cooler valve controls. Tank to pump valve control.
- Pump capacity rating plate. All discharge controls.
- Two (2) master 4-1/2" pump gauges.
- 2-1/2" Gauges for all 1-1/2" and larger discharge lines.

#### **1.12.38 PRIMING SYSTEM**

The priming pump shall be a Trident Emergency Products compressed air powered, high efficiency, multi- stage, venturi based AirPrime System. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. A single panel mounted control will activate the priming pump and open the priming valve to the pump. The priming system shall have a five year warranty.



#### **1.12.39 (2) PRIMER BUTTON - MAIN SUCTION**

A single panel mounted control will activate the priming pump and open the priming valve to the pump. An additional primer control valve shall be furnished to prime the front suction line plumbing. The Trident Emergency products RPV (remote priming valve) shall activate using the same air that powers the AirPrime™ system when the coinciding panel valve is depressed. Priming the remote suction line evacuates air from that line and minimizes cavitation during remote suction operations. The valve control is to be co-located next to the main priming valve control on the pump operator's panel.

#### **1.12.40 THERMAL RELIEF VALVE**

There shall be a Hale TRV120 Thermal Relief Valve (TRV) supplied. The valve shall automatically dump a controlled amount of water to atmosphere when the pump water exceeds 120 degrees Fahrenheit. The valve shall re-set automatically. A light shall be provided at the pump panel, which will illuminate when the pump reaches 120 degrees Fahrenheit to warn the operator that the pump is automatically dumping.

#### **1.12.41 AIR HORN BUTTON**

A push button switch shall be provided on pump operator's panel to activate the air horns.

#### **1.12.42 AIR OUTLETS**

There shall be (2) air outlets on the pump panel. (1) On the right panel and (1) on the left panel.

#### **1.12.43 4.5" MASTER GAUGES**

Two (2) 4-1/2" Class 1 master gauges shall be provided. Each gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40-degrees Fahrenheit. The cases shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing, and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauges shall be mounted next to each other adjacent to crosslay area at the right upper section of the pump operator's panel. The intake gauge shall be to the left of the discharge gauge.

#### **1.12.44 WATER TANK GAUGE**



A Class1 Intelli-Tank water level gauge shall be provided. The gauge shall feature wide-angle viewing and four (4) ultra-bright LED's for high visibility even in direct sunlight. Water level sensing shall be through a pressure transducer, and capable of indicating nine (9) accurate levels.

#### **1.12.45 WATER TANK GAUGE**

Two (2) Whelen PSTANK LED strip lights shall be provided. The lights shall be steady burn green, blue, amber and flashing red to indicate water level in the booster tank.

#### **1.12.46 FOAM TANK GAUGE**

A Class1 Intelli-Tank foam level gauge shall be provided. The gauge shall feature wide-angle viewing and four (4) ultra-bright LED's for high visibility even in direct sunlight. Foam level sensing shall be through a pressure transducer, and capable of indicating nine (9) accurate levels.

### **1.13 WATER TANK SPECIFICATIONS**

#### **1.13.1 WATER TANK**

The tank shall be constructed of PT3™ polypropylene material by United Plastic Fabricating (UPF). This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on the application and may range from ½ to 1” as required. Internal baffles are generally 3/8” in thickness.

The tank shall be of a specific configuration and shall be designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include PolyProSeal™ technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise.

The top of the booster tank shall be fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" PT3™ polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions shall interlock with one another and completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901.

The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design™.



The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 1/2" PT3™ polypropylene and shall be a minimum dimension of 8" x 8" outer perimeter. The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower shall have a 1/4" thick removable polypropylene screen and a PT3™ polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the fill tower there shall be a combination vent/overflow pipe. The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of 4" that is designed to run through the tank, and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction.

The tank cover shall be constructed of 1/2" thick PT3™ polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank cover(s) shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart. These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions. A minimum of two lifting dowels shall accommodate the necessary lifting hardware.

There shall be one (1) sump constructed of a minimum of 1/2" PT3™ polypropylene and be located in the left front quarter of the tank, unless specified otherwise. On all tanks that require a front suction, a 3" schedule 40 polypropylene pipe shall be installed that will incorporate a dip tube from the front of the tank to the sump location. The sump shall have a minimum 3" N.P.T. threaded outlet on the bottom for a drain plug per NFPA. This shall be used as a combination clean-out and drain. All tanks shall have an anti-swirl plate located approximately 3" above the inside floor.

There shall be two (2) standard tank outlets: one for the tank-to-pump suction line, which shall be sized to provide adequate water flow to the pump; and, one for tank fill line, which shall be sized according to the NFPA minimum size chart for booster tanks. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates of up to 1000 G.P.M. All auxiliary outlets and inlets must meet all NFPA guidelines in effect at the time of manufacture.

The UPF Poly-Tank® III shall rest on the body cross members in conjunction with such additional cross members, spaced at a distance that would not allow for more than 530 square inches of unsupported area under the tank floor. In cases where overall height of the tank exceeds 40 inches, cross member spacing must be decreased to allow for not more than 400 square inches of unsupported area.

The tank shall be isolated from the cross members through the use of hard rubber strips with a minimum thickness and width dimension of 1/4" x 1". The rubber must be installed so it will not become dislodged during normal operation of the vehicle.



Additionally, the tank must be supported around the entire bottom outside perimeter and captured both in the front and rear as well as side to side to prevent tank from shifting during vehicle operation.

The tank shall be completely removable without disturbing or dismantling the apparatus structure.

The tank shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. The tank shall be delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight. Engineering estimates for capacity calculations shall not be permitted for capacity certification. A center of gravity and weight calculation for both empty and full conditions shall be required with each tank.

The tank shall have a limited Lifetime warranty that provides warranty service for the life of the fire apparatus in which the tank is installed. Warranties are transferable if the apparatus ownership changes by requesting the transfer from UPF. In applications where the tank will be subject to severe conditions, the tank may have a warranty unique to the application that is clearly defined for each such application.

### **1.13.2 WATER TANK SIZE**

The water tank shall have a capacity of 750 U.S. gallons.

## **1.14 APPARATUS BODY SPECIFICATIONS**

### **1.14.1 APPARATUS BODY**

The body shall be constructed of 3/16" #5052 aluminum sheet, #3003 bright aluminum diamond plate or Equal and structural aluminum extrusions. The body shall be of the modular design to allow for proper flexing of the truck chassis. The body shall be custom built and engineered for proper load distribution on the chassis. An insulator material shall be used where aluminum and steel are in contact to prevent corrosion.

The ceilings, sidewalls and floors of the body compartments shall be constructed of 3/16" 5052-H32 smooth aluminum plate with a tensile strength range of 32,000 to 44,000 psi. Continuous 5356 fill welding shall seal compartment panels.

The body framework shall be constructed of custom-designed aluminum alloy 6063-T5 extrusions with a tensile strength of 35,000 psi.

- To eliminate "dead space" and to maximize compartment interior space, there shall be no more than 1/4" between outer and inner walls.
- The compartment extrusions shall be slotted full-length on backside for uniform fitting of the aluminum plate work that forms the compartment interiors.



- The aluminum extrusion profiles shall incorporate 1" x 1-3/4" recessed continuous door seal at the bottom of the compartment. The extrusions shall be designed to allow unobstructed, sweep-out floors in all compartments.
- The front, top, and rear surfaces of body shall be covered with .125" bright aluminum diamond treadplate. The forward and rear recessed surfaces shall be flush with the corner extrusions.
- The compartment tops shall extend downward over the extrusions and form a drip molding. The material shall be .125 aluminum treadplate with approved aerated service for walking.
- The compartment assemblies are to be fastened to the sub-frame with mechanical Huck-type bolts.
- The apparatus body shall be a separate module from the pump enclosure and shall not be fastened together in any manner.
- Each compartment shall be properly vented with louvers.

#### **1.14.2 REAR STEP COMPARTMENTATION**

A1 - There shall be a compartment provided at the rear step. The compartment shall be approximately 40" wide x 40" high x 29-1/2" deep inside. The compartment shall be provided with a roll-up door.

#### **1.14.3 COMPARTMENTATION LEFT SIDE**

- L1- There shall be a compartment ahead of the rear wheels approximately 43" wide x 66" high x 27-1/4" deep.
- L2- There shall be a compartment above the rear wheels, approximately 61-1/2" wide x 36-1/2" high x 27-1/4" deep.
- L3- There shall be a compartment behind the rear wheels approximately 53" wide x 66" high x 27-1/4" deep.

#### **1.14.4 COMPARTMENTATION RIGHT SIDE**

- R1- There shall be a compartment ahead of the rear wheels approximately 43" wide x 66" high x 27-1/4" deep. The upper portion of the compartment shall be 10-1/2" deep to accommodate ladder storage.
- R2- There shall be a compartment above the rear wheels approximately 61-1/2" wide x 36-1/2" high x 10-1/2" deep.
- R3- There shall be a compartment behind the rear wheels approximately 53" wide x 66" high x 27-1/4" deep. The upper portion of the compartment shall be 10-1/2" deep to accommodate ladder storage.

#### **1.14.5 BODY SUB-FRAME**

The chassis shall be fitted with a sub-frame system consisting of a series of steel plate gusseted legs, extending down and out from the chassis frame rails on each side. This



system will provide additional structural support to the running boards and side compartments. A heavy-duty rear platform shall be constructed of the same material to support the rear compartments and rear step. The entire assembly will be attached to the chassis frame by a series of heavy-duty U-bolts. Self-supporting bodies will not be acceptable. Or Equal.

#### **1.14.6 COMPARTMENT INTERIOR - L1**

The L1 compartment on the left side of the apparatus shall include the following features:

- **ADJUSTABLE SHELF (2)**
  - o There shall be (2) adjustable shelf provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.

#### **1.14.7 COMPARTMENT INTERIOR - L2**

The L2 compartment on the left side of the apparatus shall include the following features:

- **TILT DOWN DRAWER**
  - o A Slide-Master pull out drawer with 30 degree tilt down feature shall be provided and installed in the compartment. The drawer shall have a distributed load capacity of 250 lbs. and be capable of extending 90% of it's depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".

#### **1.14.8 SPECIAL MOUNTING SHEET**

There will be a 3/16" aluminum sheet provided on the back of the L-2 Slide Out Tilt Down tray. It will be 17" high.

#### **1.14.9 COMPARTMENT INTERIOR - L3**

The L3 compartment on the left side of the apparatus shall include the following features:

- **ADJUSTABLE ROLLOUT DRAWER**
  - o There shall be a 250 lb. capacity rollout drawer supplied and installed in a compartment. The drawer shall be approximately 3" deep and shall be mounted on adjustable tracks.



- **TILT DOWN DRAWER**

- o A Slide-Master pull out drawer with 30 degree tilt down feature shall be provided and installed in the compartment. The drawer shall have a distributed load capacity of 250 lbs. and be capable of extending 90% of it's depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".

- **600# SLIDE-MASTER TRAY**

- o There shall be a Slide-Master pullout drawer provided and installed. The drawer shall have a distributed load capacity of 600 lbs. and be capable of extending 70% of its depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".

#### **1.14.10 COMPARTMENT INTERIOR - R1**

The R1 compartment on the right side of the apparatus shall include the following features:

- **ADJUSTABLE SHELF**

- o There shall be (2) adjustable shelf provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.

- **600# SLIDE-MASTER TRAY**

- o There shall be a Slide-Master pullout drawer provided and installed. The drawer shall have a distributed load capacity of 600 lbs. and be capable of extending 70% of its depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".

#### **1.14.11 COMPARTMENT INTERIOR - R2**

The R2 compartment on the right side of the apparatus shall include the following features:

- **250# ADJUSTABLE SWING-OUT TOOL BOARD**

- o A swing-out tool board with 250# rating shall be provided and mounted in a compartment. The tool board shall be constructed of a 1"



square aluminum tubing framework with a 3/16" aluminum mounting surface on each side. The tool board shall be adjustable within the depth of the compartment. It shall be held in the open position with a pneumatic strut and in the closed position with a positive latching mechanism.

#### **1.14.12 COMPARTMENT INTERIOR - R3**

The R3 compartment on the right side of the apparatus shall include the following features:

- **ADJUSTABLE SHELF (2)**
  - o There shall be (2) adjustable shelf provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.
- **600# SLIDE-MASTER TRAY**
  - o There shall be a Slide-Master pullout drawer provided and installed. The drawer shall have a distributed load capacity of 600 lbs. and be capable of extending 70% of its depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".

#### **1.14.13 COMPARTMENT INTERIOR - A1**

The A1 compartment on the rear of the apparatus shall include the following features:

- **ADJUSTABLE SHELF**
  - o There shall be an adjustable shelf provided and installed in the compartment. The shelf shall be fabricated of .188" aluminum plate.
- **ADJUSTABLE ROLLOUT DRAWER**
  - o There shall be a 250 lb. capacity rollout drawer supplied and installed in a compartment. The drawer shall be approximately 3" deep and shall be mounted on adjustable tracks.

#### **1.14.14 UNISTRUT**

Each compartment shall come equipped with 1.625" x .875" x .125" aluminum Unistrut channel. The Unistrut shall be securely fastened to the interior walls of the compartment.



#### **1.14.15 ROLL-UP COMPARTMENT DOORS**

The apparatus body shall be equipped with R.O.M Robinson Shutter doors. The door slats shall be double wall box frame, manufactured from anodized aluminum. The doors shall have the following features:

- Manufactured wholly in the United States.
- Concave individual slat design to prevent loose equipment from hindering door operation.
- Co-Extruded stretch resistant inner seal between slats to prevent metal-to-metal contact and inhibit moisture and dust penetration.
- Interlocking swaged/dimpled end shoes shall be utilized to provide a tight fitting assembly and allow for easy removal in the event of damage.
- Effective counter balancing for ease of lifting and lowering the doors.
- One-piece side rail and track to provide an unobstructed slide area and reduce the risk of binding.
- Non-abrasive replaceable water and dust barrier to keep compartment equipment clean and dry.
- A magnetic type switch integral to the door shall be supplied for door ajar indication and compartment light activation.
- A full width positive latch bar shall be operable with one hand, even with heavy gloves. A door open indicator light shall be provided in the cab.

#### **1.14.16 DOOR LOCKS**

The compartment doors shall be equipped with locks. The locks shall all be keyed alike.

#### **1.14.17 COMPARTMENT LIGHTING**

Each compartment shall be equipped with two (2) LED light strips which shall provide a consistent pattern to illuminate to entire compartment.

#### **1.14.18 HOSE BED**

The hose bed shall be provided with aluminum slatted flooring radiused at the edges to prevent hose damage from sharp edges. Each hose bed floor section shall be removable for easy access to the water tank. The hose shall be capable of holding the following minimum loads and maximum distance from the ground:

- 500-gallon tank - 2000 feet of 5" LDH
- 750-gallon tank - 1500 feet of 5" LDH
- 1000-gallon tank - 1000 feet of 5" LDH



#### **1.14.19 HOSE BED COVER**

An aluminum two-piece, hinged hose bed cover constructed of .125" aluminum diamond plate and square aluminum extrusion shall be provided for the main hose bed.

#### **1.14.20 HOSE BED DIVIDERS**

The hose bed shall be divided by three (3) 3/16" aluminum partitions that are fully adjustable by sliding in tracks located at the front and rear of the hose bed. The dividers shall be located as needed.

One of the hose bed dividers will be installed horizontal across the front the of the hose bed to provide additional storage for large items.

#### **1.14.21 HOSE BED LIGHTS**

There will be LED strip lights provided one each side under the hose bed cover.

#### **1.14.22 HOSE BED BAR**

There will be a horizontal bar provide across the back of the truck just below the hose bed.

#### **1.14.23 BODY HANDRAILS**

Handrails shall be constructed of type 304 stainless steel 1.25 inch diameter tubing with bright finish and knurled gripping surface. Mounting flanges shall be constructed from 7 gauge, .180 thick, stainless sheet. Each grab rail shall have 90 degree returns to flanges. The ends of grab rail shall pass through the flanges and be welded to form one structural unit. The handrails, shall be mounted using 1.25" SS Hex bolts, with a barrier rubber gasket at each flange. Sufficient space shall allow for a gloved hand to firmly grip the rail. The rails shall be located in the following areas:

(Note: These are in addition to those previously mentioned in the cab section):

There shall be one (1) vertical handrail at rear of the body one each side of the rear compartment.

There shall be two (2) handrails mounted horizontally, above the pump panel, one (1) on each side as large as possible.

#### **1.14.24 FRONT BODY STEPS**



There shall five (5) fold-down steps mounted three (3) left and two (2) on the front face of body to provide access to the top of the pump module and dunnage area. The steps shall have a footing area of 42 square inches.

#### **1.14.25 REAR STEPS**

The rear of the body shall be equipped with fixed steps. The steps shall have a surface area sufficient to provide safe footing for a booted firefighter. Thinly fabricated aluminum steps shall not be utilized.

The quantity and location of steps and handrails shall meet the Current NFPA 1901 pamphlet in effect at the time the apparatus is ordered.

#### **1.14.26 RUB RAILS**

The body shall be equipped with anodized aluminum channel style rub rails at the sides. Rub rails shall be spaced away from the body by 1/2" polymer spacers. The rub rails shall be polished to a bright finish.

#### **1.14.27 ALUMINUM TREADPLATE**

All load bearing aluminum treadplate running boards shall be 3/16" thick bright-annealed finish. Running boards and rear step edges shall be flanged down for added strength. Running boards shall also be flanged up to form kick plates. All non-load bearing aluminum shall be 1/8" thick bright annealed finish.

Treadplate locations:

- a. Skirting around front bumper.
- b. The step at the cab entrance.
- c. The jump seat steps.
- d. The body header.
- e. The running boards.
- f. The rear step.
- g. The top of the compartments.
- h. The rear of the apparatus.
- i. The rear fenders.
- j. The hosebed side metal.

#### **1.14.28 AIR BOTTLE COMPARTMENTS**

There shall be four (4) SCBA bottle compartments located in the fender wells of the apparatus body, two (2) each side.



#### **1.14.29 SUCTION HOSE**

Two (2) 10 ft. lengths of 6" lightweight (KOCHEK) fire department hard suction hose with lightweight long handle couplings and pin lug male couplings shall be provided.

#### **1.14.30 SUCTION HOSE MOUNTING**

The suction hose shall be mounted in diamond plate troughs and held in position by a Velcro strap.

Stainless steel scuff plates shall be provided on the body side metal where the long handle couplings would otherwise hit the body sides.

#### **1.14.31 STRAINER**

A 6" Kochek barrel strainer shall be provided.

#### **1.14.32 GROUND LADDERS**

The apparatus shall be equipped with heavy duty, box type "I" beam rail, ground ladders. The ladders shall meet the requirements of NFPA 1931 to ensure proper design and that sufficient strength is available for the service intended. The ground ladders shall be constructed of aluminum with non-welded, field replaceable rung to rail connections to simplify field repairs and removable plated steel butt spurs for added strength. A full 1/2", non-rotting, poly rope shall be provided for easy ladder operation.

- One (1) Alco-Lite PEL-24 24 ft. two-section aluminum extension ladder.
- One (1) Alco-Lite PRL-14 14 ft. aluminum roof ladder.
- One (1) Alco-Lite FL-10' 10 ft. folding ladder.

The ladders shall have lifetime Warranty against manufacturing defects.

#### **1.14.33 LADDER CHUTE**

The ground ladders shall be mounted behind the right upper compartments in an area accessible from the rear of the apparatus. The ladders shall be individually located in holders lined with anti-wear strips. There shall also be storage for a 2" backboard and two (2) pike poles in the ladder chute compartment.

- An aluminum diamond plate door shall enclose the ladders at the rear.

#### **1.14.34 LICENSE PLATE BRACKET**

A Cast Products LP0013 cast aluminum license plate bracket with LED light shall be provided at the rear of the apparatus or equal.



#### **1.14.35 BACK-UP ALARM**

An Ecco model SA917 automatic self-adjusting electronic back-up alarm producing 87-112 db shall be installed at the rear between the frame rails. It shall operate whenever the transmission's reverse gear is selected or equal.

#### **1.14.36 EMS CABINET**

There will be an aluminum locked door provided approx. half way up the inside of the L-1 Compartment or L-1 can be split into locked upper and a lower compartments.

#### **1.14.37 MOUNT EQUIPMENT**

There will be labor provided to mount the department supplied equipment on the apparatus.

#### **1.14.38 COMPARTMENT MATTING- LARGE RESCUE PUMPER**

Turtle Tile interlock matting material shall be provided in each compartment and shelves.

### **1.15 LIGHTING**

#### **1.15.1 TAIL/STOP/TURN LIGHTS**

The taillights are to be Whelen 600 LED style. The brake/tail lights to be red and exceed SAE requirements. The turn signal shall be populated in an arrow pattern, amber in color. The backup lights are to be halogen. One opening shall be open to accept a 600 series warning light.

#### **1.15.2 LED ICC/MARKER LIGHTS**

LED type ICC/marker lights shall be provided to meet D.O.T. requirements.

#### **1.15.3 FLEXIBLE MARKER LIGHTS**

A Britax L427.200.L12V LED flexible marker light shall be mounted on the rear lower corners of the body, one each side.

#### **1.15.4 STEP LIGHTS**

The pump module running board area shall be illuminated by Whelen 2G 4" diameter LED lights mounted one each side on the front of the body in chrome flanges.

LED strip lighting shall be provided at the front and rear of the body to illuminate all stepping surfaces.



### **1.15.5 GROUND LIGHTING**

The apparatus shall be equipped with lighting capable of illumination to meet NFPA requirements. Lighting shall be provided at areas under the driver and crew riding area exits and shall be automatically activated when the exit doors are opened. The ground lights shall be Truck-lite® LED model #44042C. Lighting required in other areas such as work areas, steps and walkways shall be activated when the parking brake is applied, provided the ICC lights are on.

### **1.15.6 REAR WORK LIGHTS**

Two (2) Unity AG 6" halogen flood lights shall be provided. One (1) shall be mounted on each side on the upper rear of the apparatus body. The lights shall be activated by a switch inside the cab near the driver. The lights shall also have individual switches on each light head.

### **1.15.7 OPTICAL WARNING SYSTEM**

The optical warning system shall be capable of two separate signaling modes during emergency operations. One mode shall signal to drivers and pedestrians that the apparatus is responding to an emergency and is calling for the right-of-way and the other mode shall signal that the apparatus is stopped and is blocking the right-of-way. Switching shall be provided that senses the position of the parking brake.

A master optical warning device switch shall be provided to energize all of the optical warning devices provided. All lights shall operate at not less than the minimum flash rate per minute as specified by NFPA.

### **1.15.8 UPPER LEVEL WARNING DEVICES**

The upper level is divided into zones A, B, C and D and the approved lighting package to be provided shall be as follows:

**Zone A (front)** shall have one (1) Whelen Freedom 4 72" Model F472QLED NFPA 1901 compliant light bar, with twelve (12) LED modules. The light bar shall have ten (10) red LED and two (2) clear LED heads and shall be mounted on the cab roof.

**Zone B (right side)** shall be covered by the module from the light bar and the right rear stanchion beacon.

**Zone C (rear)** shall have two (2) Whelen Model L31HRFN LED beacons, red, mounted on rear stanchions

**Zone D (left side)** shall be covered by the module from the light bar and the left rear stanchion beacons.



### **1.15.9 LOWER LEVEL WARNING DEVICES**

The lower level is divided into zones A, B, C and D and the approved lighting package to be provided shall be as follows:

**Zone A (front)** shall have a total of two (2) Whelen 600 Series LED red lights mounted one each side of the apparatus grille.

**Zone B (right side)** shall have two (2) Whelen 600 Series LED red lights mounted one (1) on the side of the headlight housing and one (1) in the fender well on the apparatus. There shall also be one (1) Whelen 500 Series LED red light located in the rub rail near the rear of the apparatus.

**Zone C (rear)** shall have two (2) Whelen 600 Series LED red lights mounted one each side of the rear of the apparatus as part of the tail light cluster.

**Zone D (left side)** shall have two (2) Whelen 600 Series LED red lights mounted one (1) on the side of the headlight housing and one (1) in the fender well on the apparatus. There shall also be one (1) Whelen 500 Series LED red light located in the rub rail near the rear of the apparatus.

### **1.15.10 LED WARNING LIGHTING**

There shall be four pair of Whelen Model 600 Series Super LED red lights mounted on the apparatus. The placement of the lights is to be determined by the fire department.

### **1.15.11 TRAFFIC ADVISOR**

A Whelen LED TAL65 Traffic Advisor with a TACTRL1 Control Head shall be provided. The low profile Traffic Advisor is approximately 1-1/2" high x 2-1/2" deep x 36" long. The six (6) LED lamp group is in a cap style extruded aluminum housing with black powder painted finish and surface mounted to eliminate large body panel cutouts. The high intensity LED's are rated for over 100,000 hours of operation and have extremely low current consumption. The Control Head has a four function rotary switch for selection of: center to left, center to right, center to left and right, or flash patterns. The dip switch on the rear panel selects the choice of eight (8) different programmable flash patterns. The Control Head features a visual LED status display.

### **1.15.12 WHELEN MINI BARS**

There will be (2) Whelen LED mini light bars installed one each side over the rear cab doors. Whelen FT\*RRRRP

### **1.15.13 WHELEN PIONEER PLUS LED BROW LIGHT**



A Whelen model PFP2 LED brow light shall be provided. The light shall be mounted at the front of the cab. The light shall be controlled from a switch in the cab.

#### **1.15.14 LED LIGHT WHELEN PIONEER**

- Two (2) Whelen Model PFP2 Pioneer Plus Dual Panel LED floodlight shall be provided.
- The light shall be housed in a heavy-duty aluminum housing.
- Lumens: 10,000
- Amps: 13
- Volts: 12.8 DC Bulb Type: LED Width: 14" Height: 4-5/8" Depth: 3"
- The light shall be mounted on a telescoping pole. A switch shall be located at the light head.

#### **1.16 CORROSION REDUCTION POLICY / PAINTING**

It is understood that fire apparatus will operate in harsh environments. The manufacturer must have in place a formal corrosion reduction program and detailed assembly procedures, designed for reducing and eliminating the possibility of corrosion. A formal program following the processes as set forth in ASTM B117, and is described below.

- **FRAME RAILS**

The chassis frame rails shall be coated with a high performance, two component, reinforced inorganic zinc rich primer with a proven cathodic protection makeup preferably Cathacoat 302HB. The surface shall be clean and free of all salts, chalk and oils prior to application. Were the primer has been broken during the frame assembly process the area shall be touch up to reestablish the seal. Prior to finish paint a second primer Devran 201 shall be applied. Once the assembly of the frame is complete and the second primer is applied the entire assembly shall be covered with high quality top coat paint preferably Imron 5000 or equal.

- **ELECTRO PLATING**

Steel and Iron brackets such as the pump module bracket shall be Zinc or cadmium plated to protect against corrosion. Plating shall be in accordance with ASTM B663.

- **FASTENERS**

In any area that a stainless steel screw or bolt head is to come in contact with aluminum or steel, painted or non-painted, the fastener shall have the underside of the head pre-coated with nylon. The nylon coating shall act as a barrier between the fastener head and the metal or painted surface.



Screw or bolt taped into the metal shall be pre-coated with a Threadlocker type material pre-applied on the threads.

When bolting together stainless steel the pan-head bolts with nylon coating under the head, a stainless washer with a rubber backing, and a Stover flange nut to secure the bolt, shall be utilized.

When mounting aluminum components such as a step to the apparatus body, stainless steel washers with rubber backing shall be used. All mounted components shall utilize barrier material between the two surfaces.

All rivet or huck type fasteners shall be of the same material being secured.

Whenever possible, holes shall be pre-drilled and taped when mounting components such as lights, steps, and hand rails prior to the paint process to reduce the corrosion opportunity. If a hole must be drilled into a previously painted surface, the paint barrier around the hole shall be re-established and a flange-type nutsert with a gasket under the flange shall be used.

When possible, the use of stainless trim screws shall be minimized. Structural tape and or adhesive shall be used were possible for mounting trim to the body or cab.

If a pre-treated screw or bolt is not available, hand applied Dynatex Boltlocker or Theadlocker shall be placed on the threads of the screw, bolt or nutsert. This will help seal threads from moisture and help prevent the fasteners from loosening. If lubricant is used when tapping the hole, the hole will be cleaned of lubricant and the shavings before applying.

- **BARRIER TAPE**

Barrier tape shall be used on the backsides of all lights, trim pieces, or other components when bolting them to the apparatus; also when attaching stainless steel over an aluminum surface or when attaching aluminum treadplate to the stainless steel. All instances of dis-similar metals contacting each other require the addition of barrier tape between the metals where contact is made.

Before applying the tape, all metal surfaces shall be clean from oil or dirt with a 50/50 mix of alcohol and water or a similar solvent.

- **GASKETS**



Gaskets shall be used under all snaps, loops and fasteners for such items as for hose bed covers. The paint seal shall be re-established around the mounting hole edges after drilling.

- **ROLLUP DOORS**

1 3/4" X 1/16" barrier tape shall be used on the frame opening to act as barrier between the aluminum door rail and the painted door opening surface.

- **HINGED DOORS**

Barrier tape shall be applied to the painted surface of the body and on the painted hinge side of the door.

- **PAINTING STEEL**

Steel shall be wiped of any oil residue, rust, and weld slag or smoke shall be removed. All surfaces shall be cleaned with solvent, primed, and then sprayed with a topcoat. After bolts are tightened to the proper torque, bolts shall be touched up with primer or cold galvanizing coating.

- **MOUNTING EMERGENCY LIGHTS AND OPTIONS**

All emergency lights, accessory mountings, Kussmaul covers, and 110 outlet boxes mounted to the body should be mounted with pre-coated Threadlocker and nylon under the head screws or bolts to minimize corrosion between dissimilar metals.

- **ELECTRICAL GROUNDING**

Grounding straps shall be installed consisting of a minimum 2-gauge strap bolted to the chassis frame.

A ground cable from the cab to the right side frame rail from the alternator to the right side frame rail. From the pump module frame to the right side truck frame. Aerials: from the hydraulic and pump module framework. From the pump mount to the truck frame rail. From the body module to the right side truck frame.

Proper grounding will help eliminate grounding problems, and will reduce the possibility for electrolysis and corrosion to occur, as a result of impressed current be presented to the chassis. All electrical connection points shall be sprayed with electrical sealer as necessary.

### **1.16.1 PAINT**



All exposed metal surfaces not chrome plated, polished stainless steel or bright aluminum tread plate shall be thoroughly cleaned and prepared for painting. All irregularities in painted surfaces shall be rubbed down and all seams shall be caulked before the application of the finish coat.

All removable items such as brackets, compartment doors, door hinges, trim, etc. shall be removed and painted separately to insure finish paint behind all mounted items. Body assemblies that cannot be finish painted after assembly shall be finish painted before assembly. Both aluminum and steel surfaces to be painted shall be primed with a two (2)-component primer which is compatible with the finish coat. The apparatus shall be finish painted with a polyurethane base/clear system. "No Exception"

A barrier gasket/washer of "High Density Closed Cell Urethane Foam" shall be used behind all lights, handrails, door hardware and any miscellaneous items such as stainless steel snaps, hooks, washers and acorn nuts. The gaskets/washers shall be coated with pressure sensitive acrylic adhesive. All screws used to penetrate painted surfaces shall be pre-treated/coated under the head with nylon and the threads shall have re-coat #80. This procedure shall be strictly adhered to for corrosion prevention and damage to the finish painted surfaces.

The following paint process shall be utilized:

- **SURFACE PREPARATION:**
  - a. Wash surface thoroughly with mild detergent.
  - b. Clean and de-grease with Prep-Sol 3812S.
  - c. Sand and feather edge using 400 grit or finer on a dual action sander.
  - d. Remove sanding dust with a cleaner compatible with polyurethane base coat/clear coat final finish.
- **SUBSTRATE TREATMENT:**
  - a. Use a Metal Conditioner followed with a Conversion Coating product.
- **PRIMING:**
  - a. Use a priming 615S pretreatment.
  - b. Use a self-etching primer applied to achieve a 1.5 mil dft minimum.
  - c. Use Prime N Seal sealer compatible with polyurethane base coat.
- **COLOR COAT:**
  - a. Apply polyurethane base coat 1-2 mil dft minimum.



- **CLEAR COAT:**

- a. Apply polyurethane clear coat 2 mil dft minimum.

#### **1.16.2 PAINT-TWO TONE CAB**

The cab exterior surfaces shall be two (2) colors. The paint break line shall be at the bottom of the windshield.

#### **1.16.3 PAINTED FRAME**

The frame rails and body subframe shall be painted glossy black.

#### **1.16.4 LETTERING**

Forty (40) 3" Scotchlite letters, with left hand shading and right hand outline to equal 3-5/8" letter, shall be provided. Lettering will match Pembroke Fire Rescue Fleet.

#### **1.16.5 EMBLEM**

The fire department emblems shall be provided on the cab doors in 22KT Gold laminate.

#### **1.16.6 STRIPING**

A 6" Scotchlite stripe shall be provided across the front of the cab and along each side of the apparatus.

#### **1.16.7 "Z" STRIPE**

The Scotchlite stripe shall be a one-piece "Z" type on the cab sides and continuing straight along each side of the apparatus.

An additional 1" Scotchlite stripe shall be provided.

#### **1.16.8 STRIPE EDGING**

A 1/8" black edge shall be provided above and below Scotchlite stripe.

#### **1.16.9 CHEVRON STRIPING, REAR BODY OUTBOARD, ORAFOLREFLEXITE**

The apparatus shall have 6" red and yellow reflective Orafol Reflexite Chevron style striping affixed to the outboard rear body panels. The striping will be set in a manner to



have the effect of an inverted “V” shape. The stripe will travel low to high from the outside to the inside.

#### **1.16.10 CHEVRON STRIPING, REAR COMPT. DOOR, ORAFOL REFLEXITE**

In addition to the outboard rear body panels, the rear compartment door shall also be covered with 6” red and yellow reflective Orafol Reflexite Chevron style striping.

#### **1.16.11 CHEVRON STRIPING, ABOVE REAR COMPT.DOOR, ORAFOL REFLEXITE**

In addition to the outboard rear body panels, the panel above the rear compartment door shall also be covered with 6” red and yellow reflective Orafol Reflexite Chevron style striping.

#### **1.16.12 CHEVRON STRIPING, FRONT BUMPER, ORAFOL REFLEXITE**

The apparatus shall have 6” red and yellow reflective Orafol Reflexite Chevron style striping affixed to the front bumper. The striping will be set in a manner to have the effect of an inverted “V” shape.

### **1.17 MISCELLANEOUS**

#### **1.17.1 EQUIPMENT FURNISHED**

- a. 1 pt. touch-up paint.
- b. A bag of stainless steel nuts and bolts, as used in the construction of the apparatus.

#### **1.17.2 WHEEL CHOCKS**

Two (2) Ziamatic #SAC-44 folding wheel chocks with SQCH-44H holders shall be provided. The wheel chocks shall be located in an area close to the rear axles easily accessible from the side of the apparatus.

#### **1.17.3 OPERATION AND SERVICE MANUALS**

Complete "Operation and Service" manuals shall be supplied with the completed apparatus, one (1) printed copy and one (1) CD. Service manual instructions shall include service, maintenance and troubleshooting for major and minor components of the truck. The apparatus manufacturer shall supply part numbers for major components (i.e. Engine, Axles, Transmission, Pump, etc.). A table of contents, hydraulic, air brake and overall apparatus wiring schematics shall be included.



A video demonstration DVD on the operation of the truck shall be supplied with the manuals.

#### **1.17.4 REAR VISION CAMERA**

Provided and mounted on the apparatus shall be a Safety Vision SV-CLCD-70 camera kit. The system shall consist of one (1) cab mounted model SV-LCD70 7" LCD monitor, two (2) model SV-620 (Color) high resolution 1/3" CCD cameras, one for back up, mounted on the rear and one for blind spot vision, indicator activated, mounted rearward facing passenger's side cowl.

#### **1.17.5 ELKHART DECK GUN**

There will be an Elkhart Stinger deck gun provided with a 5" ground base, truck mount, stream shaper, and quad stacked tips.

#### **1.17.6 HONDA GENERATOR**

There will be a Honda EU2000i portable generator will be provided and shipped loose with the truck.

### **1.18 PROPOSAL REQUIREMENTS**

All proposals shall address and be presented as outlined below:

#### **1.18.1 CONTACT INFORMATION FORM**

Attached is contact information form (Attachment A) where the vendor will enter their contact information and complete the proposal checklist. The Contact information form shall be electronically signed by the contact person authorized to represent the contractor. This form must be completed and submitted through [www.bidsync.com](http://www.bidsync.com) as part of the bidder's submittal. The vendor must provide their pricing through the designated lines items listed on the BidSync website.

- Please note vendors should be registered on BidSync under the name of the organization that they are operating as and it should match the organization name on the documents that they are submitting and utilizing when responding to the solicitation.
- The contact information form should contain an electronic signature of the authorized representative of the Proposer along with the address and telephone number for communications regarding the Proposal.



- Proposals by corporations should be executed in the corporate name by the President or other corporate officer accompanied by evidence of authority to sign. The corporate address and state of incorporation must also be shown.
- Proposals by partnerships should be executed in the partnership name and signed by a partner whose title and the official address of the partnership must be shown.

### **1.18.2 STANDARD QUALIFYING DATA, FORMS, AND CERTIFICATIONS**

The following documents will need to be completed, scanned and submitted through [www.bidsync.com](http://www.bidsync.com) as part of the bidder's submittal:

1. City of Pembroke Pines Vendor Information Form and a W-9. (Attachment B)
  - i. In addition to the Vendor Information Form, please ensure that you provide the completed W-9 (Rev. December 2014), as previously dated versions of this form will delay the processing of any payments to the awarded vendor.
2. Non-Collusive Affidavit (Attachment C)
3. Sworn Statement on Public Entity Crimes Form (Attachment D)
4. Local Vendor Preference Certification, if applicable. (Attachment E)
5. Veteran Owned Small Business Preference Certification (Attachment F)
6. Equal Benefits Certification Form (Attachment G)
7. Proposer's Qualification Statement (Attachment H)
8. Reference Form (Attachment K)

### **1.19 EVALUATION OF PROPOSALS & PROCESS OF SELECTION**

- A. Staff will evaluate all responsive proposals received from proposers who meet or exceed the bid requirements contained in the IFB. Evaluations shall be based upon the information contained in the proposals as submitted.
- B. Staff will make a recommendation to the City Commission for award of contract.

### **1.20 TENTATIVE SCHEDULE OF EVENTS**

<b>Event</b>	<b>Time &amp;/or Date</b>
Issuance of Solicitation (Posting Date)	<b>January 17, 2017</b>
Question Due Date	<b>January 30, 2017</b>
Anticipated Date of Issuance for the Addenda with Questions and Answers	<b>February 02, 2017</b>
Proposals will be accepted until	<b>2:00 p.m. on February 14, 2017</b>
Proposals will be opened at	<b>2:30 p.m. on February 14, 2017</b>
Evaluation of Proposals by Staff	<b>TBD</b>
Recommendation of Contractor to City Commission award	<b>TBD</b>



## **1.21 SUBMISSION REQUIREMENTS**

Bids/proposals **must be submitted electronically** at [www.bidsync.com](http://www.bidsync.com) on or before 2:00 p.m. on February 14, 2017.

Please note vendors should be registered on BidSync under the name of the organization that they are operating as and it should match the organization name on the documents that they are submitting and utilizing when responding to the solicitation.

The vendor must provide their pricing through the designated lines items listed on the BidSync website. In addition, the vendor must complete any webforms on the BidSync website and provide any additional information requested throughout this solicitation. Any additional information requested in the solicitation should be scanned and uploaded. **Unless otherwise specified, the City requests for vendors to upload their documents as one (1) PDF document in the order that is outline in the bid package.**

The City recommends for proposers to submit their proposals as soon as they are ready to do so. Please allow ample time to submit your proposals on the BidSync website. Proposals may be modified or withdrawn prior to the deadline for submitting Proposals. BidSync Support is happy to help you with submitting your proposal and to ensure that you are submitting your proposals correctly, but we ask that you contact their support line at 1-800-990-9339 with ample time before the bid closing date and time.

**PLEASE DO NOT SUBMIT ANY PROPOSALS VIA MAIL, E-MAIL OR FAX.**



## **SECTION 2 - INSURANCE REQUIREMENTS**

The CONTRACTOR shall indemnify and hold harmless the CITY and its officers, employees, agents and instrumentalities from any and all liability, losses or damages, including attorneys' fees and costs of defense, which the CITY or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance of this Agreement by the CONTRACTOR or its employees, agents, servants, partners principals or subcontractors. The CONTRACTOR shall pay all claims and losses in connection therewith and shall investigate and defend all claims, suits or actions of any kind or nature in the name of the CITY, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may issue thereon. The CONTRACTOR expressly understands and agrees that any insurance protection required by this Agreement or otherwise provided by the CONTRACTOR shall in no way limit the responsibility to indemnify, keep and save harmless and defend the CITY or its officers, employees, agents and instrumentalities as herein provided.

CONTRACTOR shall not commence work under this Agreement until it has obtained all insurance required under this paragraph and such insurance has been approved by the Risk Manager of the CITY nor shall the CONTRACTOR allow any subcontractor to commence work on his subcontract until all similar such insurance required of the subcontractor has been obtained and similarly approved.

**CERTIFICATES OF INSURANCE**, reflecting evidence of the required insurance, shall be filed with the City's Risk Manager prior to the commencement of this Agreement. Policies shall be issued by companies authorized to do business under the laws of the State of Florida. The insurance company shall be rated no less than "A" as to management, and no less than "Class VI" as to financial strength according to the latest edition of Best's Insurance Guide published by A.M. Best Company.

Policies shall be endorsed to provide the CITY thirty (30) days notice of cancellation, material change or non-renewal of policies required under the contract. If the carrier will not agree to this notification, the CONTRACTOR or its insurance broker shall notify the CITY of any cancellation or reduction in coverage within seven days of receipt of insurer's notification of cancellation or reduction in coverage.

Insurance shall be in force until all obligations required to be fulfilled under the terms of the Agreement are satisfactorily completed as evidenced by the formal acceptance by the CITY. In the event the insurance certificate provided indicates that the insurance shall terminate and lapse during the period of this Agreement, then in that event, the CONTRACTOR shall furnish, at least fifteen (15) days prior to the expiration of the date of such insurance, a renewed certificate of insurance as proof that equal and like coverage for the balance of the period of the Agreement and extension thereunder is in effect. The CONTRACTOR shall not commence nor continue to provide any services pursuant to this Agreement unless all required insurance remains in full force and effect. CONTRACTOR shall be liable to CITY for any lapses in service resulting from a gap in insurance coverage.

The insurance requirements specified in this Agreement are minimum requirements and in no way reduce any liability the CONTRACTOR has assumed in the indemnification/hold harmless section(s) of this Agreement.



## 2.1 REQUIRED INSURANCE

- A. COMMERCIAL GENERAL LIABILITY INSURANCE** including, but not limited to: coverage for premises & operations, personal & advertising injury, products & completed operations, Liability assumed under an Insured Contract (including tort liability of another assumed in a business contract), and independent contractors. Coverage must be written on an occurrence basis, with limits of liability no less than:

1. Each Occurrence Limit - \$1,000,000
2. Fire Damage Limit (Damage to rented premises) - \$100,000
3. Personal & Advertising Injury Limit - \$1,000,000
4. General Aggregate Limit - \$2,000,000
5. Products & Completed Operations Aggregate Limit - \$2,000,000 (**mostly for construction or equipment sold to the CITY**)

Products & Completed Operations Coverage shall be maintained for two (2) years after the final payment under this contract. (Increase to 10 years for construction projects) (For construction projects also include: Designated Construction Project(s) General Aggregate Limit)

**The City of Pembroke Pines must be shown as an additional insured with respect to this coverage.** City's Additional Insured status shall extend to any coverage beyond the minimum requirements for limits of liability found herein.

- B. WORKERS' COMPENSATION AND EMPLOYERS LIABILITY INSURANCE** covering all employees, and/or volunteers of the CONTRACTOR engaged in the performance of the scope of work associated with this Agreement. In the case any work is sublet, the CONTRACTOR shall require the subcontractors similarly to provide Workers Compensation Insurance for all the latter's employees unless such employees are covered by the protection afforded by the CONTRACTOR. Coverage for the CONTRACTOR and his subcontractors shall be in accordance with applicable state and/or federal laws that may apply to Workers' Compensation Insurance with limits of liability no less than:

1. Workers' Compensation : Coverage A – Statutory
2. Employers Liability: Coverage B \$500,000 Each Accident  
\$500,000 Disease – Policy Limit  
\$500,000 Disease – Each Employee

If CONTRACTOR claims to be exempt from this requirement, CONTRACTOR shall provide CITY proof of such exemption along with a written request for CITY to exempt CONTRACTOR, written on CONTRACTOR letterhead.

Coverage shall be included for injuries or claims under the USL&H or Jones Act, when applicable.

## 2.2 REQUIRED ENDORSEMENTS

1. The City of Pembroke Pines shall be named as an Additional Insured on each of the General Liability policies required herein



2. Waiver of all Rights of Subrogation against the CITY
3. 30 Day Notice of Cancellation or Non-Renewal to the CITY
4. CONTRACTORS' policies shall be Primary & Non-Contributory
5. All policies shall contain a "severability of interest" or "cross liability" liability clause without obligation for premium payment of the CITY
6. The City of Pembroke Pines shall be named as a Loss Payee on all Property and/or Inland Marine Policies as their interest may appear.

CONTRACTOR shall name the CITY, as an additional insured on each of the General Liability policies required herein and shall hold the CITY, its agents, officers and employees harmless on account of claims for damages to persons, property or premises arising out of the services provided hereunder. Any insurance required of the CONTRACTOR pursuant to this Agreement must also be required by any subcontractor in the same limits and with all requirements as provided herein, including naming the CITY as an additional insured, in any work is subcontracted unless such subcontractor is covered by the protection afforded by the CONTRACTOR and provided proof of such coverage is provided to CITY. The CONTRACTOR and any subcontractors shall maintain such policies during the term of this Agreement.

The CITY reserves the right to require any other additional types of insurance coverage and/or higher limits of liability it deems necessary based on the nature of work being performed under this Contract.



## **SECTION 3 - GENERAL TERMS & CONDITIONS**

### **3.1 EXAMINATION OF CONTRACT DOCUMENTS**

Before submitting a Proposal, each Proposer should (a) consider federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost or performance of the work, (b) study and carefully correlate the Proposer's observations with the Proposal Documents; and (c) notify the Purchasing Manager of all conflicts, errors and discrepancies, if any, in the Proposal Documents.

The Proposer, by and through the submission of a Proposal, agrees that Proposer shall be held responsible for having familiarized themselves with the nature and extent of the work and any local conditions that may affect the work to be done and the services, equipment, materials, parts and labor required.

### **3.2 CONFLICT OF INSTRUCTIONS**

If a conflict exists between the General Conditions and Instructions stated herein and specific conditions and instructions contained in specifications, the specifications shall govern.

### **3.3 ADDENDA or ADDENDUM**

A formal solicitation may require an Addendum to be issued. An addendum in some way may clarify, correct or change the original solicitation (i.e. due date/time, specifications, terms, conditions, line item). Vendors submitting a proposal should check the BidSync website for any addenda issued. Vendors are cautioned not to consider verbal modifications to the solicitation, as the addendum issued through BidSync will be the only official method whereby changes will be made.

### **3.4 INTERPRETATIONS AND QUESTIONS**

If the Proposer is in doubt as to the meaning of any of the Proposal Documents, is of the opinion that the Conditions and Specifications contain errors or contradictions or reflect omissions, or has any question concerning the conditions and specifications, the Proposer shall submit a question for interpretation or clarification. The City requires all questions relating to the solicitation be entered through the "**Ask a Question**" option tab available on the BidSync website. Responses to the questions will be provided online at [www.bidsync.com](http://www.bidsync.com). Such request must be received by the "**Question Due Date**" stated in the solicitation. Questions received after "**Question Due Date**" shall not be answered. Interpretations or clarifications in response to such questions will be issued via BidSync. The issuance of a response via BidSync is considered an Addendum and shall be the only official method whereby such an interpretation or clarification will be made.

BidSync Support is also available to assist proposers with submitting their proposal and to ensure that proposers are submitting their proposals correctly. Proposers should ensure that they contact the BidSync support line at 1-800-990-9339 with ample time before the bid closing date and time.

For all other questions related to this solicitation, please contact the Purchasing Division at [purchasing@ppines.com](mailto:purchasing@ppines.com).

### **3.5 RULES, REGULATIONS, LAWS, ORDINANCES and LICENSES**

The awarded contractor shall observe and obey all laws, ordinances, rules, and regulations of the federal, state, and CITY, which may be applicable to the service being provided. The awarded firm shall have or be responsible for obtaining all necessary permits or licenses required, if necessary, in order to provide this service.



Bidder warrants by submittal that prices quoted here are in conformity with the latest federal price guidelines, if any.

### **3.6 WARRANTIES FOR USAGE**

Whenever a bid is sought, seeking a source of supply for a specified time for materials or service, the quantities or usage shown are estimated only. No guarantee or warranty is given or implied by the City as to the total amount that may or may not be purchased from any resulting contracts. These quantities are for bidders information only and will be used for tabulation and presentation of bid.

### **3.7 BRAND NAMES**

If and wherever in the specifications a brand name, make, name of manufacturer, trade name, or vendor catalog number is mentioned, it is for the purpose of establishing a grade or quality of material only. Since the City does not wish to rule out other competition and equal brands or makes, the phrase "OR EQUAL" is added. However, if a product other than that specified is bid, Bidders shall indicate on their proposal and clearly state the proposed substitution and deviation. It is the vendor's responsibility to provide any necessary documentation and samples within their bid submittal to prove that the product is equal to that specified. Such samples are to be furnished before the date of bid opening, unless otherwise specified. Additional evidence in the form of documentation and samples may be requested if the proposed brand is other than that specified. The City retains the right to determine if the proposed brand shall be considered as an approved equivalent or not.

### **3.8 QUALITY**

All materials used for the manufacture or construction of any supplies, materials, or equipment covered by this bid shall be new, the latest model, of the best quality, and

highest grade workmanship, unless otherwise noted.

### **3.9 SAMPLES**

Samples, when requested, must be furnished before, or at the bid opening, unless otherwise specified, and delivered free of expense to the City and if not used in testing or destroyed, will upon request within thirty (30) days of bid award be returned at the bidders expense.

### **3.10 DEVELOPMENT COSTS**

Neither the City nor its representatives shall be liable for any expenses incurred in connection with the preparation, submission or presentation of a Bid in response to this Invitation for Bid. All information in the Bid shall be provided at no cost to the City.

### **3.11 PRICING**

Prices should be stated in units of quantity specified in the bidding specifications. In case of discrepancy in computing the amount of the bid, the unit prices quoted will govern.

Bidder warrants by virtue of bidding that prices, terms, and conditions quoted in his bid will be firm for acceptance for a period of ninety (90) days from date of bid opening unless otherwise stated by the City or bidder.

### **3.12 DELIVERY POINT**

All items shall be delivered F.O.B. destination, and delivery cost and charges included in the bid price. Failure to do so may be cause for rejection of bid.

### **3.13 TAX EXEMPT STATUS**

The City is exempt from Florida Sales and Federal Excise taxes on direct purchase of tangible property.

### **3.14 CONTRACT TIME**

By virtue of the submission of the Proposal, Proposer agrees and fully understands that



the completion time of the work of the Contract is an essential and material condition of the Contract and that time is of the essence. The Successful Proposer agrees that all work shall be prosecuted regularly, diligently and uninterrupted at such rate of progress as will ensure full completion thereof within the time specified. Failure to complete the work within the time period specified shall be considered a default.

In addition, time will be of the essence for any orders placed as a result of this bid. Purchaser reserves the right to cancel such orders, or part thereof, without obligation if delivery is not made at the time(s) or place(s) specified.

### **3.15 COPYRIGHT OR PATENT RIGHTS**

Bidder warrants that there have been no violations of copyrights or patent rights in manufacturing, producing, or selling other goods shipped or ordered as a result of this bid, and seller agrees to hold the purchaser harmless from any and all liability, loss or expense occasioned by such violation.

### **3.16 PUBLIC ENTITY CRIMES**

"A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list."

The Public Entity Crime Affidavit Form, attached to this solicitation, includes

documentation that shall be executed by an individual authorized to bind the Proposer. The Proposer further understands and accepts that any contract issued as a result of this solicitation shall be either voidable or subject to immediate termination by the City. In the event there is any misrepresentation or lack of compliance with the mandates of Section 287.133 or Section 287.134, respectively, Florida Statutes. The City in the event in such termination, shall not incur any liability to the Bidder for any goods, services or materials furnished.

### **3.17 CONFLICT OF INTEREST**

The award of any contract hereunder is subject to the provisions of Chapter 112, Florida Statutes. Proposers must disclose with their Proposal the name of any officer, director, partner, proprietor, associate or agent who is also an officer or employee of CITY or any of its agencies. Further, all Proposers must disclose the name of any officer or employee of CITY who owns, directly or indirectly, an interest of five percent (5%) or more in the Proposer's firm or any of its branches or affiliate companies.

### **3.18 FACILITIES**

The City reserves the right to inspect the Bidder's facilities at any time with prior notice.

### **3.19 ENVIRONMENTAL REGULATIONS**

CITY reserves the right to consider Proposer's history of citations and/or violations of environmental regulations in determining a Proposer's responsibility, and further reserves the right to declare a Proposer not responsible if the history of violations warrant such determination. Proposer shall submit with the Proposal, a complete history of all citations and/or violations, notices and dispositions thereof. The non-submission of any such documentation shall be deemed to be an affirmation by the Proposer that there are no citations or violations. Proposer shall notify



CITY immediately of notice of any citation or violation that Proposer may receive after the Proposal opening date and during the time of performance of any contract awarded to Proposers.

### **3.20 SIGNATURE REQUIRED**

All proposals must be signed with the firm name and by an officer or employee having authority to bind the company or firm by his signature. FAILURE TO PROPERLY SIGN PROPOSAL SHALL INVALIDATE SAME, AND IT MAY NOT BE CONSIDERED FOR AWARD.

The individual executing this Bid on behalf of the Company warrant to the City that the Company is authorized to do business in the State of Florida, is in good standing and that Company possesses all of the required licenses and certificates of competency required by the State of Florida and Broward County to provide the goods or perform the services herein described.

The signed bid shall be considered an offer on the part of the bidder or contractor, which offer shall be deemed accepted upon approval by the City Commission of the City of Pembroke Pines and in case of default on the part of the bidder or contractor after such acceptance, the City of Pembroke Pines may take such action as it deems appropriate including legal action for damages or specific performance.

### **3.21 MANUFACTURER'S CERTIFICATION**

The City of Pembroke Pines reserves the right to request from bidder separate manufacturer certification of all statements made in the proposal.

### **3.22 MODIFICATION OR WITHDRAWAL OF PROPOSAL**

The City recommends for proposers to submit their proposals as soon as they are ready to do so. Please allow ample time to submit your proposals on the BidSync

website. Proposals may be modified or withdrawn prior to the deadline for submitting Proposals.

### **3.23 PUBLIC BID; BID OPENING AND GENERAL EXEMPTIONS**

All submittals received by the deadline will be recorded, and will subsequently be publicly opened on the same business day at 2:30 p.m. at the office of the City Clerk, 10100 Pines Boulevard, Pembroke Pines, FL.

All Proposals received from Proposers in response to the solicitation will become the property of CITY and will not be returned to the Proposers. In the event of Contract award, all documentation produced as part of the Contract shall become the exclusive property of CITY. Proposers are requested to identify specifically any information contained in their Proposals which they consider confidential and/or proprietary and which they believe to be exempt from disclosure, citing specifically the applicable exempting law.

Pursuant to Section 119.071 of the Florida Statutes, sealed bids, proposals, or replies received by a Florida public agency shall remain exempt from disclosure until an intended decision is announced or until 30 days from the opening, whichever is earlier.

Therefore, bidders will not be able to procure a copy of their competitor's bids until an intended decision is reached or 30 days has elapsed since the time of the bid opening.

However, pursuant to Section 255.0518 of the Florida Statutes, when opening sealed bids that are received pursuant to a competitive solicitation for **construction or repairs on a public building or public work**, the entity shall:

- (a) Open the sealed bids at a public meeting.
- (b) Announce at that meeting the name of each bidder and the price submitted in the bid.



- (c) Make available upon request the name of each bidder and the price submitted in the bid.

For solicitations that are **not** for **“construction or repairs on a public building or public work”** the City shall not reveal the prices submitted in the bids until an intended decision is announced or until 30 days from the opening, whichever is earlier.

### 3.24 RESERVATIONS FOR REJECTION AND AWARD

The City of Pembroke Pines reserves the right to accept or reject any and all bids or parts of bids, to waive irregularities and technicalities, and to request rebids. The City also reserves the right to award a contract on such items(s) or service(s) the City deems will best serve its interests. All bids shall be awarded to the most responsive/responsible bidder, provided the (City) may for good cause reject any bid or part thereof. It further reserves the right to award a contract on a split order basis, or such combinations as shall best serve the interests of the City unless otherwise specified. No premiums, rebates or gratuities permitted, either with, prior to, or after award. This practice shall result in the cancellation of said award and/or return of items (as applicable) and the recommended removal of bidder from bid list(s).

### 3.25 BID PROTEST

Any protests or challenges to this competitive procurement shall be governed by Section 35.38 of the City's Code of Ordinances.

### 3.26 INDEMNIFICATION

The Successful Proposer shall pay all claims, losses, liens, settlements or judgments of any nature whatsoever in connection with the subsequent indemnifications including, but not limited to, reasonable attorney's fees (including appellate attorney's fees) and costs.

CITY reserves the right to select its own legal counsel to conduct any defense in any such proceeding and all costs and fees associated therewith shall be the responsibility of Successful Proposer under the indemnification agreement. Nothing contained herein is intended nor shall it be construed to waive City's rights and immunities under the common law or Florida Statute 768.28 as amended from time to time.

Additional indemnification requirements may be included under Special Terms and Conditions and/or as part of a specimen contract included in the solicitation package.

**General Indemnification:** To the fullest extent permitted by laws and regulations, Successful Proposer shall indemnify, defend, save and hold harmless the CITY, its officers, agents and employees, harmless from any and all claims, damages, losses, liabilities and expenses, direct, indirect or consequential arising out of or in consequential arising out of or alleged to have arisen out of or in consequence of the products, goods or services furnished by or operations of the Successful Proposer or his subcontractors, agents, officers, employees or independent contractors pursuant to or in the performance of the Contract.

**Patent and Copyright Indemnification:** Successful Proposer agrees to indemnify, defend, save and hold harmless the CITY, its officers, agents and employees, from all claims, damages, losses, liabilities and expenses arising out of any alleged infringement of copyrights, patent rights and/or the unauthorized or unlicensed use of any invention, process, material, property or other work manufactured or used in connection with the performance of the Contract, including its use by CITY.

### 3.27 DEFAULT PROVISION

In the case of default by the bidder or contractor, the City of Pembroke Pines may procure the articles or services from any



other sources and hold the bidder or contractor responsible for any excess costs occasioned or incurred thereby.

The City shall be the sole judge of nonperformance, which shall include any failure on the part of the successful Bidder to accept the Award, to furnish required documents, and/or to fulfill any portion of the contract within the time stipulated. Upon default by the successful Bidder to meet any terms of this agreement, the City will notify the Bidder five (5) days (weekends and holidays excluded) to remedy the default. Failure on the Contractor's part to correct the default within the required five (5) days shall result in the contract being terminated and upon the City notifying in writing the Contractor of its intentions and the effective date of the termination. The following shall constitute default:

A. Failure to perform the Work required under the contract and/or within the time required or failing to use the subcontractor, entities and personnel as identified and set forth, and to the degree specified in the contract.

B. Failure to begin the Work under this Bid within the time specified.

C. Failure to perform the Work with sufficient Workers and equipment or with sufficient materials to ensure timely completion.

D. Neglecting or refusing to remove materials or perform new Work where prior Work has been rejected as non-conforming with the terms of the contract.

E. Becoming insolvent, being declared bankrupt, or committing act of bankruptcy or insolvency, or making an assignment renders the successful Bidder incapable of performing the Work in accordance with and as required by the contract.

F. Failure to comply with any of the terms of the contract in any material respect.

In the event of default of a contract, the successful Bidder shall pay all attorney's fees and court costs incurred in collecting any damages. The successful Bidder shall pay the City for any and all costs incurred in ensuing the completion of the project.

Additional provisions may be included in the specimen contract.

### **3.28 ACCEPTANCE OF MATERIAL**

The material delivered under this proposal shall remain the property of the seller until a physical inspection and actual usage of this material and/or services is made and thereafter accepted to the satisfaction of the City and must comply with the terms herein, and be fully in accord with specifications and of the highest quality. In the event the material and/or services supplied to the City are found to be defective or do not conform to specifications, the City reserves the right to cancel the order upon written notice to the seller and return product to seller at the sellers expense.

### **3.29 LOCAL GOVERNMENT PROMPT PAYMENT ACT**

The City complies with Florida Statute 218.70, Florida Prompt Payment Act.



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**CONTACT INFORMATION FORM**

IN ACCORDANCE WITH “IFB # FI-16-01” dated **January 17, 2017** titled “**Fire Engine / Pumper Truck**” attached hereto as a part hereof, the undersigned submits the following:

**A) Contact Information**

The Contact information form shall be electronically signed by one duly authorized to do so, and in case signed by a deputy or subordinate, the principal's properly written authority to such deputy or subordinate must accompany the proposal. This form must be completed and submitted through [www.bidsync.com](http://www.bidsync.com) as part of the bidder's submittal. The vendor must provide their pricing through the designated lines items listed on the BidSync website.

**COMPANY INFORMATION:**

COMPANY:

STREET ADDRESS:

CITY, STATE &amp; ZIP CODE:

**PRIMARY CONTACT FOR THE PROJECT:**

NAME:

TITLE:

E-MAIL:

TELEPHONE:

FAX:

**AUTHORIZED APPROVER:**

NAME:

TITLE:

E-MAIL:

TELEPHONE:

FAX:

SIGNATURE:

**B) Proposal Checklist**

Are all materials, freight, labor and warranties included?	Yes	No
Does the proposal include two trips for four people to the plant; one trip for a pre-build meeting and the other trip for final inspection?	Yes	No
Is a “Contractor’s Specifications”, as requested in section 1.4.1 of the bid package, included in your submission?	Yes	No
Do you have any exceptions to the specifications? If so, is a “Exceptions to Specifications”, as requested in section 1.4.6 of the bid package, included in your submission?	Yes Yes	No N/A
Pursuant to section 1.4.10, has the manufacturer been in business of making similar apparatus for a minimum of forty-five (45) years?	Yes	No
Pursuant to section 1.4.10, has the manufacturer built at least thirty (30) of similar units in the last five years?	Yes	No
Pursuant to section 1.4.10, is a list of five (5) departments in Florida with similar units, included in your submittal?	Yes	No
Pursuant to section 1.4.10, does the manufacturer have a licensed Full Service Center in Florida, preferably within Broward County and within (2.5) hours from the City of Pembroke Pines?  In addition, does the service center have mobile warranty service?	Yes Yes	No No
Pursuant to section 1.4.11, how many years has the manufacturer been producing their own chasis and body?		years.
Pursuant to section 1.4.12, is the manufacturer a current member of the Fire Apparatus Manufacturer's Association?	Yes	No
Pursuant to section 1.10.12, is a letter stating successful completion of the specified test on the brand of cab being supplied, included in the bid submittal?	Yes	No
Pursuant to section 1.10.13, is a copy of the certification letter of the seat belt testing included in the bid submittal?	Yes	No

C) Sample Proposal Form

The following sample price proposal is for information only. The vendor must provide their pricing through the designated lines items listed on the BidSync website.

Item	Description	Cost
1)	Fire Engine / Pumper Truck Cost (including all parts, materials & labor to furnish and deliver, as specified in the solicitation.)	Price to be Submitted via BidSync
2)	Pre-Payment Discount Option	Price to be Submitted via BidSync
3)	Trade-In Value Option for a: 1997 E-One Hush XLT (VIN # 4ENBAAA81V1007640) with approximately 61,000 miles and 1,900 hours (along with an In-frame Engine rebuild less than 10,000 miles ago) (City Vehicle # 7757)	Price to be Submitted via BidSync
Total Cost Including Pre-Payment Discount and Trade-In Value Options		Price to be Submitted via BidSync

Proposed Equipment and Maintenance Shop	
Fire Engine/Pumper Truck Year, Make and Model	
Maintenance Shop: Name and Location (Must be located in Broward County)	
*If vendor takes exception to having a shop located in Broward County and within 2.5 hours from the City of Pembroke Pines, the vendor must have a dedicated Fire Apparatus repair facility (not an RV repair shop) within a 150 mile radius of the municipal boundaries of Pembroke Pines and must provide mobile/road service. Vendor is required to provide full disclosure on their capabilities for providing road/mobile service, response time to regular calls, response time to emergency service calls, the number of service technicians on staff than are SAE or EVT certified, how many vehicles dedicated to road/mobile service, and approach to handling major repairs such as transmissions, front axels, rear axels, radiators, etc. This information can be provided in a separate document that must be uploaded to <a href="http://www.bidsync.com">www.bidsync.com</a> as part of the proposal package.	

Timeline	
NUMBER OF CALENDAR DAYS TO COMPLETE AND FURNISH THE FIRE ENGINE / PUMPER TRUCK	Days

Please note: If you have any exceptions to the specifications listed in the solicitation, you must attach a detailed

**explanation, of each exception, to this proposal form.**



(OFFICE USE ONLY) Vendor number:

Please complete this vendor information form entirely along with the  
IRS Form W-9, scan and upload it to the [www.bidsync.com](http://www.bidsync.com)

## Vendor Information Form

Operating Name (Payee)			
Legal Name (as filed with IRS)			
Remit-to Address (For Payments)			
Remit-to Contact Name:		Title:	
Email Address:			
Phone #:		Fax #	
Order-from Address (For purchase orders)			
Order-from Contact Name:		Title:	
Email Address:			
Phone #:		Fax #	
Return-to Address (For product returns)			
Return-to Contact Name		Title:	
Email Address:			
Phone #:		Fax #	
Payment Terms:			

Type of Business (please check one and provide Federal Tax identification or social security Number)

- ☐ Corporation  
☐ Sole Proprietorship/Individual  
☐ Partnership  
☐ Health Care Service Provider  
☐ LLC – C (C corporation) – S (S corporation) – P (partnership)  
☐ Other (Specify):

Federal ID Number:

Social Security No.:

Name of Applicant / Signature \_\_\_\_\_

Title of Applicant \_\_\_\_\_ Date \_\_\_\_\_

# Request for Taxpayer Identification Number and Certification

Give Form to the  
requester. Do not  
send to the IRS.

Print or type  
See Specific Instructions on page 2.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
2 Business name/disregarded entity name, if different from above	
3 Check appropriate box for federal tax classification; check only <b>one</b> of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ <b>Note.</b> For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶ _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <i>(Applies to accounts maintained outside the U.S.)</i>
5 Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
6 City, state, and ZIP code	
7 List account number(s) here (optional)	

## Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

**Note.** If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number									
				-				-	
or									
Employer identification number									
				-					

## Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign Here	Signature of U.S. person ▶	Date ▶
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## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at [www.irs.gov/fw9](http://www.irs.gov/fw9).

## Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.*

By signing the filled-out form, you:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
- Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

**Note.** If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States:

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

**Foreign person.** If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

**Nonresident alien who becomes a resident alien.** Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items:

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

**Example.** Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

## Backup Withholding

**What is backup withholding?** Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

**Payments you receive will be subject to backup withholding if:**

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the Part II instructions on page 3 for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code* on page 3 and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships* above.

## What is FATCA reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code* on page 3 and the Instructions for the Requester of Form W-9 for more information.

## Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

## Penalties

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

## Specific Instructions

### Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account, list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

**Note. ITIN applicant:** Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C Corporation, or S Corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

**Line 2**

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

**Line 3**

Check the appropriate box in line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box in line 3.

**Limited Liability Company (LLC).** If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the "Limited Liability Company" box and enter "P" in the space provided. If the LLC has filed Form 8832 or 2553 to be taxed as a corporation, check the "Limited Liability Company" box and in the space provided enter "C" for C corporation or "S" for S corporation. If it is a single-member LLC that is a disregarded entity, do not check the "Limited Liability Company" box; instead check the first box in line 3 "Individual/sole proprietor or single-member LLC."

**Line 4, Exemptions**

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in line 4 any code(s) that may apply to you.

**Exempt payee code.**

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 <sup>1</sup>	Generally, exempt payees 1 through 5 <sup>2</sup>
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

<sup>1</sup> See Form 1099-MISC, Miscellaneous Income, and its instructions.

<sup>2</sup> However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

**Exemption from FATCA reporting code.** The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

**Note.** You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

**Line 5**

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns.

**Line 6**

Enter your city, state, and ZIP code.

**Part I. Taxpayer Identification Number (TIN)**

**Enter your TIN in the appropriate box.** If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited Liability Company (LLC)* on this page), enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

**Note.** See the chart on page 4 for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at [www.ssa.gov](http://www.ssa.gov). You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at [www.irs.gov/businesses](http://www.irs.gov/businesses) and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting [IRS.gov](http://IRS.gov) or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

**Note.** Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

**Caution:** A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

## Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, or 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code* earlier.

**Signature requirements.** Complete the certification as indicated in items 1 through 5 below.

**1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.** You must give your correct TIN, but you do not have to sign the certification.

**2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.** You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

**3. Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.

**4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

**5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

## What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup>
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor <sup>2</sup>
4. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee <sup>1</sup>  The actual owner <sup>1</sup>
5. Sole proprietorship or disregarded entity owned by an individual	The owner <sup>3</sup>
6. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor <sup>4</sup>
For this type of account:	Give name and EIN of:
7. Disregarded entity not owned by an individual	The owner
8. A valid trust, estate, or pension trust	Legal entity <sup>4</sup>
9. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
10. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
11. Partnership or multi-member LLC	The partnership
12. A broker or registered nominee	The broker or nominee
13. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

<sup>4</sup> List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships* on page 2.

**\*Note.** Grantor also must provide a Form W-9 to trustee of trust.

**Note.** If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

## Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Publication 4535, Identity Theft Prevention and Victim Assistance.

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

**Protect yourself from suspicious emails or phishing schemes.** Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to [phishing@irs.gov](mailto:phishing@irs.gov). You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: [spam@uce.gov](mailto:spam@uce.gov) or contact them at [www.ftc.gov/idtheft](http://www.ftc.gov/idtheft) or 1-877-IDTHEFT (1-877-438-4338).

Visit [IRS.gov](http://IRS.gov) to learn more about identity theft and how to reduce your risk.

## Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.



**NON-COLLUSIVE AFFIDAVIT**

BIDDER is the \_\_\_\_\_,  
(Owner, Partner, Officer, Representative or Agent)

BIDDER is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

Such Bid is genuine and is not a collusive or sham Bid;

Neither the said BIDDER nor any of its officers, partners, owners, agents, representative, employees or parties in interest, including this affidavit, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other BIDDER, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted; or to refrain from bidding in connection with such Contract; or have in any manner, directly or indirectly, sought by agreement or collusion, or communications, or conference with any BIDDER, firm, or person to fix the price or prices in the attached Bid or any other BIDDER, or to fix any overhead, profit, or cost element of the Bid Price or the Bid Price of any other BIDDER, or to secure through any collusion conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed Contract;

The price of items quoted in the attached Bid are fair and proper and are not tainted by collusion, conspiracy, connivance, or unlawful agreement on the part of the BIDDER or any other of its agents, representatives, owners, employees or parties in interest, including this affidavit.

Printed Name/Signature

Title

Name of Company



**SWORN STATEMENT  
ON PUBLIC ENTITY CRIMES  
UNDER FLORIDA STATUTES CHAPTER 287.133(3)(a).**

1. This sworn statement is submitted \_\_\_\_\_ (name of entity submitting sworn statement) whose business address is \_\_\_\_\_ and (if applicable) its Federal Employer Identification Number (FEIN) is \_\_\_\_\_. (If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: \_\_\_\_\_.)
2. My name is \_\_\_\_\_ and my \_\_\_\_\_  
(Please print name of individual signing)  
  
relationship to the entity named above is \_\_\_\_\_.
3. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid, proposal, reply, or contract for goods or services, any lease for real property, or any contract for the construction or repair of a public building or public work, involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
4. I understand that a "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
5. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:
  1. A predecessor or successor of a person convicted of a public entity crime: or
  2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The Cityship by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
6. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or any entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts let by a public entity, or which otherwise transacts or applies to transact business with a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders,

employees, members, and agents who are active in management of an entity.

7. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. **(Please indicate which statement applies.)**

A) Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

B) The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND **(Please indicate which additional statement applies.)**

B1) There has been a proceeding concerning the conviction before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. **(Please attach a copy of the final order.)**

B2) The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. **(Please attach a copy of the final order.)**

B3) The person or affiliate has not been placed on the convicted vendor list. **(Please describe any action taken by or pending with the Department of General Services.)**

Bidder's Name/Signature	Company	Date
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# LOCAL VENDOR PREFERENCE CERTIFICATION

## SECTION 1 GENERAL TERM

### **LOCAL PREFERENCE**

The evaluation of competitive bids is subject to section 35.36 of the City's Procurement Procedures which, except where contrary to federal and state law, or any other funding source requirements, provides that preference be given to local businesses. To satisfy this requirement, the vendor shall affirm in writing its compliance with either of the following objective criteria as of the bid or proposal submission date stated in the solicitation. A local business shall be defined as:

1. "Local Pembroke Pines Vendor" shall mean a business entity which has maintained a permanent place of business with full-time employees within the City limits for a minimum of one (1) year prior to the date of issuance of a bid or proposal solicitation. The permanent place of business may not be a post office box. The business location must actually distribute goods or services from that location. In addition, the business must have a current business tax receipt from the City of Pembroke Pines.

**OR;**

2. "Local Broward County Vendor" shall mean or business entity which has maintained a permanent place of business with full-time employees within the Broward County limits for a minimum of one (1) year prior to the date of issuance of a bid or proposal solicitation. The permanent place of business may not be a post office box. The business location must actually distribute goods or services from that location. In addition, the business must have a current business tax receipt from the Broward County or the city within Broward County where the business resides.

A preference of five percent (5%) of the total evaluation point, or five percent (5%) of the total price, shall be given to the **Local Pembroke Pines Vendor(s)**; A preference of two and a half percent (2.5%) of the total evaluation point for local, or two and a half percent (2.5%) of the total price, shall be given to the **Local Broward County Vendor(s)**.

### **COMPARISON OF QUALIFICATIONS**

The preferences established in no way prohibit the right of the City to compare quality of supplies or services for purchase and to compare qualifications, character, responsibility and fitness of all persons, firms or corporations submitting bids or proposals. Further, the preference established in no way prohibit the right of the city from giving any other preference permitted by law instead of the preferences granted, nor prohibit the city to select the bid or proposal which is the most responsible and in the best interests of the city.

## SECTION 2 AFFIRMATION

### **LOCAL PREFERENCE CERTIFICATION:**

Place a check mark here only if affirming bidder meets requirements above as a Local Pembroke Pines Vendor.

In addition, the business must attach a current business tax receipt from the City of Pembroke Pines along with any previous business tax receipts to indicate that the business entity has maintained a permanent place of business for a minimum of one (1) year.

Place a check mark here only if affirming bidder meets requirements above as a Local Broward County Vendor.

In addition, the business must attach a current business tax receipt from the Broward County or the city within Broward County where the business resides along with any previous business tax receipts to indicate that the business entity has maintained a permanent place of business for a minimum of one (1) year.

Place a check mark here only if affirming bidder does not meet the requirements above as a Local Vendor.

**Failure to complete this certification at this time (by checking either of the boxes above) shall render the vendor ineligible for Local Preference. This form must be completed by/for the proposer; the proposer WILL NOT qualify for Local Vendor Preference based on their sub-contractors' qualifications.**

COMPANY NAME:

PRINTED NAME / AUTHORIZED SIGNATURE:



## VETERAN OWNED SMALL BUSINESS (VOSB) PREFERENCE CERTIFICATION

### SECTION 1 GENERAL TERM

#### **VETERAN OWNED SMALL BUSINESS (VOSB) PREFERENCE**

The evaluation of competitive bids is subject to section 35.37 of the City's Procurement Procedures which, except where contrary to federal and state law, or any other funding source requirements, provides that preference be given to veteran owned small businesses. To satisfy this requirement, the vendor shall affirm in writing its compliance with the following objective criteria as of the bid or proposal submission date stated in the solicitation. A veteran owned small business shall be defined as:

1. "Veteran Owned Small Business" shall mean a business entity which has received a "Determination Letter" from the United States Department of Veteran Affairs Center for Verification and Evaluation notifying the business that they have been approved as a Veteran Owned Small Business (VOSB).

A preference of two and a half percent (2.5%) of the total evaluation point, or two and a half percent (2.5%) of the total price, shall be given to the **Veteran Owned Small Business (VOSB)**. This shall mean that if a **VOSB** submits a bid/quote that is within 2.5% of the lowest price submitted by any vendor, the **VOSB** shall have an option to submit another bid which is at least 1% lower than the lowest responsive bid/quote. If the **VOSB** submits a bid which is at least 1% lower than that lowest responsive bid/quote, then the award will go to the **VOSB**. If not, the award will be made to the vendor that submits the lowest responsive bid/quote. If the lowest responsive and responsible bidder IS a "**Local Pembroke Pines Vendor**" (**LPPV**) or a "**Local Broward County Vendor**" (**LBCV**) as established in Section 35.36 of the City's Code of Ordinances, entitled "Local Vendor Preference", then the award will be made to that vendor and no other bidders will be given an opportunity to submit additional bids as described herein.

If there is a **LPPV**, a **LBCV**, and a **VOSB** participating in the same bid solicitation and all three vendors qualify to submit a second bid, the **LPPV** will be given first option. If the **LPPV** cannot beat the lowest bid received by at least 1%, an opportunity will be given to the **LBCV**. If the **LBCV** cannot beat the lowest bid by at least 1%, an opportunity will be given to the **VOSB**. If the **VOSB** cannot beat the lowest bid by at least 1%, then the bid will be awarded to the lowest bidder.

If multiple **VOSBs** submit bids/quotes which are within 2.5% of the lowest bid/quote and there are no **LPPV** or **LBCV** as described in Section 35.36 of the City's Code of Ordinance, entitled "Local Vendor Preference", then all **VOSBs** will be asked to submit a **Best and Final Offer (BAFO)**. The award will be made to the **VOSB** submitting the lowest **BAFO** providing that that **BAFO** is at least 1% lower than the lowest bid/quote received in the original solicitation. If no **VOSB** can beat the lowest bid/quote by at least 1%, then the award will be made to the lowest responsive bidder.

#### **COMPARISON OF QUALIFICATIONS**

The preferences established in no way prohibit the right of the City to compare quality of supplies or services for purchase and to compare qualifications, character, responsibility and fitness of all persons, firms or corporations submitting bids or proposals. Further, the preference established in no way prohibit the right of the city from giving any other preference permitted by law instead of the preferences granted, nor prohibit the city to select the bid or proposal which is the most responsible and in the best interests of the city.

### SECTION 2 AFFIRMATION

#### **VETERAN OWNED SMALL BUSINESS (VOSB) PREFERENCE CERTIFICATION:**

Place a check mark here only if affirming bidder meets requirements above as a Veteran Owned Small Business.

In addition, the bidder must attach the "Determination Letter" from the U.S. Dept. of Veteran Affairs Center.

Place a check mark here only if affirming bidder does not meet the requirements above as a VOSB.

**Failure to complete this certification at this time (by checking either of the boxes above) shall render the vendor ineligible for VOSB Preference. This form must be completed by/for the proposer; the proposer WILL NOT qualify for VOSB Preference based on their sub-contractors' qualifications.**

COMPANY NAME:

PRINTED NAME / AUTHORIZED SIGNATURE:



## EQUAL BENEFITS CERTIFICATION FORM FOR DOMESTIC PARTNERS AND ALL MARRIED COUPLES

Except where federal or state law mandates to the contrary, a Contractor awarded a Contract pursuant to a competitive solicitation shall provide benefits to Domestic Partners and spouses of its employees, irrespective of gender, on the same basis as it provides benefits to employees' spouses in traditional marriages.

The Contractor shall provide the City and/or the City Manager or his/her designee, access to its records for the purpose of audits and/or investigations to ascertain compliance with the provisions of this section, and upon request shall provide evidence that the Contractor is in compliance with the provisions of this section upon each new bid, contract renewal, or when the City Manager has received a complaint or has reason to believe the Contractor may not be in compliance with the provisions of this section. Records shall include but not be limited to providing the City and/or the City Manager or his/her designee with certified copies of the Contractor's records pertaining to its benefits policies and its employment policies and practices.

The Contractor must conspicuously make available to all employees and applicants for employment the following statement:

**“During the performance of a contract with the City of Pembroke Pines, Florida, the Contractor will provide Equal Benefits to its employees with spouses, as defined by Section 35.39 of the City's Code of Ordinances, and its employees with Domestic Partners and all Married Couples”.**

The posted statement must also include a City contact telephone number and email address which will be provided to each contractor when a covered contract is executed.

### SECTION 1 DEFINITIONS

1. **Benefits** means the following plan, program or policy provided or offered by a contractor to its employees as part of the employer's total compensation package which may include but is not limited to sick leave, bereavement leave, family medical leave, and health benefits.
2. **Cash Equivalent** mean the amount of money paid to an employee with a domestic partner or spouse in lieu of providing benefits to the employee's domestic partner or spouse. The cash equivalent is equal to the employer's direct expense of providing benefits to an employee for his or her spouse from a traditional marriage.
3. **Covered Contract** means a contract between the City and a contractor awarded subsequent to the date when this section becomes effective valued at over \$25,000 or the threshold amount required for competitive bids as required in section 35.18(A) of the Procurement Code.
4. **Domestic Partner** shall mean any two (2) adults of the same or different sex who have registered as domestic partners with a governmental body pursuant to state or local law authorizing such registration, or with an internal registry maintained by the employer of at least one of the domestic partners. A contractor may institute an internal registry to allow for the provision of equal benefits to employees with domestic partners who do not register their partnerships pursuant to a governmental body authorizing such registration, or who are located in a jurisdiction where no such governmental domestic partnership registry exists. A contractor that institutes such registry shall not impose criteria for registration that are more stringent than those required for domestic partnership registration by the City of Pembroke Pines.
5. **Equal benefits** means the equality of benefits between employees with spouses and/or dependents of spouses and employees with domestic partners and/or dependents of domestic partners, and/or between spouses of employees and/or dependents of spouses and domestic partners of employees and/or dependents of domestic partners.

**6. Spouse** means one member of a married pair legally married under the laws of any state within the United States of America or any other jurisdiction under which such marriage is legally recognized, irrespective of gender.

**7. Traditional marriage** means a marriage between one man and one woman.

## **SECTION 2 CERTIFICATION OF CONTRACTOR**

The firm providing a response, by virtue of the signature below, certifies that it is aware of the requirements of Section 35.39 "City Contractors providing Equal Benefits for Domestic Partners and all Married Couples" of the City's Code of Ordinances, and certifies the following (**Check only one box below**):

- A.** Contractor currently complies with the requirements of this section; or
- B.** Contractor will comply with the conditions of this section at the time of contract award; or
- C.** Contractor will not comply with the conditions of this section at the time of contract award: or
- D.** Contractor does not comply with the conditions of this section because of the following allowable exemption (**Check only one box below**):
  - 1.** The Contractor does not provide benefits to employees' spouses in traditional marriages;
  - 2.** The Contractor provides an employee the cash equivalent of benefits because the Contractor is unable to provide benefits to employees' Domestic Partners or spouses despite making reasonable efforts to provide them. To meet this exception, the Contractor shall provide a notarized affidavit that it has made reasonable efforts to provide such benefits. The affidavit shall state the efforts taken to provide such benefits and the amount of the cash equivalent. Cash equivalent means the amount of money paid to an employee with a Domestic Partner or spouse rather than providing benefits to the employee's Domestic Partner or spouse. The cash equivalent is equal to the employer's direct expense of providing benefits to an employee's spouse;
  - 3.** The Contractor is a religious organization, association, society, or any non-profit charitable or educational institution or organization operated supervised or controlled by or in conjunction with a religious organization, association, or society;
  - 4.** The Contractor is a governmental agency;

**The certification shall be signed by an authorized officer of the Contractor. Failure to provide such certification (by checking the appropriate boxes above along with completing the information below) shall result in a Contractor being deemed non-responsive.**

COMPANY NAME:

AUTHORIZED OFFICER NAME / SIGNATURE:



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**PROPOSER'S QUALIFICATIONS STATEMENT**

PROPOSER shall furnish the following information. Failure to comply with this requirement will render Bid non responsive and shall cause its rejection. Additional sheets shall be attached as required.

PROPOSER'S Name and Principal Address:

Contact Person's Name and Title:

Contact Person's E-mail Address:

PROPOSER'S Telephone and Fax Number:

PROPOSER'S License Number:

**(Please attach certificate of status, competency, and/or state registration.)**

PROPOSER'S Federal Identification Number:

Number of years your organization has been in business

State the number of years your firm has been in business under your present business name

State the number of years your firm has been in business in the work specific to this solicitation:

Names and titles of all officers, partners or individuals doing business under trade name:

The business is a:      Sole Proprietorship      Partnership      Corporation

IF USING A FICTITIOUS NAME, SUBMIT EVIDENCE OF COMPLIANCE WITH FLORIDA FICTITIOUS NAME STATUTE. (ATTACH IN PROPOSER EXHIBIT SECTION)

Under what former name has your business operated? Include a description of the business. Failure to include such information shall be deemed to be intentional misrepresentation by the City and shall render the proposer RFP submittals non-responsive.

At what address was that business located?

Name, address, and telephone number of surety company and agent who will provide the required bonds on this contract:

Have you ever failed to complete work awarded to you. If so, when, where and why?

Have you personally inspected the proposed WORK and do you have a complete plan for its performance?

Will you subcontract any part of this WORK? If so, give details including a list of each sub-contractor(s) that will perform work in excess of ten percent (10%) of the contract amount and the work that will be performed by each subcontractor(s).

The foregoing list of subcontractor(s) may not be amended after award of the contract without the prior written approval of the Contract Administrator, whose approval shall not be reasonably withheld.

List and describe all bankruptcy petitions (voluntary or involuntary) which have been filed by or against the Proposer, its parent or subsidiaries or predecessor organizations during the past five (5) years. Include in the description the disposition of each such petition.

List and describe all successful Bond claims made to your surety (ies) during the last five (5) years. The list and descriptions should include claims against the bond of the Proposer and its predecessor organization(s).

List all claims, arbitrations, administrative hearings and lawsuits brought by or against the Proposer or its predecessor organizations(s) during the last (10) years. The list shall include all case names; case, arbitration or hearing identification numbers; the name of the project over which the dispute arose; and a description of the subject matter of the dispute.

List and describe all criminal proceedings or hearings concerning business related offenses in which the Proposer, its principals or officers or predecessor organization(s) were defendants.

Has the Proposer, its principals, officers or predecessor organization(s) been CONVICTED OF A Public Entity Crime, debarred or suspended from bidding by any government entity? If so, provide details.

Are you an      Original provider      sales representative      distributor,      broker,      manufacturer      other, of the commodities/services proposed upon? If other than the original provider, explain below.

Have you ever been debarred or suspended from doing business with any governmental agency? If yes, please explain:

Describe the firm's local experience/nature of service with contracts of similar size and complexity, it the previous three (3) years:

The PROPOSER acknowledges and understands that the information contained in response to this Qualification Statement shall be relied upon by CITY in awarding the contract and such information is warranted by PROPOSER to be true. The discovery of any omission or misstatement that materially affects the PROPOSER’S qualifications to perform under the contract shall cause the CITY to reject the Bid, and if after the award, to cancel and terminate the award and/or contract.

(Company Name)

(Printed Name/Signature)

**ACORD CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD[YY])

PRODUCER

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

**INSURERS AFFORDING COVERAGE**

INSURED

**YOUR COMPANY NAME HERE**

INSURER A:

INSURER B:

INSURER C:

INSURER D:

INSURER E:

**Companies providing coverage****COVERAGES**

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DDYY)	POLICY EXPIRATION DATE (MM/DDYY)	LIMITS								
	<b>GENERAL LIABILITY</b> <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input checked="" type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> policy <input type="checkbox"/> project <input type="checkbox"/> loc	<div style="border: 1px solid black; padding: 10px; text-align: center;"> <b>Must Include General Liability</b> </div>			EACH OCCURRENCE \$ FIRE DAMAGE (Any one fire) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$								
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				<div style="border: 1px solid black; padding: 10px; text-align: center;"> <b>SAMPLE CERTIFICATE</b> </div>								
	<b>GARAGE LIABILITY</b> <input type="checkbox"/> ANY AUTO			AUTO ONLY - EA ACCIDENT \$ OTHER THAN EA ACC \$ AUTO ONLY: AGG \$									
	<b>EXCESS LIABILITY</b> OCCUR <input type="checkbox"/> CLAIMS MADE  <input type="checkbox"/> DEDUCTIBLE <input type="checkbox"/> RETENTION \$				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$ \$								
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b>				<table border="1"> <tr> <td>WC STATU-TORY LIMITS</td> <td>OTH-ER</td> </tr> <tr> <td>E.L. EACH ACCIDENT</td> <td>\$</td> </tr> <tr> <td>E.L. DISEASE - EA EMPLOYEE</td> <td>\$</td> </tr> <tr> <td>E.L. DISEASE - POLICY LIMIT</td> <td>\$</td> </tr> </table>	WC STATU-TORY LIMITS	OTH-ER	E.L. EACH ACCIDENT	\$	E.L. DISEASE - EA EMPLOYEE	\$	E.L. DISEASE - POLICY LIMIT	\$
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E.L. EACH ACCIDENT	\$												
E.L. DISEASE - EA EMPLOYEE	\$												
E.L. DISEASE - POLICY LIMIT	\$												
	OTHER												

**Certificate must contain wording similar to what appears below**

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCL

**"THE CERTIFICATE HOLDER IS NAMED AS ADDITIONALLY INSURED WITH REGARD TO GENERAL LIABILITY"**

CERTIFICATE HOLDER

ADDITIONAL INSURED; INSURER LETTER:

CANCELLATION

**City of Pembroke Pines**  
**10100 Pines Boulevard**  
**Pembroke Pines FL 33026**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION

MAIL 30 DAYS WRITTEN  
LEFT.

**City Must Be Named as Certificate Holder**

AUTHORIZED REPRESENTATIVE



**AGREEMENT FOR PURCHASE OF**

**THIS AGREEMENT FOR PURCHASE OF** \_\_\_\_\_  
("Agreement") is dated this \_\_\_\_\_ day of \_\_\_\_\_, 2017 by and between:

**CITY OF PEMBROKE PINES**, a municipal corporation organized and operating pursuant to the laws of the State of Florida, with a business address of 10100 Pines Boulevard, Pembroke Pines, Florida 33026 (hereinafter referred to as the "CITY"),

and

\_\_\_\_\_, a \_\_\_\_\_, with a business address of \_\_\_\_\_ (hereinafter referred to as the "CONTRACTOR"). CITY and CONTRACTOR may hereinafter be referred to collectively as the "Parties."

**RECITALS:**

**WHEREAS**, the CITY advertised its invitation to bid No. \_\_\_\_\_ entitled \_\_\_\_\_ (hereinafter "ITB") which set forth the CITY's desire to hire a firm to provide \_\_\_\_\_:

**WHEREAS**, on \_\_\_\_\_, the responses to the ITB were opened at the offices of the City Clerk; and,

**WHEREAS**, on \_\_\_\_\_ the CITY awarded the ITB to CONTRACTOR and authorized the proper City officials to enter into this Agreement with CONTRACTOR to render provide the goods as required in the IFB; and,

**WHEREAS**, CITY and CONTRACTOR wish to enter into this Agreement to provide for the delivery of \_\_\_\_\_ to the CITY by CONTRACTOR; and,

**WHEREAS**, CONTRACTOR shall act as the primary provider of \_\_\_\_\_ to the CITY for the term of this Agreement;

**NOW THEREFORE**, in consideration of the mutual promises detailed herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:



## ARTICLE 1 PURCHASE OF GOODS

- 1.1 CITY agrees to purchase and CONTRACTOR agrees to provide \_\_\_\_\_ (the “Commodities”) subject of this Agreement.
- 1.2 CONTRACTOR shall provide the Commodities as identified herein and the CITY’s IFB and CONTRACTOR’s response thereto, collectively incorporated herein as **Exhibit “A”** and made a specific part hereof, according to the estimated quantities and schedule contained in **Exhibit “A”**.
- 1.3 The Parties acknowledge that this Agreement is a term contract and that CITY shall purchase and CONTRACTOR shall provide the Commodities on an as-needed basis upon written request of the CITY. Nothing contained herein or in any exhibit or amendment hereto, shall require the CITY to purchase the quantity of Commodities identified in **Exhibit “A”**.
- 1.4 As needed, the CITY shall submit a purchase order to the CONTRACTOR for a specified amount of Commodities. CONTRACTOR shall then provide the specified amount of Commodities in accordance with the purchase order, and submit to the CITY an invoice for those Commodities.
- 1.5 CITY agrees that CONTRACTOR shall be the primary provider of the Commodities, as further described on **Exhibit “A”**, and that CITY shall submit to CONTRACTOR a purchase order for the Commodities. By acceptance of CONTRACTOR’s bid, CONTRACTOR agrees that it shall provide such Commodities upon receipt of purchase order from CITY and has the ability to fulfill such orders as CITY requires.
- 1.6 CONTRACTOR acknowledges that it has the capacity, ability and/or inventory to provide the Commodities to the CITY on an as-needed basis and in accordance with the estimated schedule and quantities listed in **Exhibit “A”**.

## ARTICLE 2 TERM AND TERMINATION

- 2.1 CONTRACTOR shall provide the Commodities as identified herein and in **Exhibit “A”** attached hereto and made part hereof, for an initial \_\_\_\_\_ ( ) **year period** commencing on \_\_\_\_\_ and ending on \_\_\_\_\_, and according to the estimated schedule contained in **Exhibit “A”**.
- 2.2 This Agreement may be renewed for \_\_\_\_\_ ( ) **additional** \_\_\_\_\_ ( ) **year terms** upon mutual written consent, evidenced by a written Amendment to this Agreement extending the term thereof.



- 2.3 *Termination for Convenience:* CITY may terminate this Agreement for convenience, upon \_\_\_\_\_ (\_\_\_\_\_) **business days** of written notice by the terminating party to the other party for such termination.
- 2.4 In the event CONTRACTOR abandons or terminates this Agreement or causes it to be terminated by CITY for any reason, CONTRACTOR shall indemnify CITY against any loss pertaining to this termination.

For purposes of this Agreement, termination by CITY for cause includes, but is not limited to, any of the following circumstances:

- 2.4.1 CONTRACTOR's failure to keep, perform and observe each and every provision of this Agreement and such failure continues for a period of more than \_\_\_\_\_ (\_\_\_\_\_) **days** after CITY's delivery of a written notice to CONTRACTOR's of such breach or default;
- 2.4.2 CONTRACTOR becomes insolvent;
- 2.4.3 CONTRACTOR takes the benefit of any present or future insolvency statute;
- 2.4.4 CONTRACTOR makes a general assignment for the benefit of creditors,
- 2.4.5 CONTRACTOR files a voluntary petition in bankruptcy or a petition or answer seeking an arrangement of its reorganization or the readjustment of its indebtedness under the Federal Bankruptcy laws or under any other law or statute of the United States or any state thereof;
- 2.4.6 CONTRACTOR consents to the appointment of a receiver, trustee or liquidator of all or substantially all of its property;
- 2.4.7 A petition under any present or future insolvency laws or statute is filed against CONTRACTOR and such petition is not dismissed within \_\_\_\_\_ (\_\_\_\_\_) **days** after its filing; or
- 2.4.8 Any assignment of this Agreement in whole or in part, or any of CONTRACTOR's rights and obligations hereunder.

### **ARTICLE 3**

#### **COMPENSATION AND METHOD OF PAYMENT**

- 3.1 Unless stated otherwise on attached **Exhibit "A"**, CITY's sole compensation to CONTRACTOR for the provision of Commodities hereunder shall be \_\_\_\_\_ **Dollars (\$\_\_\_\_\_)** per \_\_\_\_\_. Upon delivery, the CITY shall make final inspection of the Commodities. If this inspection shows that the Commodities have been delivered in a satisfactory manner and in accordance with the specifications of this Agreement or purchase order submitted by the CITY, the CITY shall



receive the same. Final payment due the CONTRACTOR shall be withheld until inspection is made by the CITY and merits of performance evaluated. This total acceptance will be done in a reasonable and timely manner. Upon acceptance, CONTRACTOR shall submit to CITY an invoice for the Commodities provided and CITY, upon approval of the invoice, shall pay the same within \_\_\_\_\_ (\_\_\_\_) **days**.

- 3.2 If any of the Commodities has to be rejected for any reason, the CONTRACTOR shall be required to repair or replace the Commodities to the satisfaction of the CITY. Warranty repairs may be accomplished on CITY property if space is available, at the discretion of the CITY. Title to or risk loss or damage to all Commodities shall be the responsibility of the CONTRACTOR until acceptance of the Commodities by the CITY, unless such loss or damages have been proven to be the result of negligence by the CITY.
- 3.3 Should the Parties renew the term of this Agreement pursuant to Section 2.2 herein, in the event that CONTRACTOR shall provide adequate evidence to CITY to substantiate a price increase, the purchase price of the Commodities contained in Section 3.1 above may be adjusted no more than on an amount equal to the increase in the "Consumer Price Index" or "CPI" for the current year as of two (2) months prior to the beginning of any renewal term of this Agreement. However, in no event shall the increase be greater than \_\_\_\_\_ **percent** (\_\_\_\_ **%**) for each year subsequent to the initial term. The purchase price shall be subject to an annual CPI increase for each year of any renewal term. The purchase price due from the CITY shall never decrease.

The term "Consumer Price Index" is defined as the Consumer Price Index for all Urban Consumers, U.S. City Average (1982-84=100) All Items, published by the United States Department of Labor, Bureau of Labor Statistics. The increase in the CPI shall be computed by subtracting the CPI used to calculate the purchase price for the current year from the CPI reported on the U.S. Department of Labor, Bureau of Statistic's website available at <http://data.bls.gov/cgi-bin/surveymost?cu> for the month that is one hundred twenty (120) days prior to the first day of the upcoming year.

#### **ARTICLE 4**

#### **WARRANTY OF COMMODITIES**

- 4.1 The Commodities, and each individual good or item, including all components and all installed accessories and equipment, shall be guaranteed by the CONTRACTOR to be free of defective parts and workmanship. This warranty shall be for a period of \_\_\_\_\_ (\_\_\_\_) **days** or the time designated in the standard factory warranty, whichever is longer. The warranty will be the same as that offered to the commercial trade and shall be honored by any of the manufacturer's authorized dealers. The warranty will cover parts, labor and any necessary shipping for repair or replacement of the Commodities, or each individual good or item, including all components and all installed accessories and equipment. The warranty shall start at the time of acceptance by the CITY.
- 4.2 CONTRACTOR warrants and guarantees that the Commodities, and each individual good or item, including all components and all installed accessories and equipment, shall be fit



for the intended use of the Commodities and CONTRACTOR shall provide a warranty as to fitness of the Commodities for a period of \_\_\_\_\_ (\_\_\_\_) **days** or the time designated in the standard factory warranty, whichever is longer. The warranty will cover parts, labor and any necessary shipping for repair or replacement of the Commodities, or each individual good or item, including all components and all installed accessories and equipment.

## **ARTICLE 5 INDEMNIFICATION**

- 5.1 CONTRACTOR shall indemnify and hold harmless the CITY, its trustees, elected and appointed officers, agents, servants, assigns and employees, from and against any and all claims, demands, or causes of action whatsoever, and the resulting losses, costs, expenses, reasonable attorneys' fees, including paralegal expenses, liabilities, damages, orders, judgments, or decrees, sustained by the CITY or any third party arising out of, by reason of, or resulting from the CONTRACTOR's acts, errors, or omissions or consequence of the goods and/or Commodities furnished pursuant to this Agreement or those of any subcontractor, agents, officers, employees, or independent contractor retained by CONTRACTOR.
- 5.2 CONTRACTOR shall indemnify and hold harmless the CITY, its trustees, elected and appointed officers, agents, servants, assigns and employees, from and against any and all claims, demands, or causes of action whatsoever, and the resulting losses, costs, expenses, reasonable attorneys' fees, including paralegal expenses, liabilities, damages, orders, judgments, or decrees, sustained by the CITY or any third party arising out of, by reason of, or resulting from any alleged infringement of copyrights, patent rights and/or the unauthorized or unlicensed use of any invention, process, material, property or other work manufactured or used in connection with the performance of the Agreement, including the use of the Commodities by the City.
- 5.3 CITY reserves the right to select its own legal counsel to conduct any defense in any such proceeding and all costs and fees associated therewith shall be the responsibility of CONTRACTOR.
- 5.4 Upon completion of all Services, obligations and duties provided for in this Agreement, or in the event of termination of this Agreement for any reason, the terms and conditions of this Article shall survive indefinitely.
- 5.5 Nothing contained herein is intended nor shall be construed to waive City's rights and immunities under the common law or §768.28, Florida Statutes, as may be amended from time to time.

## **ARTICLE 6 INSURANCE**



- 6.1 CONTRACTOR shall not commence performance hereunder until it has obtained all insurance required under this paragraph and such insurance has been approved by the Risk Manager of the CITY nor shall the CONTRACTOR allow any subcontractor to commence work on his subcontract until all similar such insurance required of the subcontractor has been obtained and similarly approved.
- 6.2 Certificates of Insurance reflecting evidence of the required insurance shall be filed with the City's Risk Manager prior to the commencement of this Agreement. These Certificates shall contain a provision that coverages afforded under these policies will not be cancelled until at least thirty days (30) prior written notice has been given to the CITY. Policies shall be issued by companies authorized to do business under the laws of the State of Florida. Financial Ratings must be not less than "A-VI" in the latest edition of "Best Key Rating Guide", published by A.M. Best Guide.
- 6.3 Insurance shall be in force until the obligations required to be fulfilled under the terms of the Agreement are satisfied. In the event the insurance certificate provided indicates that the insurance shall terminate and lapse during the period of this Agreement, then in that event, the CONTRACTOR shall furnish, at least forty-five (45) days prior to the expiration of the date of such insurance, a renewed certificate of insurance as proof that equal and like coverage for the balance of the period of the Agreement and extension thereunder is in effect. The CONTRACTOR shall not commence nor continue to provide any service pursuant to this Agreement unless all required insurance remains in full force and effect. CONTRACTOR shall be liable to CITY for any lapses in service resulting from a gap in insurance coverage.
- 6.4 REQUIRED INSURANCE
- 6.4.1 Comprehensive General Liability insurance to cover liability bodily injury and property damage. Exposures to be covered are premises, operations, products/completed operations, and certain contracts. Coverage must be written on an occurrence basis, with the following limits of liability:
- |    |  |             |
|----|--|-------------|
| A. | Bodily Injury  |             |
| 1. | Each Occurrence  | \$1,000,000 |
| 2. | Annual Aggregate   | 1,000,000   |
| B. | Property Damage  |             |
| 1. | Each Occurrence  | 1,000,000   |
| 2. | Annual Aggregate   | 1,000,000   |
| C. | Personal Injury  |             |
|    | Annual Aggregate   | 1,000,000   |
| D. | Completed Operations and Products Liability shall be maintained for two (2) years after the final payment. |             |



- E. Property Damage Liability Insurance shall include Coverage for the following hazards: X - explosion, C - Collapse, U - underground.

6.4.2 Worker's Compensation Insurance shall be maintained during the life of this contract to comply with statutory limits for all employees. The following limits must be maintained:

A.	Worker's Compensation	Statutory
B.	Employer's Liability	\$100,000 each accident
		\$500,000 Disease-policy limit
		\$100,000 Disease-each employee

If CONTRACTOR claims to be exempt from this requirement, CONTRACTOR shall provide CITY proof of such exemption along with a written request for CITY to exempt CONTRACTOR, written on CONTRACTOR letterhead.

6.4.3 Comprehensive Auto Liability – coverage shall include owned, hired and non-owned vehicles.

A.	Bodily Injury	
1.	Each Occurrence	\$1,000,000
2.	Annual Aggregate	\$1,000,000
B.	Property Damage	
1.	Each Occurrence	\$1,000,000
2.	Annual Aggregate	\$1,000,000

6.5 CONTRACTOR shall name the CITY, as an additional insured on each of the policies required herein and shall hold the CITY, its agents, officers and employees harmless on account of claims for damages to persons, property or premises arising out of the services provided hereunder.

6.6 Any insurance required of CONTRACTOR pursuant to this Agreement must also be required by any subcontractor in the same limits and with all requirements as provided herein, including naming the CITY as an additional insured, in any work that is subcontracted unless such subcontractor is covered by the protection afforded by the CONTRACTOR and provided proof of such coverage is provided to CITY. The CONTRACTOR and any subcontractors shall maintain such policies during the term of this Agreement.

## **ARTICLE 7**

### **NON-DISCRIMINATION & EQUAL OPPORTUNITY EMPLOYMENT**

7.1 During the performance of the Agreement, neither CONTRACTOR nor its subcontractors shall discriminate against any employee or applicant for employment because of race, religion, color, gender, national origin, sex, age, marital status, political affiliation, familial status, sexual orientation, or disability if qualified. CONTRACTOR will take affirmative



action to ensure that employees are treated during employment, without regard to their race, religion, color, gender, national origin, sex, age, marital status, political affiliation, familial status, sexual orientation, or disability if qualified. Such actions must include, but not be limited to, the following: employment, promotion; demotion or transfer; recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. CONTRACTOR shall agree to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause. CONTRACTOR further agrees that he/she/it will ensure that subcontractors, if any, will be made aware of and will comply with this nondiscrimination clause.

## **ARTICLE 8 INDEPENDENT CONTRACTOR**

- 8.1 This Agreement does not create an employee/employer relationship between the parties. It is the intent of the parties that the CONTRACTOR is an independent CONTRACTOR under this Agreement and not the CITY's employee for all purposes, including but not limited to, the application of the Fair Labor Standards Act minimum wage and overtime payments, Federal Insurance Contribution Act, the Social Security Act, the Federal Unemployment Tax Act, the provisions of the Internal Revenue Code, the State Workers' Compensation Act, and the State unemployment insurance law. The CONTRACTOR shall retain sole and absolute discretion in the judgment of the manner and means of carrying out CONTRACTOR activities and responsibilities hereunder provided, further that administrative procedures applicable to services rendered under this Agreement shall be those of CONTRACTOR which policies of CONTRACTOR shall not conflict with CITY, State, H.U.D., or United States policies, rules or regulations relating to the use of CONTRACTOR Funds provided for herein. The CONTRACTOR agrees that it is a separate and independent enterprise from the CITY, that it has full opportunity to find other business, that it has made its own investment in its business, and that it will utilize a high level of skill necessary to perform the work. This Agreement shall not be construed as creating any joint employment relationship between the CONTRACTOR and the CITY and the CITY will not be liable for any obligation incurred by CONTRACTOR including but not limited to unpaid minimum wages and/or overtime premiums.

## **ARTICLE 9 SIGNATORY AUTHORITY**

- 9.1 CONTRACTOR shall provide CITY with copies of requisite documentation evidencing that the signator for CONTRACTOR has the authority to enter into this Agreement.

## **ARTICLE 10 MERGER; AMENDMENT**

- 10.1 This Agreement constitutes the entire Agreement between CONTRACTOR and CITY, and negotiations and oral understandings between the parties are merged herein. This Agreement



can be supplemented or amended only by a written document executed by both CONTRACTOR and CITY with the same formality and equal dignity herewith.

## **ARTICLE 11 DEFAULT OF CONTRACT & REMEDIES**

- 11.1 CITY reserves the right to recover any ascertainable actual damages incurred as a result of the failure of CONTRACTOR to perform in accordance with the requirements of this Agreement, or for losses sustained by CITY resultant from CONTRACTOR failure to perform in accordance with the requirements of this Agreement.

## **ARTICLE 12 BANKRUPTCY**

- 12.1 It is agreed that if CONTRACTOR is adjudged bankrupt, either voluntarily or involuntarily, then this Agreement shall terminate effective on the date and at the time the bankruptcy petition is filed.

## **ARTICLE 13 DISPUTE RESOLUTION**

- 13.1 In addition to any other remedy provided hereunder, CITY, at its option, may use arbitration to resolve any controversy or claim arising out of or relating to this Agreement if arbitration is elected by CITY. Any controversy or claim arising out of or relating to this Agreement, or breach thereof, may be settled by arbitration in accordance with the rules of the American Arbitration Association and judgment upon the award rendered by the arbitrators may be entered into by any court having jurisdiction thereof. In the event arbitration is elected by CITY, such controversy or claim shall be submitted to one arbitrator selected by the CITY from the National Panel of The American Arbitration Association.
- 13.2 Operations During Dispute.

13.2.1 In the event that a dispute, if any, arises between CITY and CONTRACTOR relating to this Agreement, performance or compensation hereunder, CONTRACTOR shall continue to provide the Commodities in full compliance with all terms and conditions of this Agreement as interpreted by CITY regardless of such dispute.

13.2.2 Notwithstanding the other provisions in this Section, CITY reserves the right to terminate the Agreement at any time, whenever the subject goods and/or commodities provided by CONTRACTOR fail to meet reasonable standards of the trade or any warranty, express or implied contained herein, after CITY gives written notice to the CONTRACTOR of the deficiencies as set forth in Section 2.4.1 of this Agreement.

## **ARTICLE 14 PUBLIC RECORDS**



14.1 The City of Pembroke Pines is public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law. Specifically, the Contractor shall:

14.1.1 Keep and maintain public records required by the CITY to perform the service;

14.1.2 Upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in chapter 119, Fla. Stat., or as otherwise provided by law;

14.1.3 Ensure that public records that are exempt or that are confidential and exempt from public record disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and, following completion of the contract, CONTRACTOR shall destroy all copies of such confidential and exempt records remaining in its possession after the CONTRACTOR transfers the records in its possession to the CITY; and

14.1.4 Upon completion of the contract, CONTRACTOR shall transfer to the CITY, at no cost to the CITY, all public records in CONTRACTOR's possession. All records stored electronically by the CONTRACTOR must be provided to the CITY, upon request from the CITY's custodian of public records, in a format that is compatible with the information technology systems of the CITY.

14.2 The failure of Contractor to comply with the provisions set forth in this Article shall constitute a Default and Breach of this Agreement and the CITY shall enforce the Default in accordance with the provisions set forth in **Article 11**.

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT**

**CITY CLERK  
10100 PINES BOULEVARD, 5<sup>th</sup> FLOOR  
PEMBROKE PINES, FL 33026  
(954) 450-1050  
[mgraham@ppines.com](mailto:mgraham@ppines.com)**



## ARTICLE 15 MISCELLANEOUS

- 15.1 **Ownership of Documents.** Reports, surveys, studies, and other data provided in connection with this Agreement are and shall remain the property of CITY, whether or not the project for which they are made is completed.
- 15.2 **Legal Representation.** It is acknowledged that each party to this agreement had the opportunity to be represented by counsel in the preparation of this Agreement, and accordingly, the rule that a contract shall be interpreted strictly against the party preparing same shall not apply herein due to the joint contributions of both parties.
- 15.3 **Records.** CONTRACTOR shall keep such records and accounts and require any and all subcontractors to keep records and accounts as may be necessary in order to record complete and correct entries as to the provision of Commodities or purchases hereunder for which CONTRACTOR. Such books and records will be available at all reasonable times for examination and audit by CITY and shall be kept for a period of \_\_\_\_ (\_\_\_\_) **years** after the completion of all work to be performed pursuant to this Agreement, or as otherwise required by Florida law. Incomplete or incorrect entries in such books and records will be grounds for disallowance by CITY of any fees or expenses based upon such entries.
- 15.4 **Assignments; Amendments.** This Agreement, and any interests herein, shall not be assigned, transferred or otherwise encumbered, under any circumstances, by CONTRACTOR without the prior written consent of CITY. For purposes of this Agreement, any change of ownership of CONTRACTOR shall constitute an assignment which requires CITY approval. However, this Agreement shall run to the benefit of CITY and its successors and assigns.
- It is further agreed that no modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.
- 15.5 **No Contingent Fees.** CONTRACTOR warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for CONTRACTOR to solicit or secure this Agreement, and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for CONTRACTOR any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Agreement. For the breach or violation of this provision, CITY shall have the right to terminate the Agreement without liability at its discretion, to deduct from the contract price, or otherwise recover the full amount of such fee, commission, percentage, gift or consideration.
- 15.6 **Notice.** Whenever any party desires to give notice unto any other party, it must be given by written notice, sent by certified United States mail, with return receipt requested, addressed to the party for whom it is intended and the remaining party, at the places last specified, and the places for giving of notice shall remain such until they shall have been changed by written



notice in compliance with the provisions of this section. For the present, CONTRACTOR and CITY designate the following as the respective places for giving of notice:

CITY                      Charles F. Dodge, City Manager  
City of Pembroke Pines  
10100 Pines Boulevard  
Pembroke Pines, Florida 33025  
Telephone No.            (954) 431-4884  
Facsimile No.            (954) 437-1149

Copy To:                Samuel S. Goren, City Attorney  
Goren, Cherof, Doody & Ezrol, P.A.  
3099 East Commercial Boulevard, Suite 200  
Fort Lauderdale, Florida 33308  
Telephone No.            (954) 771-4900  
Facsimile No.            (954) 771-4923

CONTRACTOR:        **[CONTACT, TITLE]**  
**[VENDOR NAME]**  
**[VENDOR ADDRESS]**  
**[VENDOR CITY, STATE, & ZIP CODE]**  
**Telephone No:**        \_\_\_\_\_  
**Facsimile No:**        \_\_\_\_\_  
**E-Mail:**                \_\_\_\_\_

- 15.7 **Binding Authority.** Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.
- 15.8 **Headings.** Headings herein are for the convenience of reference only and shall not be considered in any interpretation of this Agreement.
- 15.9 **Exhibits.** Each Exhibit referred to in this Agreement forms an essential part of this Agreement. The exhibits if not physically attached should be treated as part of this Agreement and are incorporated herein by reference.
- 15.10 **Severability.** If any provision of this Agreement or application thereof to any person or situation shall to any extent, be held invalid or unenforceable, the remainder of this Agreement, and the application of such provisions to persons or situations other than those as to which it shall have been held invalid or unenforceable, shall not be affected thereby, and shall continue in full force and effect, and be enforced to the fullest extent permitted by law.



- 15.11 **Extent of Agreement and Conflicts.** This Agreement represents the entire and integrated agreement between CITY and CONTRACTOR and supersedes all prior negotiations, representations or agreements, either written or oral.
- 15.12 **Waiver.** Failure of CITY to insist upon strict performance of any provision or condition of this Agreement, or to execute any right herein contained, shall not be constructed as a waiver or relinquishment for the future of any such provision, condition, or right, but the same shall remain in full force and effect.
- 15.13 **Disputes.** Any claim, objection, or dispute arising out of the terms of this Agreement shall be litigated in Broward County, Florida.
- 15.14 **Attorney's Fees.** In the event that either party brings suit for enforcement of this Agreement, each party shall bear its own attorney's fees and court costs, except as otherwise provided under the indemnification provisions set forth herein above.

**THE REMAINDER OF THIS PAGE  
HAS BEEN INTENTIONALLY LEFT BLANK.**



**IN WITNESS OF THE FOREGOING**, the parties have set their hands and seals the day and year first written above.

**CITY:**

CITY OF PEMBROKE PINES, FLORIDA

ATTEST:

\_\_\_\_\_  
MARLENE D. GRAHAM, CITY CLERK

By: \_\_\_\_\_  
MAYOR FRANK C. ORTIS

APPROVED AS TO FORM:

\_\_\_\_\_  
OFFICE OF THE CITY ATTORNEY

**CONTRACTOR:**

**[NAME OF CONTRACTOR]**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )

**BEFORE ME**, an officer duly authorized by law to administer oaths and take acknowledgments, personally appeared \_\_\_\_\_ as \_\_\_\_\_ of **[NAME OF CONTRACTOR]**, a company authorized to conduct business in the State of Florida, and acknowledged execution of the foregoing Agreement as the proper official of **[NAME OF CONTRACTOR]** for the use and purposes mentioned in it and affixed the official seal of the corporation, and that the instrument is the act and deed of that corporation.

**IN WITNESS OF THE FOREGOING**, I have set my hand and official seal at in the State and County aforesaid on this \_\_\_\_\_ day of \_\_\_\_\_, 2017.

\_\_\_\_\_  
NOTARY PUBLIC

\_\_\_\_\_  
(Name of Notary Typed, Printed or Stamped)

**REFERENCES FORM**

Provide specific examples of similar contracts. References should be should be capable of explaining and confirming your firm’s capacity to successfully complete the scope of work outlined herein. **This form should be duplicated for each reference and any additional information that would be helpful can be attached.**

**Reference Contact Information:**

Name of Firm, City, County or Agency:

Address:

City/State/Zip:

Contact Name: Title:

E-Mail Address:

Telephone: Fax:

**Project Information:**

Name and location of the project:

Nature of the firm’s responsibility on the project:

Project duration: Completion (Anticipated) Date:

Size of project: Cost of project:

Work for which staff was responsible:

Contract Type:

The results/deliverables of the project:

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Address:

City/State/Zip:

Contact Name: Title:

E-Mail Address:

Telephone: Fax:

**Project Information:**

Name and location of the project:

Nature of the firm’s responsibility on the project:

Project duration: Completion (Anticipated) Date:

Size of project: Cost of project:

Work for which staff was responsible:

Contract Type:

The results/deliverables of the project:

[Vendor view of bid](#)

[Chat](#) | [Bid Comments](#) | [Documents](#) | [Attachments](#) | [Items](#)

**Bid #FI-16-01 - Fire Engine / Pumper Truck**   

**Time Left** Bid has ended.

**Bid Started** Jan 17, 2017 8:04:38 AM EST

**Bid Ended** **This bid closed on Feb 14, 2017 2:00:00 PM EST**

**Agency Information** City of Pembroke Pines, FL ([view agency's bids](#))

**Bid Classifications** [Classification Codes](#)

**Bid Regions** [Regions](#)


**Bid Contact** [see contact information](#)

**Copy Bid** Click here to [copy](#) the bid and relist it as a new bid

**View Rules** Click here to [change](#) the rules for this bid.

**Best and Final Offer:** [Create](#)

**Notifications** [Report](#) [Bidder Activity](#)

**# of suppliers that viewed** 37  ([View](#))

**Q & A** [Questions & Answers](#)  
Q&A Deadline: Jan 30, 2017 8:30:00 PM EST

#### Approval

**View Approval Flow** [View Approval Flow](#)

**Approval Status** **Approved**

#### Bid Comments

**Contract Duration** 3 years

**Contract Renewal** See Specifications

**Prices Good for** 90 days

**Budgeted Amount** \$0.00 ([change](#))

**Standard Disclaimer** Bids/proposals must be submitted electronically

Please note vendors should be registered on BidSync under the name of the organization that they are operating as and it should match the organization name on the documents that they are submitting and utilizing when responding to the solicitation.

The vendor must provide the necessary information on the BidSync website and upload all of the requested documents listed in the PROPOSAL REQUIREMENTS section of this solicitation. Unless otherwise specified, the City requests for vendors to upload their documents as one (1) PDF document in the order that is outline in the bid package.

The City recommends for proposers to submit their proposals as soon as they are ready to do so. Please allow ample time to submit your proposals on the BidSync website. Proposals may be modified or withdrawn prior to the deadline for submitting Proposals. BidSync Support is happy to help you with submitting your proposal and to ensure that you are submitting your proposals correctly, but we ask that you contact their support line at 1-800-990-9339 with ample time before the bid closing date and time.









PLEASE DO NOT SUBMIT ANY PROPOSALS VIA MAIL, E-MAIL OR FAX.

However, please note that any required Bid Bond or Cashier's Check should be in a sealed envelope, plainly marked "BID SECURITY" (with the Solicitation Number and Title) and sent to the City of Pembroke Pines, City Clerk's Office, 5th Floor, 10100 Pines Boulevard, Pembroke Pines, FL 33026

**Bid Comments** The City of Pembroke Pines is seeking proposals to provide the Fire Department with a Fire Engine / Pumper Truck that will meet their needs.

#### Documents

[Select All](#) | [Select None](#) | [Download Selected](#)

- |   |   |
|---|---|
| <input type="checkbox"/> 1.  <a href="#">FI-16-01 Fire Engine-Pumper Truck.pdf</a> ( <a href="#">download</a> )                  | <input type="checkbox"/> 2.  <a href="#">Attachment A - Contact Information Form.docx</a> ( <a href="#">download</a> )         |
| <input type="checkbox"/> 3.  <a href="#">Attachment B - Vendor Information Form and a W-9.pdf</a> ( <a href="#">download</a> )   | <input type="checkbox"/> 4.  <a href="#">Attachment C - Non-Collusive Affidavit</a> ( <a href="#">download</a> )               |
| <input type="checkbox"/> 5.  <a href="#">Attachment D - Sworn Statement on Public Entity Crimes</a> ( <a href="#">download</a> ) | <input type="checkbox"/> 6.  <a href="#">Attachment E - Local Vendor Preference Certification</a> ( <a href="#">download</a> ) |
| <input type="checkbox"/> 7.  <a href="#">Attachment F - Veteran Owned Small Business (VOSB) Preference</a>                       | <input type="checkbox"/> 8.  <a href="#">Attachment G - Equal Benefits Certification Form</a> ( <a href="#">download</a> )     |

[Product Feedback](#)

[Certification](#) [\[download\]](#)

☐ 9.  [Attachment H - Proposers Qualifications Statement](#) [\[download\]](#)

☐ 11.  [Attachment J - Specimen Contract Continuing Purchase.pdf](#) [\[download\]](#)

☐ 10.  [Attachment I - Sample Insurance Certificate.pdf](#) [\[download\]](#)

☐ 12.  [Attachment K - References Form](#) [\[download\]](#)



= Included in Bid Packet



= Excluded from Bid Packet

#### Items

Item	Title	Offers	
FI-16-01--01-01	<a href="#">Fire Engine / Pumper Truck Cost</a>	Y	<a href="#">Info</a>
FI-16-01--01-02	<a href="#">Pre-Payment Discount Option</a>	Y	<a href="#">Info</a>
FI-16-01--01-03	<a href="#">Trade-In Value Option for a: 1997 E-One Hush XLT (VIN # 4ENBAAA81V1007640)</a>	Y	<a href="#">Info</a>
FI-16-01--01-04	<a href="#">Proposed Equipment (Fire Engine/Pumper Truck Year, Make and Model)</a>	Y	<a href="#">Info</a>
FI-16-01--01-05	<a href="#">Maintenance Shop Name and Location</a>	Y	<a href="#">Info</a>
FI-16-01--01-06	<a href="#">Number of Calendar Days to Complete and Furnish the Fire Engine / Pumper Truck</a>	Y	<a href="#">Info</a>

#### Contractor Advertisements

[View All Ads](#)

There are no advertisements on this solicitation.

Questions? Contact a BidSync representative: 800-990-9339 or email: [support@bidsync.com](mailto:support@bidsync.com)

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[Product Feedback](#)

## Question and Answers for Bid #FI-16-01 - Fire Engine / Pumper Truck

Create New Question

Question Deadline: Jan 30, 2017 8:30:00 PM EST

### Overall Bid Questions

There are no questions associated with this bid.

Questions? Contact a BidSync representative: 800-990-9339 or email: [support@bidsync.com](mailto:support@bidsync.com)

## Hall-Mark RTC

Bid Contact **Dee Daniels**  
**ddaniels@hall-markfire.com**  
**Ph 352-629-6305**

Address **725 SW 46th Ave**  
**Ocala, FL 34474**

Item #	Line Item	Notes	Unit Price	Qty/Unit	Attch.	Docs
FI-16-01--01-01	Fire Engine / Pumper Truck Cost	<b>Supplier</b> <b>Product</b> <b>Code:</b> Confirm <b>Supplier</b> <b>Notes:</b> Typhoon/Rescue Pumper 42-56	First Offer - \$468,480.00	1 / each	\$468,480.00	Y Y
FI-16-01--01-02	Pre-Payment Discount Option	<b>Supplier</b> <b>Product</b> <b>Code:</b> Confirm <b>Supplier</b> <b>Notes:</b> Pre-Payment in Required 30 Days after Receipt of PO.	First Offer - (\$13,114.00)	1 / each	(\$13,114.00)	Y Y
FI-16-01--01-03	Trade-In Value Option for a: 1997 E-One Hush XLT (VIN # 4ENBAAA81V1007640)	<b>Supplier</b> <b>Product</b> <b>Code:</b> Confirm	First Offer - (\$5,500.00)	1 / each	(\$5,500.00)	Y Y
FI-16-01--01-04	Proposed Equipment (Fire Engine/Pumper Truck Year, Make and	<b>Supplier</b> <b>Product</b> <b>Code:</b>	First Offer -	1 / each		Y

Model)

FI-16-01--01-05	Maintenance Shop Name and Location	Supplier Product Code:	First Offer -	1 / each	Y
FI-16-01--01-06	Number of Calendar Days to Complete and Furnish the Fire Engine / Pumper Truck	Supplier Product Code:	First Offer -	1 / each	Y

Supplier Total \$449,866.00

**Hall-Mark RTC****Item: Fire Engine / Pumper Truck Cost****Attachments**

PEMBROKE PINES DETAILED SPEC Q-80703 REV-68.pdf

PEMBROKE PINES LINE ITEM Q-80703 REV-68.pdf

Q80703A Pembroke Pines Driver Side.pdf

Q80703A Pembroke Pines Officer Side.pdf

Customer: PEMBROKE PINES FIRE RESCUE

## **TESTING COMPLIANCE STANDARD**

### **Hose Bed Capacity**

Hosebed hoseload allowance on the apparatus shall be 1200 lbs.

### **Overall Height Restriction**

The apparatus shall have no overall height restrictions.

### **Overall Length Restriction**

The unit has no overall length restrictions.

### **NFPA Compliance**

The E-ONE supplied components of the apparatus shall be compliant with NFPA 1901, 2016 edition.

### **Equipment Capacity**

Equipment allowance on the apparatus shall be 2500 lbs. This allowance is in addition to the weight of the hoses and ground ladders listed in the shop order as applicable.

## **BUMPERS**

### **Bumper Extension**

The bumper extension shall be approximately 24" from the face of the cab as required.

### **Bumper Gravel Shield**

The extended front bumper gravel shield shall be made of 3/16" (.375") aluminum treadplate material.

### **Bumper**

A heavy duty 10" high steel channel type front bumper shall be provided. The front corners of the bumper shall be angled at 45 degrees to reduce swing clearance. The driver side of the bumper shall have a notch to allow room for a flush mounted Q2B siren.

The bumper shall be painted job color.

## **BUMPER TRAYS**

### **Bumper Tray - Center**

A hose tray constructed of 1/8" aluminum shall be recessed into the front bumper extension. The tray shall be located in the center of the bumper and be approximately 14" deep (13" to the top of the slats). One inch thick aluminum slats shall be included in the bottom of the hose tray to aid in the dissipation of water from the tray.

### **Lid, Bumper Hose Tray**

The center bumper tray shall have a diamond plate lid. The lid shall be hinged and shall be secured in the closed position by a D-Ring latch and held open with a pneumatic shock.

## **FRAME ASSEMBLY**

### **Rear Underbody Support Frame**

The body shall be supported at the rear by a steel frame extension bolted to the chassis frame rails. The frame rails and frame extension shall be isolated from the aluminum body extrusions by 5/16" x 2" fiber reinforced rubber.

The frame extension shall be built with (2) 2.5" sq. x .25 wall thickness x full width cross rails welded to (2) 2.5" sq. x .25 wall thickness side rails. The frame extension assembly will be welded to steel weldments, which are secured to the chassis frame with grade 8 5/8" bolts.

The frame extension shall not interfere with N.F.P.A. minimum requirements for angle of departure.

### **Frame Assembly**

The frame shall consist of two (2) C-channel frame rails with heavy-duty cross-members. Each frame rail shall have the following minimum specifications in order to minimize frame deflection under load and thereby improve vehicle ride and extend the life of the frame:

Dimensions: 10-1/4" x 3-1/2" x 3/8"

Material: 110,000-psi minimum yield strength, high strength, low alloy steel

Section Modulus: 16.61 cu. in.

Resistance to Bending Moment (RBM): 1,827,045 in. lbs.

If larger rails are provided, the maximum height of each frame rail shall not exceed the 10-1/4" dimension by more than 1/2" in order to ensure the lowest possible body height for ease of access as well as the lowest possible vehicle center of gravity for maximum stability.

There shall be a minimum of six (6) cross-members joining the two (2) frame rails in order to make the frame rigid and hold the rails/liners in alignment. The cross-members shall be a combination of a formed steel C-channel design along with heavy duty steel fabricated designs as required for the exact chassis configuration. The cross-members shall be attached to the frame rails with not less than four (4) bolts at each end arranged in a bolt pattern to adequately distribute the cross-member load into the rail/liner and minimize stress concentrations.

All frame fasteners shall be high-strength Grade 8, flanged-head threaded bolts and nuts for frame strength, durability, and ease of repair. The nuts shall be Stover locknuts to help prevent loosening. The frame fasteners shall be tightened to the proper torque at the time of assembly.

The frame rails shall be zinc plated (galvanized) and powder coated for improved corrosion resistance. The galvanization shall be a minimum of 4 mils thick and done in accordance with ASTM A123. The powder coat shall be 6.5 mils thick (+/- 1.5 mils) and pass ASTM D3359 testing.

The frame cross-members and frame mounted components (suspensions, axles, air tanks, battery boxes, fuel tank, etc.) shall be painted black.

The apparatus manufacturer shall supply a full lifetime frame warranty including cross-members against defects in materials or workmanship. Warranties that provide a lifetime warranty for only the frame rails, but not the cross-members, are not acceptable. NO EXCEPTIONS.

The custom chassis frame shall have a WHEEL ALIGNMENT in order to achieve maximum vehicle road performance and to promote long tire life. The alignment shall conform to the manufacturer's internal specifications. All wheel lug nuts and axle U-bolt retainer nuts shall be tightened to the proper torque at the time of alignment. The wheel alignment documentation shall be made available at delivery upon request.

## **Frame Liner**

A 9-3/8" x 3-1/8" x 3/8" channel frame liner shall be bolted to each frame rail for added strength and rigidity. Frame liners shall be made of 110,000 psi minimum yield, high strength, low alloy steel. The frame rails shall be zinc plated (galvanized) and powder coated for improved corrosion resistance. The galvanization shall be a minimum of 4 mils thick and done in accordance with ASTM A123. The powder coat shall be 6.5 mils thick (+/- 1.5 mils) and pass ASTM D3359 testing.

Each frame rail with liner shall have the following minimum characteristics:

Section Modulus: 28.74 cu. in.

RBM: 3,161,400 in. lbs.

The frame liners shall be inserted inside the open portion of the frame rails and shall run continuously from the rear of the frame to the centerline of the front axle to provide maximum frame strength at all critical load points.

## **AXLE OPTIONS**

### **Front Axle**

The vehicle shall utilize an ArvinMeritor FL-941 front axle with a rated capacity of 18,700 lbs. It shall have "easy steer" knuckle pin bushings and 68.5" kingpin centers. The axle shall be of I-beam construction and utilize grease-lubricated wheel bearings. The vehicle shall have a nominal cramp angle of 45 degrees, plus two (+ 2) degrees to minus three (- 3) degrees including front suction applications.

The front axle hubs shall be made from ductile iron and shall be designed for use with 10 hole hub-piloted wheels in order to improve wheel centering and extend tire life.

The front springs shall be parabolic tapered, minimum 4" wide x 54" long (flat), minimum 3 leaf, progressive rate with bronze bushings and a capacity of 20,000 lbs. at the ground.

Tapered leaf springs provide a 20% ride improvement over standard straight spring systems. Supporting documentation/data shall be provided upon request.

The vehicle shall be equipped with a Sheppard model M-110 power steering gear, used in conjunction with a power assist cylinder. The steering assembly shall be rated to statically steer up to a maximum front axle load of 18,700 lbs. Relief stops shall be provided to reduce system pressure upon full wheel cut. The system shall operate mechanically should the hydraulic system fail.

A 2-year/unlimited miles parts and 2-year labor axle warranty shall be provided as standard by ArvinMeritor Automotive.

In order to achieve maximum vehicle road performance and to promote long tire life, there shall be a wheel alignment. The alignment shall conform to the manufacturer's internal specifications. All wheel lug nuts and axle U-bolt retainer nuts shall be tightened to the proper torque at the time of alignment. The wheel alignment documentation shall be made available at delivery.

### **Shock Absorbers Front**

Koni model 90 shock absorbers shall be provided for the front axle. The shocks shall be three way adjustable.

The shocks shall be covered by the manufacturer's standard warranty.

## **Front Axle Spiral Pins**

The front suspension springs shall utilize Kaiser spring eyes/shackle pins. The pins shall be of the "grease grooved" design. Spiral steer spring eye bushings, with integral grease seals, shall be provided.

## **Rear Axle**

The vehicle shall be equipped with an ArvinMeritor RS-25-160 single rear axle with single-reduction hypoid gearing and a manufacturer's rated capacity of 27,000 lbs. The axle shall be equipped with oil-lubricated wheel bearings with ArvinMeritor oil seals.

The rear axle hubs shall be made from ductile iron and shall be designed for use with 10 hole hub-piloted wheels to improve wheel centering and extend tire life.

A 2-year/unlimited miles parts and 2-year labor rear axle warranty shall be provided as standard by ArvinMeritor Automotive.

## **Shock Absorbers, Rear**

There shall be Koni model 90 shock absorbers provided, one (1) at each wheel position. In the case of a tandem rear axle application the shocks shall be mounted to the rear/rear axle.

The shocks shall be covered by the manufacturer's standard warranty.

# **SUSPENSIONS**

## **Rear Suspension**

The rear suspension shall be a pair of linear-rate leaf springs with auxiliary "helper" leaf springs and bronze bushings. The variable-rate springs with auxiliary springs ensure that the vehicle rides and handles smoothly under both loaded and unloaded conditions. The suspension shall be rated for the maximum axle capacity.

# **WHEEL OPTIONS**

## **Front Wheels**

The vehicle shall have two (2) polished (on outer wheel surfaces only) Alcoa aluminum disc wheels. They shall be forged from one-piece corrosion-resistant aluminum alloy and sized appropriately for the tires.

## **Front Wheel Trim Package**

The front wheels shall have stainless steel lug nut covers (for use with aluminum wheels) or chrome plated plastic (for use with steel wheels). The front axle shall be covered with American made Real Wheels brand mirror finish, 304L grade, non-corrosive stainless steel universal baby moons. All stainless steel baby moons shall carry a lifetime warranty plus a 2 year re-buffing policy. There shall be two (2) baby moons and twenty (20) lug nut covers.

## **Rear Wheels**

The vehicle shall have four (4) polished (on outer wheel surfaces only) Alcoa aluminum disc wheels. They shall be forged from one-piece corrosion-resistant aluminum alloy and sized appropriately for the tires.

## **Rear Wheel Trim Package, Single Axle**

The rear wheels shall have stainless steel lug nut covers (chrome plated steel lug nut covers not acceptable), or American made chrome plated plastic lug nut covers. The rear axle shall be covered with American made Real Wheels brand mirror finish, 304L grade, non-corrosive stainless steel, spring clip band mount high hats, DOT user friendly. All stainless steel high hats shall carry a lifetime warranty plus a 2 year re-buffing policy. There shall be two (2) high hats and twenty (20) lug nut covers.

# **TIRE OPTIONS**

## **Rear Tires**

Rear tires shall be Goodyear 12R22.5 tubeless type "H" range radial tires with G661 HSA highway tread.

Tires with wheels shall have the following weight capacity:

Rear Rating - 27,000# (dual) @ 75 MPH

Wheel and tire shall conform to the Tire and Rim Association requirements.

## **Front Tires**

The front tires shall be Goodyear 385/65R22.5 tubeless type "J" range radial tires with G296 MSA highway tread.

The tires with wheels shall have the following weight capacity:

Max front rating - 20,050 @ 68 MPH (intermittent fire service rating if GAW is over 18,740)

The wheels and tires shall conform to the Tire and Rim Association requirements.

## **Tire Pressure Indicators**

The apparatus shall be provided with Real Wheels AirGuard LED tire pressure indicating valve stem caps. When the tire is under inflated by 5-10 PSI, the LED indicator on the cap shall flash red. The indicator housings shall be shock resistant and constructed from polished stainless steel. The indicators shall be calibrated by attaching to valve stem of a tire at proper air pressure per load ratings and easily re-calibrated by simply removing and re-installing them during service.

Real Wheel Part number RWC1234 was superseded by RWC1235 as of June 2015

## **BRAKE SYSTEMS**

### **Front Brakes**

The front axle shall be equipped with Meritor DiscPlus EX225H 17 inch disc brakes.

The brakes shall be covered by the manufacturer's standard warranty which is three years, unlimited mileage and parts only.

### **Rear Brakes**

The rear axle shall be equipped with ArvinMeritor 16-1/2" x 7" S-cam brakes with cast brake drums. Q-Plus shoes shall be provided with up to 24,000 lb. axle ratings and P-Type shoes with over 24,000 lb. axle ratings.

The rear axle brakes shall be furnished with automatic slack adjusters. ArvinMeritor brand shall be supplied on RS-24-160 and RS-25-160 axles, and Haldex brand shall be supplied on RS-26-185 and RS-30-185 axles.

A 3 year/unlimited miles parts and 3 year labor rear brake warranty shall be provided as standard by ArvinMeritor Automotive. The warranty shall include bushings, seals, and cams.

### **Brake System**

The vehicle shall be equipped with air-operated brakes and an anti-lock braking system (ABS). The brake system shall meet or exceed the design and performance requirements of the current Federal Motor Vehicle Safety Standard (FMVSS)-121, and the test requirements of the current NFPA 1901 Standard.

A dual-treadle brake valve shall correctly proportion the braking power between the front and rear systems. The air system shall be provided with a rapid pressure build-up feature, designed to meet current NFPA 1901 requirements, to allow the vehicle to begin its emergency response as quickly as possible.

A pressure-protection valve shall be installed to prevent use of the air horns or other air-operated devices should the air system pressure drop below 85 psi. This feature is designed to prevent inadvertent actuation of the emergency/parking brakes while the vehicle is in motion.

Two (2) air pressure needle gauges, one (1) each for front and rear air pressure, with a warning light and buzzer shall be installed at the driver's instrument panel.

The braking system shall be provided with a minimum of three (3) air tank reservoirs for a total air system capacity of 5,214 cu. in. One (1) reservoir shall serve as the wet tank and a minimum of one (1) tank shall be supplied for each of the front and rear axles. The total system shall carry a sufficient volume of air to comply with FMVSS-121.

#### Tank Capacities in Cubic Inches:

Wet	Front	Rear	Total
1,738	1,738	1,738	5,214

Spring-actuated emergency/parking brakes shall be installed on the rear axle.

A Bendix-Westinghouse SR-1 valve, in conjunction with a double check valve system, shall provide automatic emergency brake application when the air brake system pressure falls below 40 psi in order to safely bring the vehicle to a stop in case of an accidental loss of braking system air pressure.

A four-channel Wabco ABS shall be provided to improve vehicle stability and control by reducing wheel lock-up during braking. This braking system shall be fitted to both front and rear axles. All electrical connections shall be environmentally-sealed for protection against water, weather, and vibration.

The system shall constantly monitor wheel behavior during braking. Sensors on each wheel transmit wheel speed data to an electronic processor, which shall detect approaching wheel lock-up and instantly modulate (or pump) the brake pressure up to five (5) times per second to prevent wheel lock-up. Each wheel shall be individually controlled. To improve field performance, the system shall be equipped with a dual-circuit design configured in a diagonal pattern. Should a malfunction occur in one circuit, that circuit shall revert to normal braking action. A warning light at the driver's instrument panel shall signal a malfunction.

The system shall also be configured to work in conjunction with all auxiliary engine, exhaust, or driveline brakes to prevent wheel lock-up.

To improve maintenance troubleshooting, provisions in the system for an optional diagnostic tester shall be provided. The system shall test itself each time the vehicle is started, and a dash-mounted light shall go out once the vehicle is moving above 4 MPH.

A 3 year/300,000 mile parts and labor Anti-Locking Braking System (ABS) warranty shall be provided as standard by Meritor Automotive.

### **Park Brake Release**

One (1) Bendix-Westinghouse PP-5 parking brake control valve shall be supplied on the lower dash panel within easy reach of the driver.

### **Electronic Stability Control**

The apparatus shall be equipped with a G4 4S4M Electronic Stability Control (ESC) system that combines the functions of Roll Stability Control (RSC) with the added capability of yaw - or rotational – sensing.

RSC focuses on the vehicle's center of gravity and the lateral acceleration limit or rollover threshold. When critical lateral acceleration thresholds are exceeded, RSC intervenes to regulate the vehicle's deceleration functions. The added feature of ESC is to automatically intervene to reduce the risk of the vehicle rotating while in a curve or taking evasive action, prevents drift out through selective braking, and controlling and reducing vehicle speed when lateral acceleration limits are about to be exceeded.

Intervention by the system occurs in three forms - engine, retarder and brake control. The ESC system uses several sensors to monitor the vehicle. These include a steering wheel angle sensor, lateral accelerometer, and yaw position sensor. ESC constantly monitors driving conditions and intervenes if critical lateral acceleration is detected or if the vehicle begins to spin due to low friction surfaces. The system provides control of engine and retarder torque as well as automatically controlling individual wheels to counteract both over steer and under steer.

To further improve vehicle drive characteristics, the unit shall be fitted with Automatic Traction Control (ATC). This system shall control drive wheel slip during acceleration from a resting point. An extra solenoid valve shall be added to the ABS system. The system shall control the engine and brakes to improve acceleration slip resistance. The system shall have a dash mounted light that shall come on when ATC is controlling drive wheel slip.

3 year/300,000 miles parts and labor warranties for ESC, RSC, and ATC shall be provided as standard by Meritor Automotive.

## **AIR SYSTEM OPTIONS**

### **Air Dryer**

The chassis air system shall be equipped with a Bendix-Westinghouse AD-9 air dryer to remove moisture from the air in order to help prevent the air lines from freezing in cold weather and prolong the life of the braking system components.

## **Air Inlet**

A 1/4" brass quick-release air inlet with a male connection shall be provided. The inlet shall allow a shoreline air hose to be connected to the vehicle, discharging air directly into the wet tank of the air brake system. It shall be located driver door jamb.

## **Heated Moisture Ejectors**

All air reservoirs shall be equipped with a Bendix DV-2 automatic reservoir drain valve which shall automatically eject moisture and contaminants from the reservoirs. The moisture ejectors shall be heated.

## **Air Lines**

Wire braided air hose with oil and scuff resistant cover shall be supplied for all undercarriage hoses. The hose shall have a working temperature range of -55 degrees Fahrenheit to 250 degrees Fahrenheit.

## **Air Horns**

Dual air horns shall be provided, connected to the chassis air system. The horns shall be mounted through the front bumper. The front bumper shall have two (2) holes punched to accommodate the air horns. A pressure protection valve shall be installed to prevent the air brake system from being depleted of air pressure.

# **ENGINES & TRANSMISSIONS**

## **Transmission Selector**

A push-button transmission shift module, Allison model 29538373, shall be located to the right side of the steering column within easy reach of the driver. The shift position indicator shall be indirectly lit for after dark operation. The shift module shall have a "Do Not Shift" light and a "Service" indicator light. The shift module shall have means to enter a diagnostic mode and display diagnostic data including oil life monitor, filter life monitor, transmission health monitor and fluid level. A transmission temperature gauge with warning light and buzzer shall be installed on the cab instrument panel.

## **Transmission Fluid**

The transmission fluid shall be TransSynd synthetic.

## **Vehicle Speed**

The maximum speed shall be electronic limited to 68 MPH as required by NFPA 1901.

Note: Maximum speed may be set at 65 MPH due to tire rating.

## **Engine/Transmission Package**

### **Engine**

The vehicle shall utilize a Cummins ISL electronic engine as described below:

- 450 gross bhp at 2200 rpm
- 1250 lb.-ft. peak torque at 1400 rpm
- Six (6)-cylinder, charge air cooled, 4-cycle diesel
- 543 cu. in. displacement -- 4.49 in bore x 5.69 in stroke (8.9 liters)
- 16.6:1 compression ratio
- Interact System Controlled Viable Geometry Turbocharged
- Engine shall be equipped with Full-Authority Electronics
- Electronic Timing Control fuel system
- Fuel cooler (when equipped with a fire pump)
- Fleetguard FS1022 fuel filter with integral water separator and water-in-fuel sensor approved by Cummins for use on the ISL engine
- Fleetguard LF9009 Venturi Combo combination full-flow/by-pass oil filter approved by Cummins for use on the ISL engine
- Engine lubrication system, including filter, shall have a minimum capacity of 25 quarts
- Delco-Remy 39 MT-HD 12-volt starter
- Cummins 18.7 cubic foot per minute (cfm) air compressor
- Corrosion inhibitor additive for coolant system
- After treatment system consisting of a oxidation catalyst and diesel particulate filter and selective catalyst reduction system
- Ember separator compliant with current NFPA 1901 standard
- The engine shall be compliant with 2016 EPA Emission standards
- Reference curve FR93434EV for ISCAAN

The engine air intake shall draw air through the front cab grill. The intake opening shall be located on the officer (right) side behind front cab face with a plenum that directs air to the air filter. The air cleaner shall be a 11" diameter dry type that is easily accessed for service. Air cleaner intake piping shall be made from aluminized steel tubing with flexible rubber hoses. Air cleaner intake piping clamps shall be heavy-duty, constant-torque, T-bolt clamps to ensure proper sealing under all temperatures in order to keep dust and other contaminants out of the engine intake air stream and protect the engine.

The engine exhaust piping shall be a minimum of 4" diameter welded aluminized steel tubing. The muffler shall be mounted horizontally under the right-hand frame rail in back of the cab in order to minimize heat transmission to the cab and its occupants. The exhaust shall be directed away from the vehicle on the right side ahead of the rear wheels in order to keep exhaust fumes as far away as possible from the cab and pump operator position.

A 5-year/100,000-miles parts and labor warranty shall be provided as standard by Cummins.

A copy of the Engine Installation Review stating the engine installation meets Cummins recommendations shall be provided as requested. The engine installation shall not require the operation of any type of "power-down" feature to meet engine installation tests.

## **Transmission**

The vehicle shall utilize an Allison EVS3000P, electronic, 5-speed automatic transmission.

A push button shift module shall be located right side of the steering column, within easy reach of the driver. The shift position indicator shall be indirectly lit for after-dark operation. The shift module shall have a "Do Not Shift" light and a "Service" indicator light that are clearly visible to the driver. The shift module shall have means to enter a diagnostic mode and display diagnostic data.

A transmission oil temperature gauge with warning light and buzzer shall be installed on the cab instrument panel to warn the driver of high oil temperatures that may damage the transmission.

The transmission shall have a gross input torque rating of 1250 lb.-ft. and a gross input power rating of 450 HP.

The gear ratios shall be as follows:

1 - 3.49

2 - 1.86

3 - 1.41

4 - 1.00

5 - .75

R - 5.03

The transmission shall have an oil capacity of 23 quarts and shall be equipped with a fluid level sensor (FLS) system, providing direct feedback of transmission oil level information to the driver.

A water-to-oil transmission oil cooler shall be provided to ensure proper cooling of the transmission when the vehicle is stationary (no air flow). Air-to-oil transmission oil coolers, which require constant air flow, are not acceptable.

The transmission shall be provided with two (2) engine-driven PTO openings located at the 4 o'clock and 8 o'clock positions for flexibility in installing pto-driven equipment.

The automatic transmission shall be equipped with a power lock-up device. The transmission lock-up shall prevent down shifting of the transmission when the engine speed is decreased during pump operations, thereby maintaining a constant gear ratio for safe operation of the pump. The transmission lock-up shall be automatically activated when the pump is engaged in gear. The transmission lock-up shall be automatically deactivated when the pump is disengaged for normal road operation.

A 5-year/unlimited miles parts and labor warranty shall be provided as standard by Allison Transmission.

### **Automatic Shift to Neutral**

The transmission shall be programmed to comply with NFPA 1901 and automatically shift to neutral upon application of the parking brake.

## **SECONDARY BRAKING**

### **Jacobs Engine Brake**

One (1) Jacobs engine brake shall be installed to assist in slowing and controlling the vehicle as required by NFPA 1901 for vehicles with gross vehicle weight ratings (GVWR) of 36,000 lbs. or greater. An on-off control switch and a high-medium-low selector switch shall be mounted in the cab accessible to the driver.

When activated, the Jacobs engine brake shall cut off the flow of fuel to the cylinders and alter the timing of the exhaust valves. This shall transform the engine into a high-pressure air compressor, driven by the wheels, and the horsepower absorbed by the engine in this mode shall slow the vehicle. The selector switch allows the driver to select the amount of retarding power.

When the on-off switch is in the “on” position, the engine brake shall be automatically applied whenever the accelerator is in the idle position and the automatic transmission is in the lock-up mode. If the accelerator is depressed or if the on-off switch is placed in the “off” position, the engine brake shall immediately release and allow the engine to return to its normal function.

### **Transmission Programming**

The transmission shall include the Allison 2nd gear Pre-Select feature. This option will direct the transmission to down shift to second gear when the throttle is released and the Jacobs engine brake (or Telma retarder wired to activate with release of throttle) is engaged. This feature is designed to increase brake life and aid vehicle braking.

## **COOLING PACKAGE**

### **Engine Cooling Package**

**Radiator**

The cooling system shall include an aluminum tube-and-fin radiator with a minimum of 1,408 total square inches of frontal area to ensure adequate cooling under all operating conditions. There shall be a drain valve in the bottom tank to allow the radiator to be serviced. A sight glass shall be included for quick fluid level assessment. The radiator shall be installed at the prescribed angle in order to achieve the maximum operational effectiveness. This shall be accomplished according to established work instructions and properly calibrated angle measurement equipment.

**Silicone Hoses**

All radiator and heater hoses shall be silicone. Pressure compensating band clamps shall be used to eliminate hose pinching on all hoses 3/4" diameter and larger. All radiator hoses shall be routed, loomed, and secured so as to provide maximum protection from chafing, crushing, or contact with other moving parts.

**Coolant**

The cooling system shall be filled with a 50/50 mixture of water and antifreeze/coolant conditioner to provide freezing protection to minus 40 (- 40) degrees F for operation in severe winter temperatures.

**Coolant Recovery**

There shall be a coolant overflow recovery system provided.

**Charge Air Cooler System**

The system shall include a charge air cooler to ensure adequate cooling of the turbocharged air for proper engine operation and maximum performance.

**Charge Air Cooler Hoses**

Charge air cooler hoses shall be made from high-temperature, wire-reinforced silicone to withstand the extremely high temperatures and pressures of the turbocharged air. The hoses shall incorporate a flexible hump section to allow motion and misalignment of the engine relative to the charge air cooler. Charge air cooler hose clamps shall be heavy-duty, constant-torque, T-bolt clamps to ensure proper sealing under all temperatures in order to keep dust and other contaminants out of the engine intake air stream and protect the engine.

**Fan/Shroud**

The fan shall be 30" in diameter with eleven (11) blades for maximum airflow and dynamic balance. It shall be made of nylon for strength and corrosion resistance. The fan shall be installed with grade 8 hardware which has been treated with thread locker for additional security. A fan

shroud attached to the radiator shall be provided to prevent recirculation of engine compartment air around the fan in order to maximize the cooling airflow through the radiator. The fan shroud shall be constructed of fiber-reinforced high temperature plastic. The shroud shall be specifically formed with curved surfaces which improves air flow and cooling.

### **Transmission Cooler**

The cooling system shall include a liquid-to-liquid transmission cooler capable of cooling the heat generated from the transmission. When a transmission retarder is selected, the cooler shall have an increased capacity to handle the additional heat load.

## **FUEL SYSTEMS**

### **Fuel System**

One (1) 65 gallon fuel tank shall be provided. The tank shall be of an all-welded, aluminized-steel construction with anti-surge baffles and shall conform to all applicable Administration (FHWA) 393.65 and 393.67 standards. The tank shall be mounted below the frame rails at the rear of the chassis for maximum protection. The tank shall be secured with two (2) wrap-around T-bolt type stainless steel straps. Each strap shall be fitted with protective rubber insulation and shall be secured with Grade 8 hardware. This design allows for tank removal from below the chassis.

The fuel tank shall be equipped with a 2" diameter filler neck. The filler neck shall extend to the rear of the vehicle behind the rear tires and away from the heat of the exhaust system as required by NFPA 1901 Standard for Automotive Fire Apparatus. The open end of the filler neck shall be equipped with a twist-off filler cap with a retaining chain.

The tank shall be plumbed with top-draw and top-return fuel lines in order to protect the lines from road debris. Bottom-draw and/or bottom-return fuel lines are not acceptable. A vent shall be provided at the top of the tank. The vent shall be connected to the filler neck to prevent splash-back during fueling operations. A .50" NPT drain plug shall be provided at the bottom of the tank.

The tank shall have a minimum useable capacity of 65 gallons of fuel with a sufficient additional volume to allow for thermal expansion of the fuel without overflowing the vent.

A fuel pump shall be provided and sized by the engine manufacturer as part of the engine.

### **Fuel Line Hose**

Wire braided fuel hose meeting SAE J-1402 shall be provided for the chassis fuel system. The hose shall have a working temperature rating of -55 degree F to 300 degree F.

The ends of the hose shall have connections that shall allow the hose to be reattached if removed.

## **Fuel/Water Separator**

A Racor fuel/water separator shall be installed in place of the Cummins fuel/water separator with drain. The unit shall utilize a three-step separate process: centrifuge for primary contaminant separation, conical baffles for water coalescing, and a replaceable filter for final particulate removal. The separator shall have a bottom drain for removing contaminants, shall be heated and shall have a rated maximum flow of 3.16 GPM. A sensor with indicator light and audible alarm shall be provided for the Racor fuel/water separator. The indicator light shall be mounted in the cab visible to the driver with the unit located inside the frame rails. The unit will alert the driver of high water content in the separator bowl.

## **Fuel Shut-Off**

A shut-off valve shall be supplied to prevent drain back of fuel into the main supply line during filter changes. The valve(s) shall be located: one (1) inlet side of fuel/water separator.

## **ALTERNATOR**

### **270 Amp Alternator**

A Leece Neville model 4870J-J180 series 270 amp SAE (J56) rated, 240 amp NFPA 1901 rated alternator with internal rectifier, regulator and AC taps shall be installed in accordance with the engine manufacturer's recommendations.

## **BATTERIES**

### **Battery System**

The manufacturer shall supply five (5) heavy duty Group 31 12 volt maintenance-free batteries. Each battery shall be installed and positioned so as to allow easy replacement of any single battery. Each battery shall be equipped with carrying handles to facilitate ease of removal and replacement. There shall be two (2) steel frame-mounted battery boxes, one (1) on the left frame rail and one (1) on the right frame rail. Each battery box shall be secured to the frame rail with Grade 8 hardware. The boxes shall hold two (2) batteries on the left side and three (3) on the right side. The batteries shall have a minimum combined rating of 5,000 (5 x 1000) cold cranking amps (CCA) @ 0 degrees Fahrenheit and 1025 (5 x 205) minutes of reserve capacity for extended operation. The batteries shall have 3/8-16 threaded stud terminals to ensure tight cable connections. The battery stud terminals shall each be treated with concentrated industrial soft-seal after cable installation to promote corrosion prevention. The positive and negative battery stud terminals and the respective cables shall be clearly marked to ensure quick and mistake-proof identification.

Batteries shall be placed on non-corrosive rubber matting and secured with hold-down brackets to prevent movement, vibration, and road shock. The hold-down bracket J-hooks shall be cut to fit and shall have all sharp edges removed. The batteries shall be placed in plastic trays to

provide preliminary containment should there be leakage of hazardous battery fluids. There shall be two (2) plastic trays, one (1) for each set of batteries. Each battery tray shall be equipped with a rubber hose to facilitate drainage. The rubber hose shall be routed to drain beneath the battery box. The batteries shall be positioned in well-ventilated areas.

One (1) positive and one (1) negative jumper stud shall be provided.

Batteries shall have a warranty of twelve (12) months that shall commence upon the date of delivery of the apparatus.

## **CHASSIS OPTIONS**

### **Engine Fan Clutch**

The engine shall be equipped with a thermostatically controlled engine cooling fan. The fan shall be belt driven and utilize a clutch to engage when the engine reaches a specified temperature and / or the water pump is engaged (if equipped).

When disengaged, the fan clutch shall allow for improved performance from optional floor heaters, reduced cab interior noise, increased acceleration and improved fuel economy.

The fan shall be equipped with a fail-safe engagement so that if the clutch fails the fan shall engage to prevent engine overheating.

### **Drivelines**

Drivelines shall have a heavy duty metal tube and shall be equipped with Spicer 1710HD universal joints to allow full-transmitted torque to the axle(s). Drive shafts shall be axially straight, concentric with axis and dynamically balanced.

### **Front Tow Eyes**

Two (2) 3/4" thick heavy duty steel tow eyes shall be securely attached to the chassis frame rails at the front of the apparatus. They shall be mounted down below the bumper / cab.

### **Rear Tow Eyes**

Two (2) heavy duty tow eyes made of 3/4" (0.75") thick steel having 2-1/2" diameter holes shall be mounted below the body at the rear of the vehicle to allow towing (not lifting) of the apparatus without damage. The tow eyes will be welded to the lower end of a 5" steel channel that is bolted at the end of the chassis frame rails. The tow eyes shall be painted chassis black.

### **DEF Tank**

A diesel exhaust fluid (DEF) tank with a five (5) gallon capacity shall be provided.

The DEF tank shall include a heater fed by hot water directly from the engine block to prevent the DEF from becoming too cool to operate correctly per EPA requirements. The tank shall include a temperature sensor to control the heater control valve that controls the feed of hot water from the engine to the DEF tank heater.

A sender shall be provided in the DEF tank connected to a level gauge on the cab dash.

The tank shall be located left side below rear of cab.

## **Power Steering Cooler**

A heat exchanger (cooler) shall be installed to maintain desired power steering fluid temperature. The cooler shall be a model DH-073-1-1 with air / oil design rated at 6300 BTU/HR @10 GPM. The cooler shall be mounted in front of the radiator and plumbed with #10 lines.

## **CAB MODEL**

### **Cab Typhoon X Medium w/Barrier Style Doors**

The vehicle shall be distinguished by an all-welded aluminum and fully enclosed tilt cab. The cab shall be designed exclusively for fire/rescue service and shall be pre-engineered to ensure long life. It shall incorporate an integral welded substructure of high-strength aluminum alloy extrusions that creates an occupant compartment that is essentially a protective perimeter. The end result is a distinctive structure that is aesthetically appealing, functionally durable, and characterized by increased personnel safety.

The cab shall be constructed from 3/16" (0.188") 3003 H14 aluminum alloy plate roof, floor, and outer skins welded to a high-strength 6063-T6 aluminum alloy extruded subframe. Wall supports and roof bows are 6061 T6 aluminum alloy. This combination of a high-strength, welded aluminum inner structure surrounded on all sides by load-bearing, welded aluminum outer skins provides a cab that is strong, lightweight, corrosion-resistant, and durable.

The inner structure shall be designed to create an interlocking internal "roll-cage" effect by welding two (2) 3" x 3" x 0.188" wall-thickness 6063-T5 aluminum upright extrusions between the 3" x 3" x 0.375" wall-thickness 6061-T6 roof crossbeam and the 2.25" x 3" x 0.375" wall-thickness 6063-T6 subframe structure in the front. An additional two (2) aluminum upright extrusions within the back-of-cab structure shall be welded between the rear roof perimeter extrusion and the subframe structure in the rear to complete the interlocking framework. The four (4) upright extrusions -- two (2) in the front and two (2) in the rear -- shall be designed to effectively transmit roof loads downward into the subframe structure to help protect the occupant compartment from crushing in a serious accident. All joints shall be electrically seam welded internally using aluminum alloy welding wire.

The subframe structure shall be constructed from high-strength 6061-T6 aluminum extrusions welded together to provide a structural base for the cab. It shall include a side-to-side C-channel

extrusion across the front, with 3/4" x 2-3/4" (.75" x 2.75") full-width crossmember tubes spaced at critical points between the front and rear of the cab.

The cab floor shall be constructed from 3/16" (0.188") 3003 H14 smooth aluminum plate welded to the subframe structure to give the cab additional strength and to help protect the occupants from penetration by road debris and under-ride collision impacts.

The cab roof shall be constructed from 3/16" (0.188") 3003 H14 aluminum treadplate supported by a grid of fore-aft and side-to-side aluminum extrusions to help protect the occupants from penetration by falling debris and downward-projecting objects. Molded fiberglass or other molded fiber-reinforced plastic roof materials are not acceptable.

The cab roof perimeter shall be constructed from 4" x 6-5/8" (4" x 6.625") 6063-T5 aluminum extrusions with integral drip rails. Cast aluminum corner joints shall be welded to the aluminum roof perimeter extrusions to ensure structural integrity. The roof perimeter shall be continuously welded to the cab roof plate to ensure a leak-free roof structure.

The cab rear skin shall be constructed from 3/16" (0.188") 3003 H14 aluminum plate. Structural extrusions shall be used to reinforce the rear wall.

The left-hand and right-hand cab side skins shall be constructed from 3/16" (0.188") 3003 H14 smooth aluminum plate. The skins shall be welded to structural aluminum extrusions at the top, bottom, and sides for additional reinforcement.

The cab front skins shall be constructed from 3/16" (0.188") 3003 H14 smooth aluminum plate. The upper portion shall form the windshield mask, and the lower portion shall form the cab front. Each front corner shall have a full 9" outer radius for strength and appearance. The left-hand and right-hand sides of the windshield mask shall be welded to the left-hand and right-hand front door frames, and the upper edge of the windshield mask shall be welded to the cab roof perimeter extrusion for reinforcement. The cab front shall be welded to the subframe C-channel extrusion below the line of the headlights to provide protection against frontal impact.

## **Cab Exterior**

The exterior of the cab shall be 94" wide x 130" long to allow sufficient room in the occupant compartment for up to eight (8) fire fighters. The cab roof shall be approximately 101" above the ground with the flat roof option. The back-of-cab to front axle length shall be a minimum of 58".

Front axle fenderette trim shall be brushed aluminum for appearance and corrosion resistance. Bolt-in front wheel well liners shall be constructed of 3/16" (0.188") composite material to provide a maintenance-free, damage-resistant surface that helps protect the underside of the cab structure and components from stones and road debris.

The cab windshield shall be of a two-piece replaceable design for lowered cost of repair. The windshield shall be made from 1/4" (0.25") thick curved, laminated safety glass with a 75% light transmittance automotive tint. A combined minimum viewing area of 2,700-sq. in. shall be

provided. Forward visibility to the ground for the average (50<sup>th</sup> percentile) male sitting in the driver's seat shall be no more than 11 feet 7 inches from the front of the cab to ensure good visibility in congested areas.

## **Cab Mounts and Cab Tilt System**

The cab shall be independently mounted from the body and chassis to isolate the cab structure from stresses caused by chassis twisting and body movements. Mounting points shall consist of two (2) forward-pivoting points, one (1) on each side; two (2) intermediate rubber load-bearing cushions located midway along the length of the cab, one on each side; and two (2) combination rubber shock mounts and cab latches located at the rear of the cab, one (1) on each side.

An electric-over-hydraulic cab tilt system shall be provided to provide easy access to the engine. It shall consist of two (2) large-diameter, telescoping, hydraulic lift cylinders, one (1) on each side of the cab, with a frame-mounted electric-over-hydraulic pump for cylinder actuation.

Safety flow fuses (velocity fuses) shall be provided in the hydraulic lift cylinders to prevent the raised cab from suddenly dropping in case of a burst hydraulic hose or other hydraulic failure. The safety flow fuses shall operate when the cab is in any position, not just the fully raised position.

The hydraulic pump shall have a manual override system as a backup in the event of an electrical failure. Lift controls shall be located in a compartment to the rear of the cab on the right side of the apparatus. A parking brake interlock shall be provided as a safety feature to prevent the cab from being tilted unless the parking break is set.

The entire cab shall be tilted through a 42-45 degree arc to allow for easy maintenance of the engine, transmission and engine components. A positive-engagement safety latch shall be provided to lock the cab in the full tilt position to provide additional safety for personnel working under the raised cab.

In the lowered position, the cab shall be locked down by two (2) automatic, spring-loaded cab latches at the rear of the cab. A "cab ajar" indicator light shall be provided on the instrument panel to warn the driver when the cab is not completely locked into the lowered position.

## **Cab Interior**

The interior of the cab shall be of the open design with an ergonomically-designed driver area that provides ready access to all controls as well as a clear view of critical instrumentation.

The engine cover between the driver and the officer shall be a low-rise contoured design to provide sufficient seating and elbow room for the driver and the officer. The engine cover shall blend in smoothly with the interior dash and flooring of the cab. An all-aluminum subframe shall be provided for the engine cover for strength. The overall height of the engine enclosure shall not exceed 23" from the floor at each side and 27" in the center section. The engine cover shall not exceed 41" in width at its widest point.

The rear portion of the engine cover shall be provided with a lift-up section to provide easy access for checking transmission fluid, power steering fluid, and engine oil without raising the cab. The engine cover insulation shall consist of 3/4" dual density fiberglass composite panels with foil backing manufactured to specifically fit the engine cover without modification to eliminate "sagging" as found with foam insulation. The insulation shall meet or exceed DOT standard MVSS 302-1 and V-0 (UI subject 94 Test).

All cab floors shall be covered with a black rubber floor mat that provides an aggressive slip-resistant surface in accordance with current NFPA 1901.

A minimum of 57.25" of floor-to-ceiling height shall be provided in the front seating area of the cab and a minimum of 55.25" floor-to-ceiling height shall be provided in the rear seating area. A minimum of 36" of seated headroom at the "H" point shall be provided over each fenderwell.

The floor area in front of the front seat pedestals shall be no less than 20.5" side to side by 25.0" front to rear for the driver and no less than 20.5" side to side by 26.0" front to rear for the officer to provide adequate legroom.

Battery jumper studs shall be provided to allow jump-starting of the apparatus without having to tilt the cab.

All exposed interior metal surfaces shall be pretreated using a corrosion prevention system.

The interior of the cab shall be insulated to ensure the sound (dbA) level for the cab interior is within the limits stated in the current edition of NFPA 1901. The insulation shall consist of 2 oz. wadding and 1/4" (0.25") foam padding. The padding board shall be backed with 1/4" (0.25") thick reflective insulation. The backing shall be spun-woven polyester. Interior cab padding shall consist of a rear cab headliner, a rear wall panel, and side panels between the front and rear cab doors.

The overhead console and heater cover shall be covered with thermoformed, non-metallic, non-fiber trim pieces to provide excellent scuff and abrasion resistance, as well as chemical stain resistance. The thermoformed material shall comply with Federal Motor Vehicle Safety Standard (FMVSS) 302 for flammability of interior materials.

The vehicle shall use a seven-position tilt and telescopic steering column to accommodate various size operators. An 18" padded steering wheel with a center horn button shall be provided.

A full-width overhead console shall be mounted to the cab ceiling for placement of siren and radio heads, and for warning light switches. The console shall be made from a thermoformed, non-metallic material and shall have easily removable mounting plates.

Storage areas, with hinged access doors, shall be provided below the driver and officer seats. The driver side compartment shall be approximately 19.25" x 17.75" x 5.75" high and the officer side

compartment shall be approximately 18.25" x 22.5" x 11" high (19.25" x 17.75" x 5.75" w/ air ride).

The front cab steps shall be a minimum of 8" deep x 24" wide. The first step shall be no more than 24.0" above the ground with standard tires in the unloaded condition per NFPA 1901 standards. The rear cab steps shall be a minimum 12" deep x 21" wide. The first step shall be no more than 24.0" above the ground with standard tires in the unloaded condition per NFPA 1901 standards. The rear steps shall incorporate intermediate steps for easy access to the cab. The step surfaces shall be aluminum diamond plate with a multi-directional, aggressive gripping surface incorporated into the aluminum diamond plate in accordance with current NFPA 1901.

A black rubber grip handle shall be provided on the interior of each front door below the door window to ensure proper hand holds while entering and exiting the cab. An additional black rubber grip handle shall be provided on the left and right side windshield post for additional handholds.

## **Cab Doors**

There shall be reflective signs on each cab door in compliance with all NFPA requirements.

Four (4) side-opening cab doors shall be provided. Doors shall be constructed of a 3/16" (0.188") aluminum plate outer material with an aluminum extruded inner framework to provide a structure that is as strong as the side skins.

Front cab door openings shall be approximately 36" wide x 63" high, and the rear cab door openings shall be approximately 33.75" wide x 63" high. The front doors shall open approximately 75 degrees, and the rear doors shall open approximately 80 degrees.

The doors shall be securely fastened to the doorframes with full-length, stainless steel piano hinges, with 3/8" (0.375") diameter pins for proper door alignment, long life, and corrosion resistance. Mounting hardware shall be treated with corrosion-resistant material prior to installation. For effective sealing, an extruded rubber gasket shall be provided around the entire perimeter of all doors.

Stainless steel paddle-style door latches shall be provided on the interiors of the doors. The latches shall be designed and installed to protect against accidental or inadvertent opening as required by NFPA 1901.

The front door windows shall provide a minimum viewing area of 530 sq. in. each. The rear door windows shall provide a minimum viewing area of 500 sq. in. each. All windows shall have 75% light transmittance automotive safety tint. Full roll-down windows shall be provided for the front cab doors with worm gear drive cable operation for positive operation and long life. Scissors or gear-and-sector drives are not acceptable.

## **Cab Instruments and Controls**

Two (2) pantograph-style windshield wipers with two (2) separate electric motors shall be provided for positive operation. Air-operated windshield wipers are not acceptable because of their tendency to accumulate moisture, which can lead to corrosion or to freezing in cold weather. The wipers shall be a wet-arm type with a one (1) gallon washer fluid reservoir, an intermittent-wipe function, and an integral wash circuit. Wiper arm length shall be approximately 28", and the blade length approximately 20". Each arm shall have a 70 degree sweep for full coverage of the windshield.

An overhead mounted heater and defroster with a minimum capacity of 60,000 Btu/hr and all necessary controls shall be mounted in the cab. The airflow system shall consist of two (2) levels, defrost and cab, and shall have fresh air and defogging capabilities.

Cab controls shall be located on the cab instrument panel in the dashboard on the driver's side where they are clearly visible and easily reachable. Emergency warning light switches shall be installed in removable panels for ease of service. The following gauges and/or controls shall be provided:

- Master battery switch/ignition switch (rocker with integral indicator)
- Starter switch/engine stop switch (rocker)
- Heater and defroster controls with illumination
- Marker light/headlight control switch with dimmer switch
- Self-canceling turn signal control with indicators
- Windshield wiper switch with intermittent control and washer control
- Master warning light switch
- Transmission oil temperature gauge
- Air filter restriction indicator
- Pump shift control with green "pump in gear" and "o.k. to pump" indicator lights • Parking brake controls with red indicator light on dash
- Automatic transmission shift console
- Electric horn button at center of steering wheel
- Cab ajar warning light on the message center enunciator

Controls and switches shall be identified as to their function by backlit wording adjacent to each switch, or indirect panel lighting adjacent to the controls.

### **Fast Idle System**

A fast idle system shall be provided and controlled by the cab-mounted switch. The system shall increase engine idle speed to a preset RPM for increased alternator output.

### **Electrical System**

The cab and chassis system shall have a centrally located electrical distribution area. All electrical components shall be located such that standard operations shall not interfere with or disrupt vehicle operation. An automatic thermal-reset master circuit breaker compatible with the alternator size shall be provided. Automatic-reset circuit breakers shall be used for directional

lights, cab heater, battery power, ignition, and other circuits. An access cover shall be provided for maintenance access to the electrical distribution area.

A 6 place, constantly hot, and 6 place ignition switched fuse panel and ground for customer-installed radios and chargers shall be provided at the electrical distribution area. Radio suppression shall be sufficient to allow radio equipment operation without interference.

All wiring shall be mounted in the chassis frame and protected from impact, abrasion, water, ice, and heat sources. The wiring shall be color-coded and functionally-labeled every 3" on the outer surface of the insulation for ease of identification and maintenance. The wiring harness shall conform to SAE 1127 with GXL temperature properties. Any wiring connections exposed to the outside environment shall be weather-resistant. All harnesses shall be covered in a loom that is rated at 280 degrees F to protect the wiring against heat and abrasion.

A Vehicle Data Computer (VDC) shall be supplied within the electrical system to process and distribute engine and transmission Electronic Control Module (ECM) information to chassis system gauges, the message center, and related pump panel gauges. Communication between the VDC and chassis system gauges shall be through a 4 wire multiplexed communication system to ensure accurate engine and transmission data is provided at the cab dash and pump. The VDC shall be protected against corrosion, excessive heat, vibration, and physical damage.

Two (2) dual rectangular sealed beam halogen headlights shall be installed on the front of the cab, one (1) on each side, mounted in a polished chrome-plated bezel. The low beam headlights shall activate with the release of the parking brake to provide daytime running lights (DRL) for additional vehicle conspicuity and safety. The headlight switch shall automatically override the DRL for normal low beam/high beam operation.

## **Cab Crashworthiness Requirement**

The apparatus cab shall meet and/or exceed relevant NFPA 1901 load and impact tests required for compliance certification with the following:

### **Side Impact Dynamic Pre-Load per SAE J2422 (Section 5).**

Testing shall meet and/or exceed defined test using 13,000 ft-lbs of force as a requirement. The cab shall be subject to a side impact representing the force seen in a roll-over. The cab shall exhibit minimal to no intrusion into the cab's occupant survival space, doors shall remain closed and cab shall remain attached to frame.

Cab testing shall be completed using 13,776 ft-lbs of force **exceeding** testing requirements.

### **Quasi-static Roof Strength (proof loads) per SAE J2422 (Section 6) / ECE R29, Annex 3, paragraph 5.**

Testing shall meet and/or exceed defined test using 22,046 lbs of mass as a requirement. Testing shall be completed using platen(s) distributed uniformly over all bearing members of the cab roof structure.

Cab testing shall be completed using 23,561 lbs of mass **exceeding** testing requirements. The cab shall exhibit minimal to no intrusion into the cab's occupant survival space and doors shall remain closed.

Additional cab testing shall be conducted using 117,336 lbs of mass **exceeding** testing requirements by **over five (5) times**. The cab shall exhibit minimal to no intrusion into the cab's occupant survival space and the doors shall remain closed.

#### **Frontal Impact per SAE J2420.**

Testing shall meet and/or exceed defined test using 32,549 ft-lbs of force as a requirement. The cab shall be subject to a frontal impact as defined by the standard. The cab shall exhibit minimal to no intrusion into the cab's occupant survival space, doors shall remain closed and cab shall remain attached to frame.

Cab testing shall be completed using 34,844 ft-lbs of force **exceeding** testing requirements.

Additional cab testing shall be conducted using 65,891 ft-lbs of force **exceeding** testing requirements by **over two (2) times**.

The cab shall meet all requirements to the above cab crash worthiness; **NO EXCEPTIONS**.

A copy of a certificate or letter verifying compliance to the above performance by an independent, licensed, professional engineer shall be provided upon request.

For any or all of the above tests, the cab manufacturer shall provide either photographs or video footage of the procedure upon request.

### **ISO Compliance**

The manufacturer shall ensure that the construction of the apparatus cab shall be in conformance with the established ISO-compliant quality system. All written quality procedures and other procedures referenced within the pages of the manufacturer's Quality Manual, as well as all Work Instructions, Workmanship Standards, and Calibration Administration that directly or indirectly impacts this process shall be strictly adhered to. By virtue of its ISO compliance the manufacturer shall provide an apparatus cab that is built to exacting standards, meets the customer's expectations, and satisfies the customer's requirements.

## **CAB ROOF TYPE**

### **Cab Roof**

The cab shall have a flat roof (non-vista).

## **CAB BADGE PACKAGE**

## **Logo Package**

The apparatus shall have manufacturer logos provided on the cab and body as applicable.

## **GRILLE**

### **Cab Grille**

The front cooling air intake grille shall be constructed of stainless steel mesh and supported by a 0.80" polished stainless steel frame providing no less than 81% open area for excellent cooling performance.

## **CAB DOOR OPTIONS**

### **Rear Cab Door Position**

The cab rear doors shall be moved to the rear of the wheel opening. This door placement facilitates easier entry and egress by reducing the rear facing seat protrusion into the door opening.

Rear door position to the 58" or (medium cab).

### **Cab Front Door Windows**

Driver and officer door windows shall have the support pillar located toward the front of the window. There shall be a vent that can be opened and closed within the window itself, located towards the front.

### **Cab Door Locks**

Each cab door shall have a manual operated door lock actuated from the interior of each respective door. Exterior of each cab door shall be provided with a barrel style keyed lock below the cab door handle.

### **Cab Door Locks**

The cab shall have CH751 keyed door locks provided on exterior doors to secure the apparatus.

### **Cab Door Front Windows**

Driver and Officer door windows. Includes electric roll-down actuation. Each door to have individual control at door position and the driver door is to have master control for all power window locations.

## **Exterior Cab Door Latches**

All exterior cab door latches shall be paddle style.

## **Cab Door Panels**

The inner door panels shall be made from 1/8" (.125") aluminum plate painted Zolatone gray for increased durability. The cab door panels shall incorporate an easily removable panel for access to the latching mechanism for maintenance or service.

## **Cab Door Area Lighting**

There shall be four (4) clear LED lights provided to illuminate the cab step well area. Each light shall be located in the cab step well area. Each light shall be activated by the cab door ajar circuit.

## **Cab Door Reflective Material**

Reflective Red/Lemon Yellow material striping shall be provided approximately 12" high on the lower cab door panels. The stripes shall run from the top outer corner to the bottom inside corner of the lower door area, forming a "A" shape when viewed from the rear. The reflective material shall meet NFPA 1901 requirements.

## **Cab Door Rear Windows**

Rear crew cab door windows with rear fixed panel. Includes electric roll-down actuation. Each door to have individual controls. For use with paddle style door latching. The rear of the window opening shall have a fixed glass panel approximately 5" wide to allow the forward section of glass to roll down completely ahead of the door latching hardware.

## **Cab Door Map Pockets**

A bolt on map pocket shall be mounted on the front cab doors, centered on the lower area of the door panel. The map pocket shall be constructed of 1/8" (.125") aluminum plate painted Zolatone gray.

The dimensions of the map pocket shall be approximately 10" high x 14" wide x 3" deep.

# **CAB STEP OPTIONS**

## **Cab Step**

An auxiliary step below the cab door shall be provided. The step shall be constructed of .188" aluminum tread brite. The step surface shall be provided with an aggressive skid-resistant surface and have an open back. The step shall be in accordance with current NFPA requirements and

shall include a multi-directional aggressive gripping surface incorporated into the diamond plate. The surface shall extend vertically from the diamond plate sheet a minimum of 1/8" (0.125"). Gripping surfaces shall be circular in design, a minimum of 1" diameter and on centers not to exceed 4".

The step shall be located driver's front door, officer's front door, driver's rear door, officer's rear door.

Steps under front cab doors shall not interfere with approach angle.

### **Cab Steps**

The lower cab steps shall extend 3.5" past the side of the cab to provide increased surface area.

## **MIRRORS**

### **Cab Mirrors**

There shall be two (2) Lang Mekra 300 Aero Series Technology Mirrors provided, one (1) driver's and one (1) officer's side. The mirrors shall be chrome-plated on the main head, be remote controlled with a four way power system and be heated. There shall be LED marker lights with bezel on the main head, and LED arrow lights in the mirror glass. The main flat glass shall provide 120 square inches of viewable surface space.

There shall be separate heads for the driver's and officer's side housing convex glass and provide 56 square inches of viewing surface.

The mirrors shall be mounted on the cab doors.

## **MISC EXTERIOR CAB OPTIONS**

### **Cab Canopy Window**

There shall be a fixed window provided between the front and rear doors on the driver's side of the cab.

Window dimensions shall be as follows:

- 44" C/A cab (short cab): 16"W x 24.5"H
- 58" - 80" C/A cab (medium - extended): 26.69"W x 24.5"H

### **Cab Canopy Window**

There shall be a fixed window provided between the front and rear doors on the officer's side of the cab.

Window dimensions shall be as follows:

- 44" C/A cab (short cab): 16"W x 24.5"H
- 58" - 80" C/A cab (medium - extended): 26.69"W x 24.5"H

## **Front Mud Flaps**

Black linear low density polyethylene (proprietary blend) mud flaps shall be installed on the rear of the cab front wheel wells. The design of the mud flaps shall have corrugated ridges to distribute water evenly.

## **Handrails**

Cab door assist handrails shall consist of two (2) 1.25" diameter x 18" long 6063-T5 anodized aluminum tubes mounted directly behind the driver and officer door openings one each side of the cab. The handrails shall be machine extruded with integral ribbed surfaces to assure a good grip for personnel safety. Handrails shall be installed between chrome end stanchions and shall be positioned at least 2" from the mounting surface to allow a positive grip with a gloved hand.

## **Handrails**

Cab door assist handrails shall consist of two (2) 1.25" diameter x 18" long 6063-T5 anodized aluminum tubes mounted directly behind the driver and officer rear door openings each side of the cab. The handrails shall be machine extruded with integral ribbed surfaces to assure a good grip for personnel safety. Handrails shall be installed between chrome end stanchions and shall be positioned at least 2" from the mounting surface to allow a positive grip with a gloved hand.

## **Rear Cab Wall Construction**

The rear cab wall shall be constructed with the use of 3/16" aluminum diamond plate interlocking in aluminum extrusions.

## **Receptacle Mounting Plate**

A mounting plate shall be provided for the battery charger receptacle, battery charger indicator and if applicable the air inlet, etc. The plate shall be constructed of 14 gauge brushed finish stainless steel and be removable for service access to the receptacle(s) and indicator.

## **HVAC**

### **Air Conditioning**

An overhead air-conditioner / heater system with a single radiator mounted condenser shall be supplied.

The unit shall be mounted to the cab interior headliner in a mid cab position, away from all seating positions. The unit shall provide ten (10) comfort discharge louvers, four (4) to the back area of the cab and six (6) to the front. These louvers will be used for AC and heat air delivery. Two (2) additional large front louvers shall be damper controlled to provide defogging and defrosting capabilities to the front windshield as necessary.

The unit shall consist of a high output evaporator coil and heater core with one (1) high output dual blower for front air delivery, and two (2) high performance single wheel blowers for rear air delivery.

The control panel shall actuate the air-distribution system with air cylinders, which are to be separated from the brake system by an 85-90 psi pressure protection valve. A three-speed blower switch shall control air speed.

The condenser shall be radiator mounted and have a minimum capacity of 65,000 BTU's and shall include a receiver drier.

Performance Data: (Unit only, no ducting or louvers)

AC BTU: 55,000

Heat BTU: 65,000

CFM: 1300 @ 13.8V (All blowers)

The compressor shall be a ten-cylinder swash plate type Seltec model TM-31HD with a capacity of 19.1 cu. in. per revolution.

The system shall be capable of cooling the interior of the cab from 100 degrees ambient to 75 degrees or less with 50% relative humidity in 30 minutes or less.

## **HVAC Control Location**

Heating and air conditioning controls shall be located in the driver side lower dash area.

## **SEATS**

### **Cab Seats**

All cab seats shall be Bostrom brand.

### **Seat, Driver**

One (1) H. O. Bostrom 400 Series Sierra Air- 100RX4 suspension seats with high back styling shall be supplied for the driver position.

Features shall include:

- Air-100 suspension assembly with weight, height and ride adjustment.
- Built in lumbar support.
- 4" vertical suspension motion.
- 5" fore and aft adjustment.

All seat positions shall have a bright red retractable 3-point lap and shoulder harness, providing additional safety and security for personnel. Extensions shall be provided with the seat belts so the male end can be easily grasped and the female end easily located while sitting in a normal position.

### **Seat, Officer**

One (1) H. O. Bostrom 400 Series fixed seat with high back SCBA storage for the officer's position shall be supplied.

Features shall include:

- Removable "Store-All" side cushions.
- Auto-pivot and return headrest to open for improved exit with SCBA.
- 12.5" wide SCBA cavity to store leading SCBA Brands.
- Built in lumbar support.
- Replaceable seat, side and headrest cushions.

All seat positions shall have a bright red retractable 3-point lap and shoulder harness, providing additional safety and security for personnel. Extensions shall be provided with the seat belts so the male end can be easily grasped and the female end easily located while sitting in a normal position.

### **Seat, Rear Facing**

One (1) Bostrom 400 Series tanker 450 SCBA high back SCBA storage seat shall be provided in the rear facing position over the driver side wheel well.

Features shall include:

- Removable "Store-All" side cushions.
- Auto-pivot and return headrest to open for improved exit with SCBA.
- 12.5" wide SCBA cavity to store leading SCBA Brands.
- Built in lumbar support.
- Replaceable seat, side and headrest cushions.

All seat positions shall have a bright red retractable 3-point lap and shoulder harness, providing additional safety and security for personnel. Extensions shall be provided with the seat belts so

the male end can be easily grasped and the female end easily located while sitting in a normal position.

### **Seat, Rear Facing**

One (1) Bostrom 400 Series tanker 450 SCBA high back SCBA storage seats shall be provided in the rear facing position over the officer side wheel well.

Features shall include:

- Removable "Store-All" side cushions.
- Auto-pivot and return headrest to open for improved exit with SCBA.
- 12.5" wide SCBA cavity to store leading SCBA Brands.
- Built in lumbar support.
- Replaceable seat, side and headrest cushions.

All seat positions shall have a bright red retractable 3-point lap and shoulder harness, providing additional safety and security for personnel. Extensions shall be provided with the seat belts so the male end can be easily grasped and the female end easily located while sitting in a normal position.

### **Seat Cover Material**

All seats shall have Durawear seat cover material.

### **Seat Fabric Color**

All seats shall be gray in color.

### **Seating Capacity Tag**

A tag that is in view of the driver stating seating capacity of six (6) personnel shall be provided.

### **Seat, Rear Wall**

One (1) fold down jump seat shall be provided.

The seat shall be located on the rear wall driver's side outboard, officer's side outboard.

Features to include:

- Seat bottom cushion shall be constructed of high density foam with a heavy duty, wear resistant material.
- Seat bottom automatically folds up when not in use to provide increased room in the rear of the cab.

All seat positions shall have a bright red retractable 3-point lap and shoulder harness, providing additional safety and security for personnel. Extensions shall be provided with the seat belts so the male end can be easily grasped and the female end easily located while sitting in a normal position.

### **Bostrom SecureAll Locking System**

The H.O. Bostrom SecureAll™ SCBA Locking System shall be one bracket model and store all U.S. and international SCBA brands and sizes while in transit or for storage on fire trucks. The bracket shall be easily adjustable; all adjustment points shall utilize similar hardware and adjustments shall be made with one tool.

The bracket system shall be free of straps and clamps that may interfere with auxiliary equipment on SCBA units. The center guide fork shall keep the tank in-place for a safe and comfortable fit in seat cavity. Firefighters shall simply push the SCBA unit against the pivot arm to engage the patented auto-locking system. Once the lock is engaged, the top clamp shall surround the top of the SCBA tank for a secure fit in all directions.

The SecureAll™ bracket shall fit in all H.O. Bostrom Tanker SCBA seats including ABTS and non-ABTS seats and all flip-up ABTS and non-ABTS seats. Additional seat depth shall not be required for proper bracket fit; changes to the shroud back shall not be required for proper mounting of the bracket.

The standard release handle shall be integrated into the seat cushion for quick and easy release and shall eliminate the need for straps or pull cords to interfere with other SCBA equipment.

The H.O. Bostrom SecureAll™ system meets NFPA 1901 standards and requirements of EN 1846-2.

Location: rear facing driver's side, rear facing officer's side. The bracket(s) shall be located rear facing driver's side, rear facing officer's side.

## **MEDICAL CABINETS**

### **Medical Cabinet**

There shall be a medical storage cabinet provided at the back wall of the interior of the cab, between outboard seats. The medical cabinet shall be constructed of 1/8" smooth aluminum plate. The medical cabinet shall be approximately 48" high x 40" wide x 20" deep interior.

Three (3) vertically adjustable shelves shall be provided and installed in the medical cabinet. The shelves shall be constructed of 1/8" smooth aluminum plate. Each shelf shall have a 1" front for added strength and reinforcement. The shelves shall be sized to the interior dimensions of the medical cabinet. The shelves shall be mounted with extruded aluminum adjustable shelf tracking attached to the cabinet walls and the shelves to be secured with aluminum brackets to the tracks

to allow for vertical height adjustment. As necessary a 3/4" x 2-3/4" aluminum extrusion shall be mounted to the underside of the shelves to provide additional reinforcement as needed.

There shall be a locking roll-up door provided to secure contents.

### **Medical Storage Cabinet Finish**

The medical storage cabinet(s) shall have a Zolatone gray finish. The finish shall be applied to the interior, exterior, shelves (if equipped) and trays (if equipped) of the cabinet.

### **Medical Cabinet Doors**

All medical cabinets on the custom cab shall be ROM brand roll-up type doors.

## **MISC INTERIOR CAB OPTIONS**

### **Cab Interior Color**

Cab instrument panel, overhead console, trim panels, headliner, and door panels shall be gray.

### **Sun Visors**

Lexan sun visors shall be provided for the driver and officer matching the interior trim of the cab and shall be flush mounted into the underside of the overhead console.

### **Engine Cover**

The engine cover shall blend in smoothly with the interior dash and flooring of the cab. The upper left and right sides shall have a sloped transition surface running front to rear providing increased space for the driver and officer.

The engine cover and engine service access door cover shall be molded 18 lb/cu. ft. (+/-0.5) flexible integral skinned polyurethane foam at a Durometer of 60 (+/- 5.0) per ASTM F1957-99. The cover shall be approximately .5" thick with a minimum skin thickness of 0.0625 inches. The cover shall be provided to reduce the transmission of noise and heat from the engine. The cover shall be black and feature a pebble grain finish for slip resistance.

### **Cab Dash - Severe Duty**

The center and officer side dash shall be constructed from .125" smooth aluminum plate painted to match the cab interior. The officer side dash panel shall be lowered to provide increased visibility. A hinged access panel shall be provided on top of the center dash to provide easy access to components within.

The lower kick panels below the dash to be constructed from .125" aluminum smooth plate painted to match cab interior. The panels shall be removable to allow for servicing components that may be located behind the panels.

## **CAB ELECTRICAL OPTIONS**

### **Cab Dome Lights**

Four (4) ceiling mounted dome light assemblies shall be provided.

Each light shall consist of a three-position assembly mounted rocker switch, LED (light emitting diode) 4" grommet mount white dome light, LED (light emitting diode) 4" grommet mount red dome light, and a plastic housing.

The white light activates with appropriate cab door and light assembly mounted rocker switch, the red light activates with assembly mounted rocker switch only.

Two (2) lights shall be located in both the front and rear of the cab.

### **Push-Button Switch**

A heavy duty metal push-button switch shall be installed on the officer's side dash to operate the Q2B siren.

### **Auto-Eject Battery Charger Receptacle**

The battery charger receptacle shall be a Kussmaul 20 amp NEMA 5-20 Super Auto-Eject #091-55-20-120 with a cover. The Super Auto-Eject receptacle shall be completely sealed and have an automatic power line disconnect.

The receptacle shall be located outside driver's door next to handrail and the cover color shall be Yellow.

### **Push-Button Switch**

A heavy duty metal push-button switch shall be installed on the officer's side dash to operate the air horns.

### **Hourmeter**

A pump hourmeter shall be provided and mounted in the cab visible to the driver.

### **English Dominant Gauge Cluster**

The cab operational instruments shall be located in the dashboard on the driver side of the cab and shall be clearly visible. The gauges in this panel shall be English dominant and shall be the following:

- Speedometer/Odometer
- Tachometer with integral hour meter
- Engine oil pressure gauge with warning light and buzzer
- Engine water temperature gauge with warning light and buzzer
- Two (2) air pressure gauges with a warning light and buzzer (front air and rear air)
- Fuel gauge
- Voltmeter
- Transmission oil temperature gauge

This panel shall be backlit for increased visibility during day and night time operations.

### **Cab Turn Signals**

There shall be a pair of Whelen 600 LED (Light Emitting Diode) turn signal light heads with populated arrow pattern and amber lens mounted upper headlight bezel and wired with weatherproof connectors.

### **Headlights**

The front of the cab shall have four (4) headlights. The headlights shall be mounted on the front of the cab in the lower position. The headlights shall be day time operational.

### **Battery Charger/Air Compressor**

A Kussmaul Auto-Charge 1200 battery charger and air compressor with automatic battery charger shall be installed.

The battery charger shall be completely automatic with an output of 0-40 amps @ 12 volts DC and an input current requirement of 10 amps @ 120 volts AC.

A Kussmaul air compressor with automatic battery conditioner model 091-9-1200 shall be installed. The battery conditioner is completely automatic with a 0-40 amp output to maintain the charge in the battery system. The air compressor shall be powered by a 12 volt DC output from the battery charger and has an output of .30 cfm at 80 PSI. A pressure switch senses the system pressure and operates the compressor whenever the pressure in the air brake system drops below a pre-determined level.

### **Cab 12 Volt (or 24 Volt) Outlet**

A plug-in type receptacle for hand held spotlights, cell phones, chargers, etc. shall be installed In cab driver side on 3 x 3 post rear facing just above engine cover, driver side dash, officer side

dash, center rear wall of center rear medical compartment up high. The receptacle shall be wired battery hot.

### **Battery Charger Location**

The battery charger shall be located behind driver's seat.

### **Air Compressor Location**

The air compressor shall be located behind driver's seat.

### **Cab USB Charging Port**

A dual USB charging port for cell phones, chargers, etc. shall be installed In cab driver side on 3 x 3 post rear facing just above engine cover, driver side dash, officer side dash, center rear wall of center rear medical compartment up high. The receptacles shall be wired battery hot.

### **Cab Headlights**

The quad cab headlight bezels shall contain rectangular sealed beam halogen lights.

### **DPF Regeneration Override**

A momentary override switch shall be provided for the Diesel Particulate Filter (DPF) regeneration. The switch will inhibit the regeneration process until the switch is reset or the engine is shut down and restarted. The switch shall be located within reach of the driver.

## **BODY COMPT LEFT SIDE**

### **Driver Side Assembly**

The driver side assembly shall be constructed entirely of aluminum extrusions and interlocking aluminum plates. This aluminum modular design shall provide a high strength-to-weight ratio for increased equipment carrying capacity.

The driver side body corners shall be 6063-T5 extruded aluminum corner sections with a 3/16" (0.188") wall thickness. The side body extrusions shall be 6063-T5 aluminum tubing with a 3/16" (0.188") wall thickness and 3/16" (0.188") outside corner radius. The corners and sides shall be welded both internally and externally at each joint using an aluminum alloy welding wire.

The driver side body shall be completely sanded and deburred to assure a smooth finish and painted job color.

### **Driver Side Compartments**

The three (3) driver side compartments shall be constructed from 3003 H14 1/8" (.125") smooth aluminum plate. The compartments shall be modular in design and shall not be a part of the body support structure.

There shall be one (1) compartment located ahead of the rear wheels. This compartment shall be approximately 42" wide x 68" high x 26" deep in the lower 57" high section and 12" deep in the upper 11" high section. The compartment shall contain approximately 39.2 cu. ft. of combined storage space. The door opening shall be approximately 42" wide x 68" high.

There shall be one (1) compartment located over the rear wheel. This compartment shall be approximately 56" wide x 34" high x 26" deep in the lower 23" high section and 12" deep in the upper 11" high section and contain approximately 23.6 cu. ft. of storage space. The door opening shall be approximately 56" wide x 34" high.

There shall be one (1) compartment located behind the rear wheel. The compartment shall be approximately 56" wide x 68" high. The forward area of the compartment shall be approximately 42" wide x 68" high x 26" deep in the lower 57" high section and 12" deep in the upper 11" high section. The enhanced extended rear portion of the compartment shall be approximately 14" wide x 68" high x 24" deep in the lower 57" high section and 11" deep in the upper 38" high section. The total combined storage space shall be approximately 51.7 cu. ft. The door opening shall be approximately 56" wide x 68" high.

Each compartment seam shall be sealed using a permanent pliable silicone caulk. The walls of each compartment shall be machine-louvered for adequate ventilation.

An externally-mounted compartment top shall be provided and constructed of a 1/8" (.125") aluminum treadplate.

## **BODY COMPT RIGHT SIDE**

### **Officer Side Assembly**

The officer side assembly shall be constructed entirely of aluminum extrusions and interlocking aluminum plates. This aluminum modular design shall provide a high strength-to-weight ratio for increased equipment carrying capacity.

The officer side body corners shall be 6063-T5 extruded aluminum corner sections with a 3/16" (0.188") wall thickness. The side body extrusions shall be 6063-T5 aluminum tubing with a 3/16" (0.188") wall thickness and 3/16" (0.188") outside corner radius. The corners and sides shall be welded both internally and externally at each joint using an aluminum alloy welding wire.

The officer side body shall be completely sanded and deburred to assure a smooth finish and painted job color.

### **Officer Side Compartments**

The three (3) officer side compartments shall be constructed from 3003 H14 1/8" (.125") smooth aluminum plate. The compartments shall be modular in design and shall not be a part of the body support structure.

There shall be one (1) compartment located ahead of the rear wheel. The compartment shall be approximately 42" wide x 68" high x 26" deep in the lower 30" high section and 12" deep in the upper 38" high section. The compartment shall contain approximately 30 cu. ft. of combined storage space. The door opening shall be approximately 42" wide x 68" high.

There shall be one (1) compartment located over the rear wheel. The compartment shall be approximately 56" wide x 34" high x 12" deep and contain approximately 13.2 cu. ft. of storage space. The door opening shall be approximately 56" wide x 34" high.

There shall be one (1) compartment located behind the rear wheel. The compartment shall be approximately 56" wide x 68" high. The forward area of the compartment shall be 42" wide x 30" high x 26" deep in the lower area and 42" wide x 38" high x 12" deep in the upper area. The enhanced extended rear portion of the compartment shall be approximately 14" wide x 68" high x 24" deep in the lower 30" high section and 11" deep in the upper 38" high section. The total combined storage space shall be approximately 39.5 cu. ft. The door opening shall be approximately 56" wide x 68" high.

Each compartment seam shall be sealed using a permanent pliable silicone caulk. The walls of each compartment shall be machine-louvered for adequate ventilation.

An externally-mounted compartment top shall be provided and constructed of a 1/8" (.125") aluminum treadplate.

### **Storage Tunnel**

The area directly behind the upper area of the officer side compartments shall be for the storage of NFPA equipment.

## **BODY COMPT REAR**

### **Rear Body Assembly**

The rear body shall be constructed entirely of aluminum extrusions and interlocking aluminum plates and includes a full height center rear compartment.

The rear body frame shall be 6063-T5 1.5" x 4" and 1.5" x 3" aluminum extrusions with a 3/16" (0.188") wall thickness and 3/16" (0.187") outside corner radius and 1/8" (0.125") aluminum smooth plate. The rear extrusions shall be welded both internal and external at each joint using an aluminum alloy welding wire.

### **Rear Body Compartment**

The full height center rear compartment shall be constructed from 3003 H14 1/8" (.125") smooth aluminum plate. The compartment shall be modular in design and shall not be a part of the body support structure.

The compartment shall be approximately 38" wide and shall vary in height and depth dependent upon water tank capacity.

The compartment seams shall be sealed using a permanent pliable silicone caulk. Machined louvers shall be provided for adequate ventilation.

### **Storage Compartments**

A storage compartment shall be provided at the rear body compartment. The storage compartment shall be located to the officer side of the rear compartment.

The storage compartment shall be approximately 13" wide x 29" high x length of side assembly. The storage compartment shall store NFPA equipment.

The storage compartment shall include a vertical hinged door to secure contents. The door shall be constructed of 3/16" (.187") aluminum smooth plate and shall have a push-button style latch. The compartment door shall be securely attached with a full-length stainless steel piano type hinge with 1/4" pin (outboard standard design, inboard when rear body includes beaver tail). The hinge shall be "staked" on every other knuckle to prevent the pins from sliding. The door shall be wired to the door ajar indicator light in the cab and shall be interlocked with the parking brake per NFPA.

### **Tailboard Step**

A tailboard step shall be provided at the rear of the body. The tailboard shall 15.5" in depth and in accordance with NFPA in both step height and stepping surface. The maximum rear step height to the tailboard shall not exceed 24".

The tailboard step shall be formed from 3/16" (0.188") aluminum treadplate and shall be reinforced with 6063-T5 1.5" x 3" aluminum extrusion. The tailboard shall be in accordance with current NFPA requirements and shall include a multi-directional aggressive gripping surface incorporated into the diamond plate. The surface shall extend vertical from the diamond plate sheet a minimum of 1/8" (0.125"). Gripping surfaces shall be circular in design, a minimum of 1" diameter and on centers not to exceed 4".

The tailboard step shall be bolted on to the body from the underside assuring a clear surface and shall be easily removable for replacement in the case of damage.

### **Enhanced Extended Compartment Framework**

Each side of the tailboard shall be the external compartment frame work of the enhanced extended side compartments. The compartment frame work shall be 6063-T5 1.5"x 4" and 1.5" x

3" aluminum extrusions with a 3/16"(0.188") wall thickness and 3/16" (0.188") outside corner radius. The rear extrusions shall be welded both internally and externally at each joint using an aluminum alloy welding wire.

### **Rear Access Handrails**

Handrails shall be provided at the rear of the body to assist ground personnel accessing the tailboard step and hosebed area. Each handrail shall be constructed of 6063T5 1.25" OD anodized aluminum tube, with an integral ribbed surface to assure a good grip for personnel safety, and shall be mounted between chrome stanchions.

The handrails shall be located- two (2) handrails, one (1) on each side, appropriately sized handrail mounted vertical on the trailing edge of the body and appropriately sized handrail(s) mounted horizontal below the rear hosebed opening.

### **Enhanced Extended**

Enhanced Extended Compartmentation stepped down below hosebed level. Includes embossed diamond plate compartment tops.

## **DOORS**

### **Roll Up Compartment Door**

A ROM brand roll up door with satin finish shall be provided on a compartment up to 45" tall. The door(s) shall be installed in the following location(s): L2, R2.

The Robinson door slats shall be double wall box frame and manufactured from anodized aluminum. The slats shall have interlocking end shoes on each slat. The slats shall have interlocking joints with a PVC/vinyl inner seal to prevent any metal to metal contact and inhibit moisture and dust penetration.

The track shall be anodized aluminum with a finishing flange incorporated to provide a finished look around the perimeter of the door without additional trim or caulking. The track shall have a replaceable side seal to prevent water and dust from entering the compartment.

The doors shall be counterbalanced for ease in operation. A full width latch bar shall be operable with one hand, even with heavy gloves. Securing method shall be a positive latch device.

A magnetic type switch integral to the door shall be supplied for door ajar indication and compartment light activation.

The door opening shall be reduced by 2" in width and approximately 8-9" in height depending on door height.

## **Roll Up Compartment Door**

A ROM brand roll up door with satin finish shall be provided on a compartment greater than 45" tall. The door(s) shall be installed in the following location(s): L1, L3, R1, R3, B1.

The Robinson door slats shall be double wall box frame and manufactured from anodized aluminum. The slats shall have interlocking end shoes on each slat. The slats shall have interlocking joints with a PVC/vinyl inner seal to prevent any metal to metal contact and inhibit moisture and dust penetration.

The track shall be anodized aluminum with a finishing flange incorporated to provide a finished look around the perimeter of the door without additional trim or caulking. The track shall have a replaceable side seal to prevent water and dust from entering the compartment.

The doors shall be counterbalanced for ease in operation. A full width latch bar shall be operable with one hand, even with heavy gloves. Securing method shall be a positive latch device.

A magnetic type switch integral to the door shall be supplied for door ajar indication and compartment light activation.

The door opening shall be reduced by 2" in width and approximately 8-9" in height depending on door height.

## **SHELVES**

### **Adjustable Shelf**

There shall be an aluminum adjustable shelf provided for compartment L1, L2, L3.

The shelf shall be constructed of 3/16" (.187") smooth aluminum plate. The shelf shall have a minimum 2" front and rear lips to accommodate optional plastic interlocking compartment tile systems. For additional strength and reinforcement of the shelf a return break shall be provided on the outward lip. The adjustable shelf shall be capable of holding 250 lbs.

The shelf shall be sized, width and depth, to match the size and location in the compartment.

### **Adjustable Shelf**

There shall be an aluminum adjustable shelf provided in the upper area of compartment R2, R1 upper, the shelf shall be notched into extended side compartment area.

The shelf shall be constructed of 3/16" (.187") smooth aluminum plate. The shelf shall have a minimum 2" front and rear lips to accommodate optional plastic interlocking compartment tile systems. The adjustable shelf shall be capable of holding 100 lbs.

The shelf shall be sized, width and depth, to match the size and location in the compartment.

### **Adjustable Tracks**

Tracks shall be provided in L1, L2, L3, R1 lower, R3 lower for use with adjustable shelves and/or trays in deep non-transverse compartments. The tracks shall be vertically mounted and attached to the side and/or rear walls of the compartments.

### **Adjustable Tracks**

Tracks shall be provided in R2, R1 upper for use with shallow depth adjustable shelves. The tracks shall be vertically mounted and attached to the side and/or rear walls of the compartments.

## **TRAYS / TOOLBOARDS**

### **Roll-Out/Tilt-Down Tray**

A roll-out/tilt-down tray shall be adjustable mounted in compartment L1, L2, L3, R1, R3. For use on single depth or rescue style compartments.

The tray shall be constructed of 3/16" (.187) aluminum with welded corners for strength and rigidity. The tray shall be sized in width and depth as applicable.

An Innovative Industries SlideMaster Tip Down frame and channel assembly shall be provided for the tray for the ease of operation and long service life. A positive twist lock shall be provided to lock the tray in the stored position. The tray shall roll out approximately 90% from its stored position and shall tip 30 degrees from horizontal.

The capacity rating of the tray, in the extended position, shall be 250 lbs. distributed.

### **Runningboard Suction Tray**

A running board suction hose storage tray "floating style" shall be provided and located in the driver side running board, officer side running board.

The tray shall be "floating style" mounted and constructed of 1/8" (.125") aluminum diamond plate (exterior) with a smooth sanded surface interior. The bottom of the tray shall have removable aluminum slats and drain holes to allow water drainage from hose stored in the tray. The tray shall have a 3" tapered front corner to protect tray against debris. The tray shall be removable for the running board.

### **Roll-Out Tray**

There shall be a floor mounted roll-out tray provided in compartment L1, L3, R1, R3, B1.

The roll-out tray shall be constructed of 3/16" (.187") smooth aluminum plate with a sanded finish and welded corners for increased strength and rigidity. The tray shall be sized in width and depth as applicable.

For greater tray accessibility, the drawer slides shall feature one hundred percent extension. The tray shall utilize a gas spring to secure the tray in the open or closed position.

The tray shall have a total capacity of 500 lbs.

## **COVERS**

### **Rear Hose Bed Cover**

A cover constructed of heavy duty black nylon cargo netting shall be installed at the rear apparatus hose bed.

The bottom of the cargo netting shall be mechanically attached to the hose bed. The cover shall be attached to comply with the latest edition of NFPA 1901.

Cover shall secure the hoseload at the rear open back of the hosebed and shall compliment separate top cover of vinyl, diamond plate or similar cover that secures top of body open areas over hoseload.

### **Hose Bed Cover**

The hose bed area shall have a two (2) piece light weight aluminum hose bed cover. The hose bed cover shall be provided in compliance with NFPA.

Each hose bed cover shall be constructed of an aluminum extrusion frame with a 1/8" (.125") embossed aluminum treadplate top. Each cover door shall be securely attached to the hose bed side with a full-length stainless steel piano type hinge. The hinge shall have 1/4" pins and shall be "staked" on every other knuckle to prevent pin slippage.

Each cover shall include two (2) hold opens per cover. The forward area of the cover shall have one (1) pneumatic shock. The rear of the cover shall have one (1) positive hold open/hold closed that shall include one (1) manually engaged securing pin.

Each cover shall include two (2) assist handles, one (1) grab handle (forward) and one (1) hand rail (rearward). The rearward hand rails shall be installed in compliance with current NFPA. The hand rails shall be constructed of 6063T5 1.25" OD anodized aluminum tube, with an integral ribbed surface to assure a good grip for personnel safety, mounted between chrome stanchions.

The water tank fill tower(s) shall be accessible with the covers in the closed position through a diamond plate door (or as applicable). The fill tower access door shall be constructed of 1/8"

(.125") embossed aluminum treadplate. The door shall be hinged and shall include one (1) hold down and grab handle.

The covers shall be supported in the closed position by a center mounted hose bed divider. The divider shall be constructed of 1/4" (.250") smooth aluminum plate with a scotch-brite finish. The divider shall run the full length of the hose bed and shall include an upper "C" channel extrusion base. The rear of the divider shall be recessed rearward to allow for looping of hose from one side of the divider to the other (as applicable).

Each cover door shall be wired to the door ajar indicator light in the cab and shall be interlocked with the parking brake per NFPA.

Requires intermediate rear step except for extended enhanced compartments.

### **Speedlay Cover - Sides**

A pair of covers constructed of heavy duty black nylon cargo netting shall be installed over the side openings of the apparatus speedlay.

The covers shall be secured in place to comply with the latest edition of NFPA 1901.

### **Running Board Tray Securing Strap**

A heavy duty black nylon strap with an aluminum quick-release buckle shall be provided for the running board hose tray(s). The strap shall be attached to the inboard side of the tray as low as practical to allow cinching of strap for securing tray contents and shall not reduce the overall tray capacity.

Location: driver side running board, officer side running board.

## **PUMP MODULE**

### **Pump Module Width**

Pump module shall be 76" wide.

### **Pump Module**

#### **Pump Module Frame**

An extruded aluminum pump module shall be provided and located forward of the apparatus body. The pump module shall be constructed entirely of welded aluminum alloy extrusions and interlocking aluminum plates. The pump module framework shall consist of 1.5" x 3" x .188" wall, 1.5" x 3" x .375" wall with center web and 3" x 3" x .188" wall extrusions.

The pump module design and mounting shall be separate from the body to allow the pump module and body to move independently of each other in order to reduce stress from frame twisting and vibration.

The exterior surface of the pump module framework shall have a sanded finish.

### **Pump Module Mounting**

The pump module shall be attached to the chassis using four (4) center bonded isolation mounts and a steel mounting frame. The isolation mounts shall be 2.75" diameter and mount to the chassis with two (2) 4" x 4" x .312" A36 steel angles.

### **Pre-connect Storage**

Two (2) transverse storage areas shall be incorporated into the module to accommodate preconnected handlines. Plumbing for the handlines shall be located at the upper back wall of the storage area to facilitate use of optional removable trays. The floors of the pre-connect areas shall be constructed from .125" smooth aluminum plate. The floors shall be slotted to prevent the accumulation of water and allow for ventilation of wet hose.

### **Top Mounted Pump Control Area**

The upper area of the module shall be configured for a top mount pump operator's panel. The upper side walls of the module shall be notched rearward to the speedlay area and tapered for improved operator visibility.

### **Crosswalk**

An extruded aluminum crosswalk shall be provided at the front of the pump module. The crosswalk shall be integral to the pump module and be constructed entirely of aluminum extrusions. The crosswalk walkway shall be in accordance with NFPA in both step height and stepping surface. The crosswalk walkway floor shall be formed from .188" aluminum treadplate. The walkway floor shall be bolted on to the module and be easily removable to service chassis components or for replacement in the case of damage.

The crosswalk entry shall include two (2) 5" wide formed diamond plate steps located one (1) on each side offset forward and two (2) handrails, a minimum 24" long, located one (1) on each side mounted vertically on the forward extrusion of the pump module.

### **Pump Module Running Boards**

The pump module shall include a running board on each side. The running boards shall be in accordance with NFPA in both step height and stepping surface. The running boards shall be formed from .125" aluminum treadplate. Each running board shall be bolted on to the pump module and be easily removable for replacement in the case of damage.

## **Stepping Surfaces**

The top mount crosswalk and each running board shall include a multi-directional, aggressive gripping surface incorporated into the treadplate. The surface shall extend vertically from the diamond plate sheet a minimum of .125". Gripping surfaces shall be circular in design, a minimum of 1" diameter and on centers not to exceed 4".

## **Pump Panel Opening**

The panel opening on the pump module shall be 39" wide.

## **Pump Module Height**

The pump module height shall be 85".

## **Crosswalk Module Step(s) Offset**

The walkway step(s) shall be offset to the rear to accommodate pole/tripod light or other options located on the back of the cab. If equipped, the tool storage compartment door(s) shall be reduced in size.

# **PUMP PANELS**

## **Top Mount Pump Panels**

The top mount gauge panel, driver and officer side pump panels shall be constructed of 14 gauge stainless steel.

The top mount gauge panel shall be able to lift forward for access to panel mounted electrical connections.

The driver and officer panels shall have the ability to be removed from the module for easier access and for maintenance in the pump area.

## **Pump Access Doors**

The driver and officer side pump module shall include an upper horizontal-hinged pump access door.

The doors shall be constructed of 14 gauge brushed stainless steel. The compartment doors shall be securely attached with a full-length stainless steel piano type hinge with 1/4" pins. The hinge shall be "staked" on every other knuckle to prevent the pin from sliding. The doors shall include two (2) push-button style latches to secure the doors in the closed position and two (2) hold-open devices to hold the doors in the open position.

## MISC PUMP PANEL OPTIONS

### Pump Panel Tags

Color coded pump panel labels shall be supplied to be in accordance with NFPA 1901 compliance.

### Air Outlet

A 1/4" female air hose fitting shall be mounted with a 1/4" valve. The fitting and valve shall be connected to the air reservoir tank.

Location: driver's side pump panel.

## PUMP MODULE OPTIONS

### Flex Joint

The area between the pump modules and body shall include a rubber flex joint.

### Spacer Plate Quartz Lights

Spacer plate for quartz lights. Requires 4" additional to cab and body gap.

### Module Logos

Logos with the OEM brand name shall be provided and shall be mounted one (1) each side on pump module/pre-connect panels. Logos shall be sized as applicable to available space on panel(s).

### Air Horn Switch

A heavy duty weatherproof push-button switch shall be installed at the pump operator's panel to operate the air horns.

The switch shall be labeled "Evacuation Alert".

Location: top mount control panel.

### Removable Poly Speedlay Tray [Qty: 2]

The speedlay areas shall include storage trays. The trays shall be constructed of 1/2" PT2E polypropylene. The floor of the tray shall be slotted to prevent the accumulation of water and

allow for ventilation of wet hose. The trays shall have vertical slots on each end to facilitate in grabbing the tray during loading and unloading.

The tray shall also have horizontal slots on the upper sides to facilitate in carrying the tray.

## **Storage Pan**

A storage pan shall be provided in the upper pump module area. The pan shall be constructed of 3/16" (.188") aluminum treadplate and be removable to service items in the pump module below. Holes shall be provided in the corners of the pan to facilitate drainage of water.

## **Top Mount Walkway Compartments**

The area directly below the top mount pump panel walkway shall include two (2) compartments, located one (1) each side. Each compartment shall provide approximately 1.5 cu. ft. of storage space (2.5 cu. ft. if equipped with speedlays). The compartments shall include spring loaded, vertically-hinged 1/8" (.188") aluminum treadplate door with a push-button latch. A switch wired to the door ajar indicator light in the cab shall be provided. One (1) LED light shall be installed in each compartment.

# **WATER TANK**

## **780 Gallon Water Tank**

A 780 gallon (U.S.) "R" booster tank shall be supplied.

The booster tank shall be constructed of polypropylene material. The booster tank shall be completely removable without disturbing or dismounting the apparatus body structure. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal.

The booster tank top, sides, and bottom shall be constructed of a minimum 1/2" (0.50") thick black UV-stabilized copolymer polypropylene. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The tank cover shall be constructed of 1/2" thick polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank cover(s) shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart. These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions.

The tank shall have a combination vent and manual fill tower with a hinged lid. The fill tower shall be constructed of 1/2" polypropylene and shall be a typical dimension of 8" x 8" outer

perimeter (subject to change for specific design applications). The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower shall have a 1/4" thick removable polypropylene screen and a polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid.

The booster tank shall have two (2) tank plumbing openings. One (1) for a tank-to-pump suction line with an anti-swirl plate, and one (1) for a tank fill line. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates per the tank fill inlet size.

The sump shall be constructed of a minimum of 1/2" polypropylene. The sump shall have a minimum 3" N.P.T. threaded outlet for a drain plug per NFPA. This shall be used as a combination clean-out and drain. All tanks shall have an anti-swirl plate located approximately 3" above the inside floor.

The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" polypropylene. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength.

Inside the fill tower there shall be a combination vent/overflow pipe. The vent overflow shall be a minimum of schedule 40 polypropylene pipe with an I.D. of 3" or larger that is designed to run through the tank. This outlet shall direct the draining of overflow water past the rear axle, thus reducing the possibility of freeze-up of these components in cold environments. This drain configuration shall also assure that rear axle tire traction shall not be affected when moving forward.

The booster tank shall undergo extensive testing prior to installation in the truck. All water tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale.

Each tank shall be weighed empty and full to provide precise fluid capacity. Each tank shall be delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight. Engineering estimates for capacity calculations shall not be permitted for capacity certification. The tank must be designed and fabricated by a tank manufacturer that is ISO 9001:2008 certified in each of its locations. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank.

A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foam(s), the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the tank manufacturer, and contact information. The QR code will allow the user to connect with the tank manufacturer for additional information and assistance.

The tank shall have a limited Lifetime warranty that provides warranty service for the life of the fire apparatus in which the tank is installed. Warranties are transferable if the apparatus ownership changes by requesting the transfer from the tank manufacturer.

Tank capacity is 780 US gallon / 649 Imperial gallons / 2952 Liters.

### **Fill Tower Location**

Fill tower(s) shall be located offset to officer side of water tank.

## **TANK PLUMBING**

### **Tank Fill 2 Akron Valve**

One (1) 2" pump-to-tank fill line having a 2" manually operated full flow valve. The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times. The fill line shall be controlled using a chrome handle with an integral tag.

The valve shall be an Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it.

The valve shall be of unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.

### **Tank To Pump**

One (1) manually operated 3" Akron valve shall be installed between the pump suction and the booster tank. Includes flex hose with stainless steel hose clamps for connection to the 4" tank sump outlet. The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times.

The valve shall be an Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position and water is flowing through it.

The valve shall be of the unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.

A check valve shall be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank. The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times.

## **FOAM TANK**

### **30 Gallon Foam Tank**

A 30 gallon (U.S.) foam cell for Class A foam shall be supplied. The foam cell shall be integral to the water tank.

The integral tank top, sides, and bottom shall be constructed of black polypropylene material. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The copolymer polypropylene material shall be used for its high strength and corrosion resistance for a prolonged tank life.

The foam tank shall have a manual fill tower. The fill tower shall be constructed of 1/2" polypropylene and shall be a typical dimension of 8" x 8" outer perimeter (subject to change for specific design applications). Foam fill tower shall be constructed of a Green colored material indicating type of foam utilized. The capacity of the tank shall be engraved on the top of the fill tower lid. The fill tower shall be located in the forward area of the tank. The tower shall have a 1/4" thick removable polypropylene screen. Inside the fill tower, approximately 1.5" down from the top, there shall be an anti-foam fill tube that extends down to the bottom of the tank. A pressure vacuum vent shall be provided in the lid of the fill tower. The foam fill tower shall be removable to facilitate the cleaning of the foam tank.

The foam tank shall undergo extensive testing prior to installation in the truck. All foam tanks shall be tested and certified as to capacity. The tank must be designed and fabricated by a tank manufacturer that is ISO 9001:2008 certified in each of its locations. The ISO certification must be to the current standard in effect at the time of the design and fabrication of the tank.

The tank shall have a limited Lifetime warranty that provides warranty service for the life of the fire apparatus in which the tank is installed. Warranties are transferable if the apparatus ownership changes by requesting the transfer from the tank manufacturer.

## **LADDER STORAGE / RACKS**

### **Hard Suction Hose Rack**

One (1) hard suction hose storage rack shall be provided on the driver side compartment top.

The storage rack shall be constructed of anodized extruded aluminum and includes two (2) spring-mounted latch handles with stainless steel scuff plates. The scuff plates shall be located on the hose bed side to protect the painted surface.

The storage rack shall be capable of storing one (1) 6" x 10' hard suction hose.

### **Hard Suction Hose Rack**

One (1) hard suction hose storage rack shall be provided on the officer side compartment top.

The storage rack shall be constructed of anodized extruded aluminum and includes two (2) spring-mounted latch handles with stainless steel scuff plates. The scuff plates shall be located on the hose bed side to protect the painted surface.

The storage rack shall be capable of storing one (1) 6" x 10' hard suction hose.

### **Ladder Brand**

The ladder brand capable of being carried on the unit shall be Alco-Lite.

### **Ladders**

The length of ladders capable of being stored shall be the following: 24' 2-section, 14' roof ladder and 10' attic ladder w/shoes.

### **Storage Tunnel Contents**

Storage tunnel capable of holding (1) 2-section, (1) roof, (1) attic, (2) pike poles, (1) backboard in Officer.

## **HANDRAILS / STEPS**

### **Hose Bed Folding Steps**

Innovative Controls dual lighted LED folding steps shall be positioned to the driver side rear of the body. The steps shall be NFPA compliant for access to the hose bed storage area and in step height and surface area. The steps shall be staggered stepped as applicable with tailboard depth, not applicable with recessed step mounting.

Innovative Controls dual lighted folding step with LED lights integral to the step on the top to provide NFPA requirements of 2 fc (20 lx) on the stepping surface. Folding step shall also have a LED light integral to the bottom of the step to meet NFPA requirements of a stepping surface up to 18" below the step. The folding step shall sustain a minimum static load of 500 lb with a 3 to 1

safety factor. The folding step shall also meet NFPA slip resistance qualifications. Corrosion resistance shall be demonstrated by a 1000 hr salt spray test with no visible signs of deterioration of the step body or hardware.

One (1) hand rail shall be installed (as applicable) in compliance with current NFPA. The hand rail shall be constructed of 6063T5 1.25" OD anodized aluminum tube, with an integral ribbed surface to assure a good grip for personnel safety, mounted between chrome stanchions.

## **Hose Bed Folding Steps**

Innovative Controls dual lighted LED folding steps shall be positioned to the officer side rear of the body. The steps shall be NFPA compliant for access to the hose bed storage area and in step height and surface area. The steps shall be staggered stepped as applicable with tailboard depth, not applicable with recessed step mounting.

Innovative Controls dual lighted LED folding step with LED lights integral to the step on the top to provide NFPA requirements of 2 fc (20 lx) on the stepping surface. Folding step shall also have a LED light integral to the bottom of the step to meet NFPA requirements of a stepping surface up to 18" below the step. The folding step shall sustain a minimum static load of 500 lb with a 3 to 1 safety factor. The folding step shall also meet NFPA slip resistance qualifications. Corrosion resistance shall be demonstrated by a 1000 hr salt spray test with no visible signs of deterioration of the step body or hardware.

One (1) hand rail shall be installed (as applicable) in compliance with current NFPA. The hand rail shall be constructed of 6063T5 1.25" OD anodized aluminum tube, with an integral ribbed surface to assure a good grip for personnel safety, mounted between chrome stanchions.

## **Folding Steps [Qty: 4]**

Innovative Controls dual lighted LED folding step(s) shall be located officer side front compartment face, driver side front compartment face. The folding step(s) shall meet current NFPA in step height and surface area.

Innovative Controls dual lighted LED folding step with LED lights integral to the step on the top to provide NFPA requirements of 2 fc (20 lx) on the stepping surface. Folding step shall also have a LED light integral to the bottom of the step to meet NFPA requirements of a stepping surface up to 18" below the step. The folding step shall sustain a minimum static load of 500 lb with a 3 to 1 safety factor. The folding step shall also meet NFPA slip resistance qualifications. Corrosion resistance shall be demonstrated by a 1000 hr salt spray test with no visible signs of deterioration of the step body or hardware.

One (1) hand rail shall be installed in compliance with current NFPA. The hand rail shall be constructed of 6063T5 1.25" OD anodized aluminum tube, with an integral ribbed surface to assure a good grip for personnel safety, mounted between chrome stanchions.

## **MISC BODY OPTIONS**

## **Rear Mud Flaps**

The rear tires shall have a set of black mud flaps mounted behind the rear chassis wheels with E-ONE logo.

## **Body Mainframe**

The body mainframe shall be entirely constructed of aluminum. The complete framework shall be constructed of 6061T6 and 6063T5 aluminum alloy extrusions welded together using 5356 aluminum alloy welding wire.

The body mainframe shall include 3" x 3" 6061-T6 aluminum 3/8" (0.375") wall crossmember extrusion or 3" x 3" I-beam section aluminum extrusion depending on the application at the front of the body. A solid 3" x 3" "I-beam" section aluminum extrusion shall be provided the full width of the body forward and rearward of the rear wheel well. The crossmembers shall be designed to support the compartment framing and shall be welded to 1-3/16" x 3" (1.188" x 3") solid 6063-T5 aluminum frame sill extrusions. The frame sill extrusions shall be shaped to contour with the chassis frame rails and shall be protected from contact with the chassis frame rails by 5/16" x 2" (0.31" x 2") fiber-reinforced rubber strips to prevent wear and galvanic corrosion caused when dissimilar metals come in contact.

## **Body Mounting System**

The main body shall be attached to the chassis frame rails with six (6) of 5/8" (0.625") diameter steel U-bolts. This body mounting system shall be used to allow easy removal of the body for major repair or disassembly.

## **Water Tank Mounting System**

The body design shall allow the booster tank to be completely removable without disturbing or dismounting the apparatus body structure. The water tank shall rest on top of a 3" x 3" frame assembly covered with rubber shock pads and corner braces formed from 3/16" angled plate to support the tank. The booster tank mounting system shall utilize a floating design to reduce stress from road travel and vibration. To maintain low vehicle center of gravity the water tank bottom shall be mounted within 5" of the frame rail top.

## **Hosebed Side Assembly**

The hosebed side assemblies shall be made of 3" x 3" slotted aluminum extrusion and 3/16" (.188") smooth plate. The hosebed side assemblies shall provide a 85" high body.

The exterior hosebed side surface shall be completely sanded and deburred to assure a smooth finish and painted job color. The interior hosebed side surface shall be completely sanded and deburred to assure a smooth sanded finish.

## **Hosebed**

The area above the booster tank shall have a hose storage area provided. The hosebed shall be constructed entirely from maintenance-free, 3/4" deep x 7.5" wide, extruded aluminum slats that shall be pop-riveted into a one-piece grid system. Each slat shall have all sharp edges removed and have an anodized ribbed top surface that shall prevent the accumulation of water and allow for ventilation of wet hose.

The hosebed shall include an open area for the fill tower(s). The hosebed design shall incorporate adjustable tracks in the forward area rearward of the fill tower(s) and the rearward area of the hosebed for the installation of an adjustable divider(s). The adjustable tracks shall hold an adjustable divider(s) mounting nut straight, so only a philips head screwdriver is required to adjust a divider(s) from side to side (as is practical with other hosebed mounted equipment).

The hosebed shall be easily removable to allow access to the booster tank below.

## **Hose Bed Divider**

There shall be a hose bed divider provided the full fore-aft length of the hose bed.

The hose bed divider shall be constructed of 1/4" (0.25") smooth aluminum plate with an extruded aluminum base welded to the bottom. The rear end of the divider shall have a 3" radius corner to protect personnel. The divider shall be natural finish aluminum for long-lasting appearance and shall be sanded and de-burred to prevent damage to the hose.

The divider shall be adjustable from side to side in the hose bed to accommodate varying hose loads.

## **Hose Bed Divider**

There shall be a hose bed divider provided behind the fill towers and shall be fore-aft length of the hose bed.

The hose bed divider shall be constructed of 1/4" (0.25") smooth aluminum plate with an extruded aluminum base welded to the bottom. The rear end of the divider shall have a 3" radius corner to protect personnel. The divider shall be natural finish aluminum for long-lasting appearance and shall be sanded and de-burred to prevent damage to the hose.

The divider shall be adjustable from side to side rearward of the fill towers to accommodate varying hose loads.

## **Hose Bed Divider Hand Hold**

There shall be a hand hole cut-out(s) on the trailing edge of each hose bed divider. The cut-out(s) is specifically sized for use in adjusting of the hose bed divider.

## **Fuel Fill**

A recessed fuel fill shall be provided at the driver side rear wheel well area.

## **Body Wheel Well**

The body wheel well frame shall be constructed from 6063-T5 aluminum extrusion with a slot the full length to permit an internal fit of 1/8" (0.125") aluminum treadplate. The wheel well trim fenderett shall be constructed from 6063-T5 formed aluminum extrusion. The wheel well liners shall be constructed of a 3/16" (.187") composite material. The liners shall be bolt-on and shall provide a maintenance-free and damage-resistant surface.

## **Rub Rail**

The pump area module(s) and body shall have rub rails mounted along the sides and at the rear. \*\*

The rub rail shall be C-channel in design and constructed of 3/16" thick 6463T6 anodized aluminum extrusion. The rub rail shall be 2.75" high x 1.25" deep and shall extend beyond the body width to protect compartment doors and the body side. The rub rail depth shall allow marker and/or warning lights to be recessed inside for protection.

The top surface of the rub rail shall have minimum of five (5) raised serrations. Each serration being a minimum of .1" in height and with cross grooves to provide a slip-resistant edge for the tailboard step and pump module running board areas. The rub rail shall be mounted a minimum of 3/16" off the pump module and body with nylon spacers. The ends of each section shall be provided with a finished rounded corner piece.

\*\* 4x4 applications with 30 degree departure angle and flip down tailboard shall omit the rear body rub rails as noted above and shall have the trailing piece of the side rub rails behind rear axle attached in 2 pieces with the rearward piece mounted on an upward angle to match departure angle body. Rearward side marker light as located in rear rub rail shall be mounted angled in the rearward rail as added.

# **SCBA BOTTLE STORAGE**

## **SCBA Strap**

Straps shall be provided in each exterior storage compartment to provide secondary means to hold each SCBA bottle in the compartment. The straps shall be constructed from 1" nylon webbing formed in a loop. The strap(s) shall be mounted to the storage compartment ceiling directly inside the door opening at each bottle location.

## **SCBA 1 BOTTLE STORAGE FIRE SHOPP**

Fire Shopp brand (1) SCBA bottle storage with hinged door and push button latch shall be provided in the body wheel well area.

The door shall have a brushed stainless steel finish.

The door shall NOT cover the recessed fuel fill if located adjacent to the SCBA storage.

Location: driver side rear wheel well offset forward, driver side rear wheel well offset rearward

## **SCBA 1 BOTTLE STORAGE CAST PRODUCTS**

Cast Products brand (1) SCBA bottle storage with gasketed door and push button latch shall be provided in the body wheel well area.

The door shall NOT cover the recessed fuel fill if located adjacent to the SCBA storage.

Location: officer side rear wheel well offset forward, officer side rear wheel well offset rearward

## **PUMPS**

### **Pump Rating**

The fire pump shall be rated at 1750 GPM.

### **Fire Pump System**

The pump shall be a midship-mounted Hale QMAX single stage centrifugal pump. The pump shall be mounted on the chassis frame rails of commercial or custom truck chassis and have the capacity of 1,250 to 2,250 gallons per minute (U.S. GPM) NFPA 1901 rated performance, and shall be split-shaft driven from the truck transmission.

The entire pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 psi (207 MPa). All metal moving parts in contact with water shall be of high quality bronze or stainless steel. Pump body shall be horizontally split in two sections, for easy removal of impeller assembly including wear rings and bearings from beneath the pump without disturbing pump mounting or piping.

The pump impeller shall be hard, fine grain bronze of the mixed flow design and shall be individually ground and hand balanced. Impeller clearance rings shall be bronze, easily renewable without replacing impeller or pump volute body, and of wrap-around double labyrinth design for maximum efficiency.

The pump shaft shall be heat-treated, corrosion-resistant stainless steel and shall be rigidly supported by three (3) bearings for minimum deflection. The sleeve bearing is to be lubricated by a force fed, automatic oil lubricated design, pressure-balanced to exclude foreign material. The remaining bearings shall be heavy-duty, deep groove ball bearings in the gearbox and shall be splash-lubricated. Pump shaft must be sealed with double-lip oil seal to keep road dirt and water out of the gearbox.

Two (2) 6" diameter suction ports with 6" NST male threads and removable screens shall be provided, one each side. The ports shall be mounted one (1) on each side of the midship pump and shall extend through the side pump panels. Inlets shall come equipped with long handle chrome caps.

### **Discharge Manifold**

The pump system shall utilize a stainless steel discharge manifold system that allows a direct flow of water to discharge valves. The manifold and fabricated piping systems shall be constructed of a minimum of Schedule 10 stainless steel to reduce corrosion.

### **Pump Shift**

The pump shift shall be pneumatically-controlled using a power shifting cylinder.

The power shift control valve shall be mounted in the cab and be labeled "PUMP SHIFT". The apparatus transmission shift control shall be furnished with a positive lever, preventing accidental shifting of the chassis transmission.

A green indicator light shall be located in the cab and be labeled "PUMP ENGAGED". The light shall not activate until the pump shift has completed its full travel into pump engagement position.

A second green indicator light shall be located in the cab and be labeled "OK TO PUMP". This light shall be energized when both the pump shift has been completed and the chassis automatic transmission has obtained converter lock-up (4th gear lock-up).

### **Test Ports**

Two (2) test plugs shall be pump panel mounted for third party testing of vacuum and pressures of the pump.

### **Gearbox Cooler**

A gearbox cooler shall be provided to maintain safe operating temperatures during prolonged pumping operations for pump rating 1500 GPM and over.

## **PUMP CERTIFICATION**

## **Pump Certification**

The pump, when dry, shall be capable of taking suction and discharging water in accordance with current NFPA 1901. The pump shall be tested at the manufacturer's facility by an independent, third-party testing service. The conditions of the pump test shall be as outlined in current NFPA 1901.

The tests shall include, at a minimum, the pump test, the pumping engine overload test, the pressure control system test, the priming device tests, the vacuum test, and the water tank to pump flow test as outlined in current NFPA 1901.

A piping hydrostatic test shall be performed as outlined in current NFPA 1901.

The pump shall deliver the percentage of rated capacities at pressures indicated below:

100% of rated capacity at 150 psi net pump pressure  
100% of rated capacity at 165 psi net pump pressure  
70% of rated capacity at 200 psi net pump pressure  
50% of rated capacity at 250 psi net pump pressure

A test plate, installed at the pump panel, shall provide the rated discharges and pressures together with the speed of the engine as determined by the certification test, and the no-load governed speed of the engine.

A Certificate of Inspection certifying performance of the pump and all related components shall be provided at time of delivery. Additional certification documents shall include, but not limited to, Certificate of Hydrostatic Test, Electrical System Performance Test, Manufacturer's Record of Pumper Construction, and Certificate of Pump Performance from the pump manufacturer.

## **PUMP OPTIONS**

### **Steamers, Flush+1**

The pump 6" steamer intake(s) shall be mounted approximately 1" from the pump panel to back of cap when installed. The "Flush+1" dimension can vary + or - 1-1/4" or as practicable depending on the pump module width and options selected. (Example 72" or 76" modules.)

Location: driver's side, officer's side.

### **Zinc Anodes**

The zinc anodes help prevent damage caused by galvanic corrosion within the fire pump. The system provides a sacrificial metal which helps to diminish or prevent pump and pump shaft galvanic corrosion. One anode will be located on the suction side and one will be located on the discharge side of the pump.

## **Thermal Relief Valve**

A Hale TRVL-120 thermal relief valve shall be provided.

The valve shall help protect the pump by automatically monitoring pump water temperature. The relief valve shall automatically dump a controlled amount of water to the ground when the pump water exceeds the pre-set temperature of the relief valve.

A pump panel mounted indicator shall be installed at the pump operator`s panel.

## **Manual Pump Shift Override**

One (1) manual pump shift override shall be side panel mounted to engage the pump in the event of an air pressure failure. The pump shift shall be operated by a chrome handled push-pull cable.

## **Pump Seal Packing**

The pump shaft shall have only one (1) packing gland located on the inlet side of the pump. It shall be of split design for ease of repacking. The packing gland shall be of a design to exert uniform pressure on packing and to prevent cocking and uneven packing load when tightened. The packing rings shall be permanently lubricated, graphite composition and have sacrificial zinc foil separators to protect the pump shaft from galvanic corrosion.

The packing shall be easily adjusted by hand with rod or screw driver with no special tools or wrenches required.

## **Master Drain Valve**

A manual master drain valve shall be installed on the pump panel. The master pump drain assembly shall consist of a Class 1 bronze master drain with a rubber disc seal. The master drain shall have a rubber seal to prevent water from running out on the running board.

The manual master drain valve shall have twelve (12) individual-sealed ports that allow quick and simultaneous draining of multiple intake and discharge lines. It shall be constructed of corrosion-resistant material and be capable of operating at a pressure of up to 600 PSI.

The master drain shall provide independent ports for low point drainage of the fire pump and auxiliary devices.

## **Pump Cooler**

The pump shall have a 3/8" line installed from the pump discharge to the booster tank to allow a small amount of water to circulate through the pump casing in order to cool the pump during sustained periods of pump operation when water is not being discharged. The pump cooler line shall be controlled from the pump operator`s panel by a Innovative Controls 1/4 turn valve with "T" handle. Each 1/4 turn handle grip shall feature built-in color-coding labels and a verbiage tag

## **Trident Primer**

A Trident air operated priming system shall be installed. The unit shall be of all brass and stainless steel construction and designed for fire pumps of 1,250 GPM (4,600 LPM) or more. Due to corrosion exposure no aluminum or vanes shall be used in the primer design. The primer shall be three-barrel design with 3/4" NPT connection to the fire pump.

The primer shall be mounted above the pump impeller so that the priming line will automatically drain back to the pump. The primer shall also automatically drain when the panel control actuator is not in operation. The inlet side of the primer shall include a brass "wye" type strainer with removable stainless steel fine mesh strainer to prevent entry of debris into the primer body.

The system shall create vacuum by using air from the chassis air brake system through a two-barrel multi-stage internal "venturi nozzles" within the primer body. The noise level during operation of the primer shall not exceed 75 Db.

## **Air Flow Requirements**

The primer shall require a minimum of 15.6 cubic foot per minute air compressor and shall be capable of meeting drafting requirements at high idle engine speed. The air supply shall be from a chassis supplied "protected" air storage tank with a pressure protection valve. The air supply line shall have a pressure protection valve set between 70 to 80 PSIG.

## **Primer Control**

The primer control shall have a manually operated, panel mounted "push to prime" air valve. The valve shall direct air pressure from the air brake storage tank to the primer body. To prevent freezing, no water shall flow to and from the panel control.

## **Warranty**

The primer shall be covered by a five (5) year parts warranty.

# **INTAKES**

## **Intake 2.5 Top Mount Control Akron Valve**

One (1) 2-1/2" suction inlet with a manually operated 2-1/2" Akron valve shall be provided on the driver side pump panel, officer side pump panel.

The valve shall be an Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position and water is flowing through it.

The valve shall be of the unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

The outlet of the valve shall be connected to the suction side of the pump with the valve body located behind the pump panel. The valve shall come equipped with a brass inlet strainer, 2-1/2" NST female chrome inlet swivel and shall be equipped with a chrome plated rockerlug plug with a retainer device.

The valve shall be controlled by a vertically mounted quarter turn locking handle located on the top mounted pump operator's panel and shall visibly indicate the position of the valve at all times.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance, and decreased friction loss.

A 3/4" bleeder valve assembly will be installed on the side pump panel.

### **Front Intake with Valve 5 with Relief**

A 5" stainless steel pipe shall extend from the right intake side of the pump to the front of the apparatus. The intake shall be controlled by a 5" butterfly valve and shall be air operated and controlled from the operator's panel. A valve(s) shall be provided to allow water to be drained. An intake relief valve shall be installed external of the butterfly valve to relieve excess pressure.

## **INTAKE OPTIONS**

### **Intake Relief Valve**

The pump shall be equipped with an Akron style 59 cast brass, variable-pressure-setting relief valve on the pump suction side. It shall be designed to operate at a maximum inlet pressure of 250 PSI. The relief valve shall be normally closed and shall be set to begin opening at 125 PSI in order to limit intake pressures in the pumping system. When the relief valve opens, the overflow water shall be directed through a plumbed outlet to discharge below the body in an area visible to the pump operator. The overflow outlet shall terminate with a male 2-1/2" NST threaded fitting to allow the overflow water to be directed away from the vehicle with a short hose (supplied by the fire department) during freezing weather or under other conditions where an accumulation of water around the apparatus might be hazardous.

### **Front Intake Swivel, 5"**

A heavy duty 5" 90 degree cast brass elbow designed and constructed specifically for fire/emergency vehicle usage shall serve as the auxiliary front suction inlet. The elbow, also referred to as the "swivel", shall be attached to the front suction piping. This component shall have the following features:

- 1) The ability to rotate 180 degrees.
- 2) A rugged twist-lock mechanism to hold the elbow in place at the desired position.
- 3) A double-ball race with bronze balls.
- 4) A 5" NPT free swivel female inlet.
- 5) A 5" NST male outlet with strainer.
- 6) Cast brass with polished chrome finish.

The elbow/swivel shall be mounted so that it extends above the extended front bumper.

## **DISCHARGES AND PRECONNECTS**

### **Front Jump Line 1.5 Akron Valve**

One (1) 1-1/2" preconnect outlet with a manually operated Akron valve shall be supplied to the extended front bumper. The preconnect shall consist of a 2" heavy duty hose coming from the pump discharge manifold to a 2" FNPT x 1-1/2" MNST mechanical swivel hose connection to permit the use of the hose from either side of the apparatus.

The valve shall be an Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it.

The valve shall be of the unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

An air blow-out valve shall be installed between the chassis air reservoir and the front jump line. The control shall be installed on the pump operator's panel.

The discharge shall be supplied with a Class 1 automatic 3/4" drain valve assembly. The automatic drain shall have an all-brass body with stainless steel check assembly. The drain shall normally be open and automatically close when the pressure is greater than 6 psi.

The valve control shall be located at the pump operator panel and shall visually indicate the position of the valve at all times.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.

### **Deck Gun 3" Discharge Akron Valve**

One (1) 3" deck gun discharge outlet with a manually operated Akron valve and 3" stainless steel pipe shall be provided above the pump compartment.

The valve shall be an Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it.

The valve shall be of the unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

The valve shall be equipped with a device that limits the opening and closing speeds to comply with the current edition of NFPA 1901.

The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.

### **Swivel Elbow, Polished Stainless Steel**

There shall be a polished stainless steel swivel elbow provided for the front bumper discharge located on top of the bumper driver's side outboard.

### **Double Speedlay 1.5 Akron Valve Controls**

One (1) double speedlay discharge shall be provided. Each speedlay section shall include one (1) 2" brass swivel with a 1-1/2" hose connection to permit the use of the hose from either side of the apparatus.

The speedlay piping shall consist of two (2) 2" heavy duty hoses coming from the pump discharge manifold to the 2" swivel. The discharges shall include a manually operated Akron valve.

The 2" valves shall be Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valves shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it.

The valves shall be of the unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

The valve controls shall be located at the pump operator's panel and shall visually indicate the position of the valves at all times.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.

### **Left Panel 2.5 Discharge Akron Valve**

One (1) 2-1/2" discharge outlet with a manually operated Akron valve shall be provided at the left hand side pump panel.

The valve shall be an Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it.

The valve shall be of the unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

The valve control shall be located at the pump operator panel and shall visually indicate the position of the valve at all times.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.

Location: left side discharge 1, left side discharge 2.

### **Right Panel 2.5 Discharge Akron Valve**

One (1) 2-1/2" discharge outlet with a manually operated Akron valve shall be provided at the right side pump panel.

The valve shall be an Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it.

The valve shall be of the unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

The valve control shall be located at the pump operator panel and shall visually indicate the position of the valve at all times.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.

Location: right side discharge 2.

### **Left Rear 2.5" Discharge Akron Valve**

One (1) 2-1/2" discharge outlet with a manually operated Akron valve shall be supplied to the left rear of the apparatus by a 2-1/2" stainless steel pipe.

The valve shall be an Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it.

The valve shall be of the unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

The valve control shall be located at the pump operator panel and shall visually indicate the position of the valve at all times.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.

Location: left rear discharge.

## **Right Panel 5**

One (1) 5" discharge outlet with a 3" manually operated Akron valve shall be provided at the right side pump panel. The discharge shall consist of a 3" valve connected to a 3" FNST x 5" MNST chrome adapter. The adapter shall protrude through the pump panel. The end of the discharge adapter shall be equipped with a chrome plated rockerlug cap with a retainer chain.

The valve shall be an Akron 8800HD series with a 316 stainless steel ball and dual polymer seats for ease of operation and increased abrasion resistance. The valve shall have a self-locking ball feature using an automatic friction lock design to balance the stainless steel ball when in a throttle position with water flowing through it.

The valve shall be of the unique Akron swing-out design to allow the valve body to be removed for servicing without disassembling the plumbing.

The valve control shall be located at the pump operator's panel and shall visually indicate the position of the valve at all times.

All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.

Location: right side discharge 1.

## **Deck Gun Location**

Deck gun piping shall be positioned centered in deck gun channel. This location shall allow for optimal operation of a deck gun monitor once installed.

## DISCHARGE OPTIONS

### Bleeder Drain Valve [Qty: 9]

The bleeder/drain valves shall be Innovative Controls 3/4" ball brass drain valves with chrome-plated lift lever handles and ergonomic grips. Each lift handle grip shall feature built-in color-coding labels and a verbiage tag identifying each valve, also supplied by Innovative Controls. The color labels shall also include valve open and close verbiage.

### Top Mount Valve Control [Qty: 13]

For valve actuation, the apparatus pump panel shall be equipped with Innovative Controls Top Mount Valve Controls. The ergonomically designed grip-activated T-handles shall be chrome-plated zinc with recessed UV-resistant labels for color-coding and verbiage. The patented spring-loaded handle and control rod assembly shall open and close valves when the user simply squeezes the T-handle and pivots the rod. When the T-handle grip is released, the valve control shall lock at the desired position automatically to eliminate valve drift. No secondary manual tightening method shall be required.

A robust die cast and chrome-plated pivot arm shall house the internal locking mechanism protecting it from environmental hazards. A brass bushing and closely-toleranced stainless steel rod shall ensure long-term smooth valve control operation and never require lubrication.

The valve control handles shall mount to sections of decorative clear anodized aluminum extrusion, designed to evenly space the handles and provide a secure mount for the handle's pivot rod.

### Garnish Ring Bezel

Innovative Controls intake and/or discharge garnish rings shall be installed to the apparatus with mounting bolts. These bezel assemblies will be used to identify intake and/or discharge ports with color and verbiage. These garnish rings are designed and manufactured to withstand the specified apparatus service environment and shall be backed by a warranty equal to that of the exterior paint and finish. The specified assemblies feature a chrome-plated panel-mount bezel with durable UV resistant polycarbonate inserts. These UV resistant polycarbonate graphic inserts shall be sub-surface screen printed to eliminate the possibility of wear and protect the inks from fading. All insert labels shall be backed with 3M permanent adhesive (200MP), which meets UL969 and NFPA standards.

## PRESSURE GOVERNORS

### Pump Pressure Governor

The apparatus shall be equipped with a Class 1 "TOTAL PRESSURE GOVERNOR" (TPG) Integrated pump control system. The TPG shall have a weatherproof color display. The TPG will operate as an engine/pump pressure governor/throttle system that is connected directly to the

Electronic Control Module (ECM) mounted on the engine. The TPG is to operate as a pressure sensor (regulating) governor (PSG).

The TPG shall display engine RPM, oil pressure, engine temperature and voltage along with providing critical warnings. The warning levels for oil pressure, high engine temperature, low voltage and high voltage shall be independently programmable.

## **GAUGES**

### **GAUGE IC 10 LED FOAM TANK LEVEL**

One (1) Innovative Controls brand foam tank level gauge shall be located at the pump operator's panel to provide a high-visibility display of the foam tank level. Ten (10) high-intensity light emitting diodes (LEDs) on the display module shall have a 3-dimensional lens allowing the full, 3/4, 1/2, 1/4, and refill levels to be easily distinguished at a glance within full 180 degree visibility.

The display module shall be protected from vibration and contamination with the components being encased in an encapsulated plastic housing. The long life and extreme durability of LED indicators eliminates light bulb replacement and maintenance. Color coded cover plates shall complete the assembly of the display module to the pump panel. Each display level can be set independently for maximum reliability.

The display shall provide a steady indication of fluid level despite sloshing inside of the tank when the vehicle is in motion due to an "anti-slosh" feature.

### **GAUGE IC 10 LED TANK LEVEL WATER/PSTANK**

One (1) Innovative Controls brand water tank level gauge shall be located at the pump operator's panel to provide a high-visibility display of the water tank level. Ten (10) high-intensity light emitting diodes (LEDs) on the display module shall have a 3-dimensional lens allowing the full, 3/4, 1/2, 1/4, and refill levels to be easily distinguished at a glance within full 180 degree visibility.

The display module shall be protected from vibration and contamination with the components being encased in an encapsulated plastic housing. The long life and extreme durability of LED indicators eliminates light bulb replacement and maintenance. Color coded cover plates shall complete the assembly of the display module to the pump panel. System calibration shall be accomplished via supplied magnet. Each display level can be set independently for maximum reliability.

The display shall provide a steady indication of fluid level despite sloshing inside of the tank when the vehicle is in motion due to an "anti-slosh" feature.

In addition to the pump panel mounted lights there shall be one (1) Whelen PSTank series LED (Light Emitting Diode) strip light installed each side as specified.

The system shall be controlled by an Innovative Control tank level driver module that is integral of the NFPA required pump panel mounted tank level light assembly.

The additional tank level system shall be interlocked through the parking brake assembly so as not to be on while the vehicle is in motion.

The remote strip light shall be arranged as follows:

Full Green  
3/4 Blue  
1/2 Amber  
1/4 Red

Location of Whelen PSTank Strip Lights: each side of cab rear of front doors.

## **Flow Meter System**

The apparatus shall be equipped with a Class 1 Flowminder on the specified discharge to digitally display the actual volume of water (in gallons per minute) being discharged through the specified line.

Flowminder shall consist of:

- Weatherproof digital flow display with super-bright digits at least 1/2" high. The display shall read actual flow and shall switch to total flow when the totalizer button is depressed and held.
- Flow transmitter mounted in the discharge line piping between the pump and the discharge outlet. The transmitter shall consist of a weather resistant black anodized housing with brass wetted parts with a double paddle wheel.
- Connecting cables to connect the digital display to the flow transmitter and apparatus power.
- Machined mounting hardware to hold the transmitter in position in the discharge line.
- The flow meter shall be checked and calibrated prior to delivery of the apparatus.

The Flowminder shall be installed in addition to the pressure gauge.

A Flowminder shall be provided for the following discharge(s): deck gun.

## **2.5 [Qty: 9]**

The valve discharge gauges shall be 2 1/2" (63mm) diameter Innovative Controls pressure gauges. Each gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauges shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F. Each gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/-

1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauges shall be installed into decorative chrome-plated mounting bezels that incorporate valve-identifying verbiage and/or color labels. The gauges shall display a range from 0 to 400 psi with black graphics on a white background.

#### **4" Master Pressure Gauges w/Bezel**

The master intake and master discharge gauges shall be 4“(101mm) diameter IC pressure gauges. Each gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge. The gauges shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F. Each gauge shall meet ANSI B40.1 Grade 1A requirements with an accuracy of +/- 1% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

The two master gauges shall be installed into decorative chrome-plated zinc mounting bezel that also incorporates a test port manifold and a graphic overlay that identifies the master intake and discharge gauges, the vacuum test port, and the pressure test port. The test port manifold is solid cast brass with chrome plated plugs. The master gauges shall be installed on the pump panel no more than 6 inches apart. The gauge on the left shall be the master pump intake gauge and display a range from 30” vac to 400 psi with black graphics on a white background. The gauge on the right shall be the master pump discharge gauge and display a range from 0 to 400 psi with black graphics on a white background.

#### **Flow Meter Totalizer Button**

The apparatus shall be equipped with a Class 1 Totalizer button. When the totalizer button is dispressed and held it will give the total volume of water that has flow through each specified discharge that is equipped with a flowmeter.

## **FOAM SYSTEMS**

### **Hale 3.3 FoamLogix Foam System**

The apparatus shall be equipped with an automatic electronically controlled, direct injection, rotary gear pump, and discharge side foam proportioning system. Foam proportioning operation shall be based on direct measurement of water flow and remain consistent within the specified flows and pressures.

#### **System Requirements**

The complete foam proportioning system shall include the following:

1. Foam Pump
2. Control System
3. Tank Selector and Flushing Valves
4. Foam Concentrate Strainer
5. Integral Check Valve/ Injector Fitting.
6. Flow Meter(s) and Flow Meter Display Units
7. Control Cables
8. SAE 1922 CAN Capable Connection
9. Low Tank Level Switch(es)
10. Water Discharge Check Valves
11. Foam Tank(s)
12. Documentation

### **Foam Pump**

The foam proportioning system shall be compatible with Class A foam concentrates and most high viscosity normal hydrocarbon or polar solvent Class B foam concentrates. The foam proportioning system shall be capable of delivering the rated foam concentrate flow with the above mentioned foam concentrate types. Foam system manufacturer shall provide a list of foam chemicals that have been tested for compatibility with the foam pump.

The foam proportioning system shall be based on an electric motor driven, rotary gear foam concentrate pump, rated at 3.3 GPM (12 LPM) foam concentrate flow rate with maximum operating pressure of 400 psig (28 BAR).

The electric motor shall be powered by 12 volts direct current with a 3/4 HP (0.5 KW) power rating at a maximum current draw of 60 amps.

The rotary gear pump shall be close coupled to the motor without an oil-filled gearbox. The foam concentrate pump and all wetted parts of the system shall be constructed of corrosion-resistant materials compatible with all foam concentrates being used. The pump body, pump head, and pump cover shall be constructed of bronze with pump shaft, gears, and bearings constructed of stainless steel. A mechanical pump shaft seal shall be provided to prevent foam concentrate leakage around the rotating shaft. An internal foam concentrate relief valve constructed of stainless steel and preset at the factory for maximum system operating pressure shall be incorporated into the foam pump to protect the pump from over-pressurization. NO components of the foam concentrate pump and wetted parts of the foam system will be manufactured of aluminum.

The foam pump/motor assembly shall be permanently attached to an apparatus mountable base plate.

A foam concentrate flow meter shall be integral to the foam concentrate pump. The foam concentrate flow meter will provide a signal to the electronic control unit to make sure the proper amount of foam concentrate is injected into the discharge stream.

The entire base plate mounted assembly shall have electrical components sealed to NEMA 4X or equivalent for mounting in the apparatus pump compartment or any suitable location on the apparatus. The pump will be mounted to allow gravity feed of foam concentrate from the foam tank to the pump.

## **Control Systems**

The system shall be equipped with an electronic control unit, suitable for installation on the pump operator panel as the single point of operation for the foam proportioning system. Incorporated within the control unit shall be a microprocessor that receives input from water flow meter(s) while receiving foam concentrate pump output information from the foam concentrate flow meter. The microprocessor, through constant comparison of the flow signals, will ensure the operator preset proportional amount of foam concentrate is injected into the discharge stream of the fire pump. Control unit will utilize a single sealed electrical connector on the rear panel. Wiring harness shall provide an SAE 1922 CAN connection for diagnostics and systems operations/communications. Control unit will have an environmentally-sealed membrane front panel and sealed metallic housing.

The electronic control unit shall permit the pump operator to perform the following control and operation functions for the foam proportioning system:

- Provide push-button ON/OFF control of foam proportioning system.
- Provide push-button control of foam proportioning rates from 0.1% to 10.0%, in 0.1% increments.
- Show real time flow rate of water or foam solution.
- Show total volume of water or foam solution discharged during and after foam operations.
- Show foam concentrate injection rate.
- Show total amount of foam concentrate consumed.
- Permit resetting of totalized values for water and foam concentrate.
- Simulate water flow rates for manual operation, calibration, and testing of foam system.
- Enable system setup and full range system diagnostic functions.
- Indicate on LED bar graph foam concentrate is being injected and the foam system capacity.
- Indicate on LED bar graph when system capacity is not within design parameters.
- Store independent default values for Class A and Class B foam concentrate injection.
- Flash a "low concentrate" warning when the foam concentrate tank runs low.
- Flash a "no concentrate" warning and shut the system off when the foam tank is empty.
- Flash a "low battery" warning when battery voltage is low enough to affect system operation.
- Flash a "hot" warning when system is running hot due to low voltage or radiant heat.
- Read out calibration values to allow setting up a replacement unit.

A power distribution box shall be attached to the base plate to provide ease of installation. The distribution box shall be sealed to a NEMA 4X or equivalent rating to permit installation in the pump compartment.

Foam concentrate flow feedback shall be provided to the control unit through the distribution box by a sensor mounted in the foam pump body. Rotors in the foam discharge side of the foam pump will provide the targets to pulse the sensor to generate a feedback signal.

The distribution box shall receive 12 volt direct current power from the apparatus electrical system as the only source of power to operate the system and power component sensors. Control power will be distributed to the control unit, flow meter sensor and foam concentrate feedback sensor through a conductor in the cable sets provided by the foam proportioner manufacturer. The microprocessor in the control unit will process input signals from the flow meter sensor and foam feedback sensor to determine the proper duty cycle for the electric motor to run. The distribution box will provide power to the electric motor, based on signals received from the control unit, at a variable rate to ensure that the correct proportion of foam concentrate, preset by the pump operator on the control unit, is injected into the water pump discharge stream. The distribution box shall have a main power control switch and overcurrent protection for the foam proportioning system.

All primary electrical wires for the foam concentrate system shall be type SXL or GXL (SAE J1128) per NFPA requirements. Electrical connections shall be made using heavy duty 5/16 inch (minimum) diameter studs and nuts.

### **Tank Selector and Flushing Valves**

When dual foam concentrate tanks are installed on the apparatus a dual tank switch over system consisting of either of the following options shall be installed to provide rapid change-over of foam concentrate reservoirs. The dual tank selector valves shall also have provision for connection of flushing water to prevent mixing of dissimilar incompatible foam concentrates:

#### **Air Operated Dual Tank Selector**

An air operated dual tank selector shall provide dual foam tank selection via a three position toggle switch located on the pump operator panel. Indicator lights on the switch placard will indicate which tank is selected. The air operated dual tank system shall be provided as an integral part of the foam concentrate pump. The air dual tank system shall be installed and tested at the foam system manufacturer. Operating air shall be provided continuously from the apparatus compressed air system. A foam concentrate bypass valve shall be provided integral to the air operated dual tank valve to permit operation of the foam concentrate pump for test and calibration purposes without injecting foam concentrate into the water discharge.

The air operated dual tank selector will be electrically interlocked with the low tank switches and control unit. When the selector is switched from one tank to the other the default foam concentrate injection rate will automatically change without operator intervention. Also, when

the selector is switched from one tank to the other the low level sensor in the selected tank will be active and the other one will be isolated from the system.

The center position of the panel mounted dual tank switch will provide a clean water flush of the foam concentrate pump to prevent concentrate mixing and possible jelling. When FLUSH is selected the foam pump will only run for ten (10) seconds. All NFPA required check valves and flushing water strainers shall be provided integral to the air dual tank selector.

### **Manual Dual Tank Selector**

The manual dual tank selector will be electrically interlocked with the low tank switches and control unit. When the selector is switched from one tank to the other the default foam concentrate injection rate will automatically change without operator intervention. Also, when the selector is switched from one tank to the other the low level sensor in the selected tank will be active and the other one will be isolated from the system. Switches provided on the manual dual tank valve will determine which low tank level sensor is providing feedback and which foam concentrate injection rate to use. When FLUSH is selected the foam pump will only run for ten (10) seconds. All NFPA required flushing water check valves shall be provided with the manual dual tank selector.

### **Single Foam Tank Flush**

When dual foam concentrate tanks ARE NOT installed flushing capabilities can be provided with a three-way flush valve. A switch provided integral to the three-way valve will indicate when the valve is in the "FLUSH" position. The "FLUSH" position will provide fresh water flushing capabilities to prevent foam concentrate deterioration of the foam pump. When FLUSH is selected the foam pump will only run for ten (10) seconds. NFPA required flushing water check valves shall be provided with the single tank flush selector valve.

**BYPASS VALVE:** When the manual dual tank selector, single tank flush valve or a single tank system without flushing capabilities is installed a three way bypass valve shall be provided on the discharge of the foam pump to permit operation of the foam concentrate pump for test and calibration purposes without injecting foam concentrate into the water discharge. The bypass valve shall be capable of being panel mounted.

### **Foam Concentrate Strainers**

Field serviceable foam concentrate strainers shall be provided in the foam concentrate suction line. When the strainer will not be subject to flushing water pressure a plastic bodied in-line strainer shall be used. The strainer body shall be constructed of plastic with a stainless steel mesh screen and shall be compatible with both Class A and Class B foam concentrates. A shutoff valve will be provided to enable isolation of the strainer for service. The strainer will be mounted in the pump compartment. The strainer will be a low pressure device and will not be subject to flush water pressure.

Where strainers are subject to flush water pressure, panel mounted field serviceable foam concentrate strainers rated at 500 psig (34 BAR) minimum shall be installed on the pump panel. The strainer body shall be constructed of brass with a chrome cap and an easily removable stainless steel mesh screen for field servicing. A 1½ inch strainer with ¾ inch NPT connection ports will be used for Class A foam concentrate and a 2½ inch strainer with 1 inch NPT connection ports shall be used for Class B foam concentrate.

### **Integral Check Valve/Injector Fitting and Waterway Check Valves**

To prevent contamination of the foam concentrate supply, foam concentrate shall be injected into the water pump discharge stream through an integral check valve/ injector fitting. The check valve/ injector fitting shall be of one piece body construction of brass, with stainless steel wetted parts.

To prevent contamination of the water pump and apparatus booster tank, spring loaded double-door type check valves shall be installed in the water pump discharge piping prior to the foam injection point.

### **Flow Meter(s) and Flow Meter Display Units**

A paddlewheel type flow meter with a stainless steel impeller wheel shall monitor water flow in foam capable discharges. The flow meter shall have a 500 psig (34 BAR) pressure rating per NFPA requirements.

One (1) flow meter is required for proper operation of the foam proportioning system. Power for the flow meter sensor will be provided through the cable set from the control unit. Flow meters shall have saddle clamp mounting which shall be used to mount in stainless steel, brass or iron OEM manifold assemblies.

The flow meter selected shall be sized to adequately monitor the minimum and maximum flow expected in the foam capable discharges.

### **Control Cables**

The cables for connection of the control unit, distribution box, flow meter sensor, flow meter display units, pressure transducers and feedback sensor shall have the ability to connect together and total length shall not exceed 40 feet (12 meters). The connections shall be keyed to prevent misconnection and improper system operation. Where required, a shield drain wire shall be tied to one of the pins on each end of the cable. No externally attached ferrite beads shall be installed for the purpose of electrical shielding. When properly connected the connections shall be sealed to NEMA 4X or equivalent.

### **Low Tank Level Switch**

A low tank level switch shall be installed in each foam concentrate tank that supplies foam concentrate to the foam proportioning system. The low tank level sensor shall be connected to

the foam proportioning system to provide protection against dry running of the foam pump. The low tank level sensor can be mounted on the side, bottom or top of the foam concentrate tank. The low tank level sensor and electrical connections shall be sealed to prevent infusion of foam concentrate into the wiring and possible short circuit of the tank level sensor. The low tank sensor shall be mounted so that the flow of foam concentrate from the tank does not cause a false low tank reading.

### **Documentation**

The foam proportioning system shall have a one-year limited manufacturer warranty.

### **Foam System Certification**

The foam system performance shall be tested and certified in compliance with the applicable NFPA 1901 requirements.

## **FOAM SYSTEM OPTIONS**

### **Foam System Plumbing**

The specified foam system shall be plumbed to 1.5 first speedlay, 1.5 second speedlay.

## **ELECTRICAL SYSTEMS**

### **Vehicle Data Recorder**

A vehicle data recorder system shall be provided to comply with the 2009 and 2016 editions of NFPA 1901. The following data shall be monitored:

- Vehicle speed MPH
- Acceleration (from speedometer) MPH/Sec.
- Deceleration (from speedometer) MPH/Sec.
- Engine speed RPM
- Engine throttle position % of full throttle
- ABS Event On/Off
- Seat occupied status Occupied Yes/No by position
- Seat belt status Buckled Yes/No by position
- Master Optical Warning Device Switch On/Off
- Time: 24 hour time
- Date: Year/Month/Day

### **Occupant Detection System**

There shall be a visual and audible warning system installed in the cab that indicates the occupant buckle status of all cab seating positions that are designed to be occupied during vehicle movement.

The audible warning shall activate when the vehicle's park brake is released and a seat position is not in a valid state. A valid state is defined as a seat that is unoccupied and the seat belt is unbuckled, or one that has the seat belt buckled after the seat has been occupied.

The visual warning shall consist of a graphical display that will continuously indicate the validity of each seat position.

The system shall include a display panel with LED back-lit ISO indicators for each seating position, seat sensor and safety belt latch switch for each cab seating position, audible alarm and braided wiring harness.

The display panel shall be located Driver side of center dash electrical cover.

## **Multiplex Electrical System**

### **Electrical System**

The apparatus shall incorporate a Weldon V-MUX multiplex 12 volt electrical system. The system shall have the capability of delivering multiple signals via a CAN bus. The electrical system installed by the apparatus manufacturer shall conform to current SAE standards, the latest FMVSS standards, and the requirements of the applicable NFPA 1901 standards.

The electrical system shall be pre-wired for optional computer modem accessibility to allow service personnel to easily plug in a modem to allow remote diagnostics.

The electrical circuits shall be provided with low voltage over-current protective devices. Such devices shall be accessible and located in required terminal connection locations or weather-resistant enclosures. The over-current 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.

Any electrical junction or terminal boxes shall be weather-resistant and located away from water spray conditions.

### **Multiplex System**

For superior system integrity, the networked multiplex system shall meet the following minimum component requirements:

- The network system must be Peer to Peer technology based on RS485 protocol. No one module shall hold the programming for other modules. One or two modules on a network referred to as Peer to Peer, while the rest of the network consists of a one master and several slaves is not considered Peer to Peer for this application.
- Modules shall be IP67 rated to handle the extreme operating environment found in the fire service industry.
- All modules shall be solid state circuitry utilizing MOS-FET technology and utilize Deutsch series input/output connectors.
- Each module that controls a device shall hold its own configuration program.
- Each module should be able to function as a standalone module. No “add-on” module will be acceptable to achieve this form of operation.
- Load shedding power management (8 levels).
- Switch input capability for chassis functions.
- Responsible for lighting device activation.
- Self-contained diagnostic indicators.
- Wire harness needed to interface electrical devices with multiplex modules.
- The grounds from each device should return to main ground trunk in each sub harness by the use of ultrasonic splices.

## **Wiring**

All harnessing, wiring and connectors shall be manufactured to the following standards/guidelines. No exceptions.

- NFPA 1901-Standard for Automotive Fire Apparatus
- SAE J1127 and J1127
- IPC/WHMA-A-620 – Requirements and Acceptance for Cable and Wire Harness Assemblies. (Class 3 – High Performance Electronic Products)

All wiring shall be copper or copper alloys of a gauge rated to carry 125% of the maximum current for which the circuit is protected. Insulated wire and cable 8 gauge and smaller shall be SXL, GXL, or TXL per SAE J1128. Conductors 6 gauge and larger shall be SXL or SGT per SAE J1127.

All wiring shall be colored coded and imprinted with the circuits function. Minimum height of imprinted characters shall not be less than .082” plus or minus .01”. The imprinted characters shall repeat at a distance not greater than 3”.

A coil of wire shall be provided behind electrical appliances to allow them to be pulled away from mounting area for inspection and service work.

## **Wiring Protection**

The overall covering of the conductors shall be loom or braid.

Braid style wiring covers shall be constructed using a woven PVC-coated nylon multifilament braiding yarn. The yarn shall have a diameter of no less than .04" and a tensile strength of 22 lbs. The yarn shall have a service temperature rating of -65 F to 194 F. The braid shall consist of 24 strands of yarn with 21 black and 3 yellow. The yellow shall be oriented the same and be next to each other.

Wiring loom shall be flame retardant black nylon. The loom shall have a service temperature of -40 F to 300 F and be secured to the wire bundle with adhesive-backed vinyl tape.

### **Wiring Connectors**

All connectors shall be Deutsch series unless a different series of connector is needed to mate to a supplier's component. The connectors and terminals shall be assembled per the connector/terminal manufacturer's specification. Crimble/Solderless terminals shall be acceptable. Heat shrink style shall be utilized unless used within the confines of the cab.

### **NFPA Required Testing of Electrical System**

The apparatus shall be electrical 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 NFPA 1901. 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 test fail.

#### **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 shall be permitted during this test. However, an alarm sounded by excessive battery discharge, as detected by the system required in NFPA 1901

Standard, or a system voltage of less than 11.7 volts DC for a 12 volt nominal system, for more than 120 seconds, shall be considered a test failure.

#### **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 nominal 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:
  - a. The nameplate rating of the alternator.
  - b. The alternator rating under the conditions.
  - c. Each specified component load.
  - d. Individual intermittent loads.

### **Multiplex Display**

The V-MUX multiplex electrical system shall include a text display.

The display shall have the following features:

- Rugged vacuum fluorescent technology
- Two twenty character lines
- Programmed to show door ajar status and diagnostic information

The display shall be located center of dash.

## **LIGHT BARS**

### **Light Bar Mounts**

One (1) pair of Whelen 5" tall (model MK8H) aluminum high mounts shall be provided on the front light bar.

### **Light Bar Color(s)**

Light Bar shall be provided with the following color LED modules: Red with clear lenses

### **Light Bar**

A Whelen Freedom IV Series 72" LED light bar model F4X7 with fourteen (14) LED modules shall be provided; two (2) front corner mounted LED modules, ten (10) forward facing LED modules and two (2) side facing LED modules (with front vista windows) or two (2) rear corner LED modules (without front vista windows).

No rear facing LEDs.

The light bars shall have clear lenses.

The white LEDs (if equipped) shall be switched off in blocking right of way mode.

The light bar shall be installed centered on the front cab roof.

### **Light Bars**

A pair of side facing Whelen Mini Freedom IV Series 21.5" LED light bars shall be provided. Each light bar shall contain four (4) LED modules. Each side facing light bar shall contain one (1) corner LED module forward facing, two (2) side facing LED modules and one (1) corner LED module rearward facing.

The white LEDs (if equipped) shall be switched off in blocking right of way mode.

The light bars shall be installed in the following location: centered above rear cab doors.

### **Light Bar Mounts**

One (1) pair of Whelen 5" tall (model MK8H) aluminum high mounts shall be provided on the side facing mini light bars.

## **WARNING LIGHT PACKAGES**

### **Lower Level Warning Light Package**

Eight (8) Whelen M6R Super LED red light heads and two (2) Whelen M2R Super LED red light heads shall be provided.

The lights shall include chrome flanges where applicable. The lights shall be wired with weatherproof connectors and shall be mounted as close to the corner points of the apparatus as is practical as follows:

- Two (2) Whelen M6R Super LED Red lights on the front of the apparatus facing forward
- Two (2) Whelen M6R Super LED Red lights on the rear of the apparatus facing rearward
- Two (2) lights each side of the apparatus, one (1) Whelen M6R Super LED Red each side at the forward most point (as practical), and one (1) Whelen M2R Super LED Red each side at the rearward most point (as practical).
- One (1) Whelen M6R Super LED Red light each side of the apparatus centrally located to provide mid ship warning light.

The side facing lights shall be located at forward most position, centered in rear wheel well, and side facing at rear of body in rubrail if equipped.

All warning devices shall be surface mounted in compliance with NFPA standards.

## **WARNING LIGHTS**

### **Upper Rear Warning Lights**

Two (2) Whelen model L31H Super LED beacons with Red domes shall be supplied.

The lights shall be located rear upper body on aerial style brackets to meet Zone C upper requirements.

### **Hazard (Door Ajar) Light**

There shall be a 2" red LED hazard light installed as specified.

The light shall be located center overhead.

### **Warning Lights**

Two (2) Whelen M6 series Linear Super LED red light heads with red lens shall be provided. The rectangular lights shall include chrome flanges where applicable.

Location: (1) each side of body rear facing up high.

### **Warning Lights**

Two (2) Whelen model M2R Super LED red light heads (red LEDs with clear lens) shall be provided.

The rectangular lights shall include chrome flanges where applicable. The lights shall be wired with weatherproof connectors.

Specifications include:

- Surface mounted
- Patented Linear LED reflector assembly
- Sealed assembly
- Mounting gasket
- Multiple Scan-Lock flash patterns available
- Chrome mounting flange

Location: (1) each side just behind rear wheels in rubrail if equipped, (1) each side in pump module rubrail if equipped.

All warning devices shall be surface mounted in compliance with NFPA standards.

## **DIRECTIONAL LIGHT BARS**

### **Directional Traffic Warning Light**

One (1) Whelen TAL65 LED 36" long Traffic Advisor with amber lenses shall be provided.

The directional bar shall include a TACTLD1 control head. The control head shall include a remote flash control and end lamp enable/disable feature.

The light shall be installed at the rear of the body to direct traffic around the vehicle.

### **Directional Light Bar Control Location**

The directional light bar control head shall be located in the center overhead console offset to driver side.

### **Directional Light Wired to Warning Lights**

The rear directional light bar shall be activated when the upper level warning lights are activated to provide additional lighting, in addition to the warning lights, when the vehicle is responding to a scene.

### **Recessed Directional Light Bar Mount**

An area at the rear of the body shall be provided for recess mounting of a directional light bar. The recess shall reduce the opening height of the rear compartment(s) (if applicable).

## **SIRENS**

### **Electronic Siren**

A Whelen 295HFSM1 electronic siren shall be installed in the cab. The siren amplifier and control panel module shall include a rotary selector for six (6) functions, on/off switch, push

button switch for manual siren or air horn tones, and noise canceling microphone. Siren shall feature a mechanical siren tone in place of the piercer tone.

### **Electronic Siren Control Location**

The electronic siren control shall be located in the center overhead.

### **Mechanical Siren**

A chrome plated flush mounted Federal Q2B-NN coaster siren shall be installed in the front bumper. An electric siren brake switch shall be located in the cab accessible to driver.

The siren shall be located driver side front bumper.

## **SPEAKERS**

### **Siren Speaker**

One (1) Federal Signal model ES100 Dynamax 100 watt speaker shall be flush mounted as far forward and as low as possible on the front of the vehicle. A polished model MSFMT with "E-ONE" grille shall be provided on the outside of the speaker to prevent road debris from entering the speaker.

Speaker dimensions shall be: 5.5 in. high x 5.9 in. wide x 2.5 in. deep. Weight = 5.5 lbs.

The speaker shall produce a minimum sound output of 120 dB at 10 feet to meet current NFPA 1901 requirements.

The speaker shall be located driver side front bumper inboard of frame, officer side front bumper inboard of frame.

## **DOT LIGHTING**

### **License Plate Light**

One (1) Truck-Lite model 15905 white LED license plate light mounted in a Truck-Lite model 15732 chrome plated plastic license plate housing shall be mounted at the rear of the body.

### **Tail Lights**

Three (3) Whelen 600 series LED (Light Emitting Diode) lights shall be installed in a Cast3 housing in a vertical position, each side at the rear of the body and wired with weatherproof connectors.

Light functions shall be as follows:

- LED red running light with red brake light in upper position.
- LED populated amber arrow pattern turn signal in middle position.
- LED clear back-up light in lower position.

A one-piece polished aluminum trim casting shall be mounted around the three (3) individual lights in a vertical position.

## **Marker Lights**

One (1) pair of Britax model L427.203L.12V LED amber/red marker rubber housed lights shall be provided. The lights shall be located on the rear body corners mounted in the down angle position. The red lenses shall illuminate to the rear of the apparatus and the amber shall illuminate to the front of the apparatus. The lights shall be wired to the marker light circuit.

## **LED Marker Lights**

LED clearance/marker lights shall be installed on the cab. The body marker lights shall be TecNiq 3/4" grommet mounted LED.

### **Upper Cab:**

- Five (5) amber LED clearance lights on the cab roof.

### **Lower Cab:**

- One (1) amber LED side turn/marker each side of cab ahead of the front door hinge.

### **Upper Body:**

- One (1) red LED clearance light each side at rear of body, facing rear.

### **Lower Body:**

- Three (3) red LED clearance lights centered at rear.
- One (1) red LED clearance light side facing at the trailing edge on either side of the apparatus body.
- One (1) amber LED clearance light side facing at front of body/pump module.
- One (1) amber LED auxiliary turn light side facing at front of body/pump module.

## **LIGHTS - COMPARTMENT, STEP & GROUND**

### **Compartment Light Package**

Two (2) ROM V4 compartment light strips shall be mounted in each body compartment greater than 4 cu. ft. Transverse compartments shall have four (4) lights located two (2) each side.

Each light bar shall include super bright white LEDs mounted to circuit boards that have acrylic conformal coating for corrosion protection. The LED circuit boards shall be mounted to an extruded aluminum base with lexan lens. The light shall produce 250 lumens per foot and be waterproof up to 1 meter (3.3 feet).

Compartment lights shall be wired to a master on/off rocker switch on the cab switch panel.

The wiring connection for the compartment lights shall be made with a weather-resistant plug in style connector. A single water and corrosion-resistant switch with a polycarbonate actuator and sealed contacts shall control each compartment light. The switch shall allow the light to illuminate if the compartment door is open.

## **Ground Lights**

The apparatus shall be equipped with a sufficient quantity of lights to properly illuminate the ground areas around the apparatus in accordance with current NFPA requirements. The lights shall be 4" circular LED (Light Emitting Diode) with clear lenses mounted in a resilient shock absorbent mount for improved bulb life. The wiring connections shall be made with a weather resistant plug in style connector.

Ground area lights shall be switched from the cab dash with the work light switch.

One (1) ground light shall be supplied under each side of the front bumper extension if equipped.

Lights in areas under the driver and crew area exits shall be activated automatically when the exit doors are opened.

## **Medical Cabinet Lighting**

Two (2) ROM V4 LED compartment light strips shall be mounted in the medical cabinet(s).

The light bar shall include super bright white LEDs mounted to circuit boards that have acrylic conformal coating for corrosion protection. The LED circuit boards shall be mounted to an extruded aluminum base with lexan lens. The lights shall produce 250 lumens per foot and be waterproof up to 1 meter (3.3 feet).

The light shall be controlled by a compartment door switch.

## **Recessed Step Light**

Two (2) TecNiq model T440 recessed 4" LED light with clear lens shall be provided to illuminate the step at the location specified.

Location: one (1) each side of the top mount walkway.

## **Cab Ground / Auxiliary Step Lights**

The cab shall be equipped with a sufficient quantity of lights to properly illuminate the auxiliary steps and the ground areas below them in accordance with current NFPA requirements. The lights shall be EON LED (Light Emitting Diode) with clear lenses. The wiring connections shall be made with a weather resistant plug in style connector.

The lights shall be switched from the cab dash with the work light switch. The lights shall also be activated automatically when the exit doors are opened.

## **LIGHTS - DECK AND SCENE**

### **Hose Bed Light Wired to Back-Up Lights**

The hose bed light shall be activated when the chassis is placed in reverse to provide additional lighting, in addition to the back-up lights, when backing the vehicle.

### **Deck/Scene Light Wired to Back-Up Lights**

The rear deck or scene lights shall be activated when the chassis is placed in reverse to provide additional lighting, in addition to the back-up lights, when backing the vehicle.

### **Scene Lights**

Two (2) Whelen model M6ZC series Linear Super LED clear scene lights shall be provided.

Each shall have Linear Super LED diodes with internal light deflecting optics. The internal light deflecting optics shall redirect the light without the use of angle brackets.

The lights shall be located (1) each side rear compartment face up high and be controlled by a switch in cab accessible to driver (lights on sides of apparatus to be switched separately).

### **Hose Bed Light**

A Whelen LED light model PFBP12C shall be installed at the front area of the hose bed to provide hose bed lighting per current NFPA 1901. The hose bed light shall be switched with work light switch in the cab.

## **LIGHTS - NON-WARNING**

### **Engine Compartment Light**

There shall be lighting provided in compliance with NFPA to illuminate the engine compartment area.

### **Pump Compartment LED Light**

An LED light shall be provided in the pump compartment area for NFPA compliance. The light shall be wired to operate with the work light switch in the cab.

### **LED Pump Panel Light Package**

Two (2) Weldon LED model 2631-0000-30 lights shall be mounted under a light shield directly above each side pump panel with the top mount panel having three (3) lights. The work light switch in the cab shall activate the lights when the parking brakes are set.

### **Map Light**

A Sunnex 742-20 map light shall be supplied.

The map light shall be a 12 volt, 20" flexible gooseneck. A 20 watt halogen bulb and spot reflector with clear lens shall be supplied. An on-off switch shall be supplied on the base of the light.

The map light shall have a matte black finish.

Location: at officer's A post.

### **Spotlight**

One (1) Golight model 2049 12 volt 65 watt remote controlled spotlight shall be supplied.

The spotlight shall produce 400,000 candlepower and have a 135 degree vertical and 370 degree horizontal range of motion. The light shall be mounted in a black, heat resistant, high impact weather resistant housing.

The light shall be controlled by both a RadioRay wireless remote and a dash / console mounted control pad.

If one light is selected, it shall be mounted at the center of the cab roof to the rear of the light bar. If two are selected they shall be mounted one each side of the cab roof to rear of the light bar.

The light shall have a 3 year warranty.

### **LED Pump Panel Light - Additional**

One (1) Weldon LED light model 2631-0000-30 shall be mounted under the light shield, in addition to the existing pump panel lights. The additional light shall be located at the top mount control panel.

### **Hand Held Spotlight**

A Whelen PAR46 hand held 12 volt super LED spotlight with mounting bracket shall be provided. It shall be hardwired and located at the officer`s side of the cab dash.

## **CONTROLS / SWITCHES**

### **Foot Switch**

A heavy duty metal floor mounted foot switch shall be installed to operate the air horns. It shall be located driver's side.

### **Foot Switch**

A heavy duty metal floor mounted foot switch shall be installed to operate the Q2B siren. It shall be located driver's side.

## **CAMERAS / INTERCOM**

### **Back-Up Camera**

A Safety Vision back-up camera model SV-625B-Kit with a color monitor model SV-CLCD70BA shall be installed. The monitor shall be installed at the front of the cab visible at night and in bright sunlight to the driver. The camera shall be mounted up high at the rear of the vehicle to provide a wide angle rear view with audio. The system shall include a cable with metallic waterproof threaded o-ring seal connectors to ensure positive connection between video cable and camera to prevent unplugging due to vibration resulting in video loss to vehicle operator.

### **Camera, Officer Side**

A Safety Vision model SV-622RS camera will be located on the officer side front corner of the cab. This camera will be interlocked with the turn indicator. The system shall include a cable with metallic waterproof threaded o-ring seal connectors to ensure positive connection between video cable and camera to prevent unplugging due to vibration resulting in video loss to vehicle operator.

Requires the option for the Safety Vision back-up camera system which consists of the colored monitor, back-up camera and control box.

### **Back-Up Camera Monitor Location**

The back-up camera monitor shall be located on the center dash offset driver.

## **MISC ELECTRICAL**

## **Back-Up Alarm**

An electronic back-up alarm shall be supplied. The 97 dB alarm shall be wired into the chassis back-up lights to signal when the vehicle is in reverse gear.

## **12 Volt DC Power Distribution Module**

There shall be a 12 place 12 volt DC power distribution module installed as specified.

The module will have six (6) circuits wired directly to the battery and have six (6) circuits wired through the master battery switch with 12 positions for grounds. Connection to the power module circuit will be through a .250 female spade connector. Each buss will be protected with a 50 amp circuit breaker for overload protection. The module will accept ATC blade type fuses or 22X series circuit breakers.

The module shall be located behind officer's seat.

## **LIGHTS - QUARTZ**

### **Whelen Pioneer 12V LED Flood Light**

A Whelen Pioneer Plus series 12V flood light model PFP2 dual panel LED light head shall be provided on a cab brow mount. The rectangular extruded light fixture with die cast end caps shall measure 14" wide by 4-5/8" high by 3" deep and have a white powder coat finish. The light fixture shall have dual panel (4) clusters of LED lamps with molded vacuum metalized reflector that draws 12 amps and produce 14,000 usable lumens.

The light shall be located center of front cab brow.

### **Pioneer 12 Volt Flood Light**

Whelen Pioneer Plus, PFP2 12V LED light fixture(s) on a Whelen 3000 series pole shall be provided. The rectangular extruded light fixture with die cast end caps shall measure 14" wide by 4-5/8" high by 3" deep and have a white powder coat finish. The light fixture shall have a dual panel (4) clusters of LED lamps with molded vacuum metalized reflector that draws 13 amps at 12.8 VDC. The lights shall be provided with a locking swivel joint to allow the lights to be manually tilted up/down and locked in position by the operator. Handle standard.

The light assembly shall be externally mounted as specified. The pole shall allow for 360-degree rotation of the light. A locking knob shall hold the pole at the desired height.

Location: officer side back of cab, driver side back of cab.

## **RECEPTACLES**

## **Receptacle**

A 20 amp, 110 volt 3-prong straight blade NEMA 5-20 duplex household receptacle with stainless steel cover plate shall be installed in a non-weather exposed area as specified by the department. The receptacle shall be wired to the inlet receptacle where it will have overcurrent protection from an external source.

Location: center rear wall of center rear medical compartment up high.

## **MISC LOOSE EQUIPMENT**

### **DOT Required Drive Away Kit**

Three (3) triangular warning reflectors with carrying case shall be supplied to satisfy the DOT requirement.

## **EXTERIOR PAINT**

### **Paint Break with Dip to Grille**

The cab shall have a two-tone paint break. The break line shall be approximately 31.5 inches below the cab roof drip rail. The paint break shall include a dip down to the corners of the cab grille.

### **Painted Pump/Pre-Connect Module(s)**

The apparatus pump/pre-connect module(s) shall be painted job color.

The paint process shall match what is applied to the body.

### **Paint Custom Cab**

The apparatus cab shall be painted Sikkens FLNA3225E-1 Red. The paint process shall meet or exceed current state regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water, and soil. Contractor shall, upon demand, provide evidence that the manufacturing facility is in compliance with State EPA rules and regulations.

The aluminum cab exterior shall have no mounted components prior to painting to assure full coverage of metal treatments and paint to the exterior surfaces. Cab doors and any hinged smooth-plate compartment doors shall be painted separately to assure proper paint coverage on cab, door jambs and door edges.

Paint process shall feature Sikkens high solid LV products and be performed in the following steps:

- Corrosion Prevention - all aluminum surfaces shall be pre-treated with the Alodine 5700 conversion coating to provide superior corrosion resistance and excellent adhesion of the base coat.
- Sikkens Sealer/Primer LV - acrylic urethane sealer/primer shall be applied to guarantee excellent gloss hold-out, chip resistance and a uniform base color.
- Sikkens High Solid LVBT650 (Base coat) - a lead-free, chromate-free high solid acrylic urethane base coat shall be applied, providing excellent coverage and durability. A minimum of two (2) coats shall be applied.
- Sikkens High Solid LVBT650 (Clear coat) - high solid LV clear coat shall be applied as the final step in order to ensure full gloss and color retention and durability. A minimum of two (2) coats shall be applied.

Any location where aluminum is penetrated after painting, for the purpose of mounting steps, hand rails, doors, lights, or other specified components shall be treated at the point of penetration with a corrosion inhibiting pre-treatment (ECK Corrosion Control). The pre-treatment shall be applied to the aluminum sheet metal or aluminum extrusions in all locations where the aluminum has been penetrated. All hardware used in mounting steps, hand rails, doors, lights, or other specified components shall be individually treated with the corrosion inhibiting pre-treatment.

After the paint process is complete, the gloss rating of the unit shall be tested with a 20 degree gloss meter. Coating thickness shall be measured with a digital MIL gauge and the orange peel with a digital wave scan device.

### **Paint Cab Two-Tone Color**

The upper section of the cab shall be painted FLNA4006 White.

The paint process of the secondary cab color shall be the same as the primary color.

### **Paint Body Small**

The apparatus body shall be painted Sikkens FLNA3225E-1 Red. The paint process shall meet or exceed current state regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water, and soil. Contractor shall, upon demand, provide evidence that the manufacturing facility is in compliance with State EPA rules and regulations.

The aluminum body exterior shall have no mounted components prior to painting to assure full coverage of metal treatments and paint to the exterior surfaces of the body. Any vertically or horizontally hinged smooth-plate compartment doors shall be painted separately to assure proper paint coverage on body, door jambs and door edges.

Paint process shall feature Sikkens high solid LV products and be performed in the following steps:

- Corrosion Prevention - all aluminum surfaces shall be pre-treated with the Alodine 5700 conversion coating to provide superior corrosion resistance and excellent adhesion of the base coat.
- Sikkens Sealer/Primer LV - acrylic urethane sealer/primer shall be applied to guarantee excellent gloss hold-out, chip resistance and a uniform base color.
- Sikkens High Solid LVBT650 (Base coat) - a lead-free, chromate-free high solid acrylic urethane base coat shall be applied, providing excellent coverage and durability. A minimum of two (2) coats shall be applied.
- Sikkens High Solid LVBT650 (Clear coat) - high solid LV clear coat shall be applied as the final step in order to ensure full gloss and color retention and durability. A minimum of two (2) coats shall be applied.

Any location where aluminum is penetrated after painting, for the purpose of mounting steps, hand rails, doors, lights, or other specified components shall be treated at the point of penetration with a corrosion inhibiting pre-treatment (ECK Corrosion Control). The pre-treatment shall be applied to the aluminum sheet metal or aluminum extrusions in all locations where the aluminum has been penetrated. All hardware used in mounting steps, hand rails, doors, lights, or other specified components shall be individually treated with the corrosion inhibiting pre-treatment.

After the paint process is complete, the gloss rating of the unit shall be tested with a 20 degree gloss meter. Coating thickness shall be measured with a digital MIL gauge and the orange peel with a digital wave scan device.

## **INTERIOR PAINT**

### **Cab Interior Paint**

The interior of the cab shall be painted Zolatone gray #20-64. Prior to painting, all exposed interior metal surfaces shall be pretreated using a corrosion prevention system.

## **STRIPING**

### **Striping**

Reflective striping shall be provided and installed by the dealer/customer.

### **Scotchlite Chassis Stripe**

Scotchlite chassis stripe shall be 3/4" Black Scotchlite. Stripe shall be centrally located and shall contour with the chassis, following the paint break.

### **Rear Body Scotchlite Striping**

Printed chevron style Scotchlite striping shall be provided on the rear of the apparatus. The stripes shall consist of 6" Yellow/Red alternating stripes in an "A" pattern. The striping shall be

located on the rear facing extrusions, panels, doors and inboard/outboard of the beavertails if applicable.

### **Designated Standing / Walking Area Indication**

A 1" wide yellow line shall be applied to indicate the outside perimeter of designated standing and walking areas above 48" from the ground in compliance with 2016 NFPA 1901. Steps, ladders and areas with a railing or structure at least 12" high are excluded from requiring the line.

## **WARRANTY / STANDARD & EXTENDED**

### **Standard 1 Year Warranty**

The apparatus manufacturer shall provide a full 1-year standard warranty. All components manufactured by the apparatus manufacturer shall be covered against defects in materials or workmanship for a 1-year period. All components covered by separate suppliers such as engines, transmissions, tires, and batteries shall maintain the warranty as provided by the component supplier. A copy of the warranty document shall be provided with the proposal.

### **Lifetime Frame Warranty**

The apparatus manufacturer shall provide a full lifetime frame warranty. This warranty shall cover all apparatus manufacturer designed frame, frame members, and cross-members against defects in materials or workmanship for the lifetime of the covered apparatus. A copy of the warranty document shall be provided with the proposal. Frame warranties that do not cover cross-members for the life of the vehicle shall not be acceptable.

### **10 Year 100,000 Mile Structural Warranty**

The apparatus manufacturer shall provide a comprehensive 10 year/100,000 mile structural warranty. This warranty shall cover all structural components of the cab and/or body manufactured by the apparatus manufacturer against defects in materials or workmanship for 10 years or 100,000 miles, whichever occurs first. Excluded from this warranty are all hardware, mechanical items, electrical items, or paint finishes. A copy of the warranty document shall be provided with the proposal.

### **10 Year Stainless Steel Plumbing Warranty**

The apparatus manufacturer shall provide a full 10-year stainless steel plumbing components warranty. This warranty shall cover defects in materials or workmanship of apparatus manufacturer designed foam/water plumbing system stainless steel components for 10 years. A copy of the warranty document shall be provided with the proposal.

### **10 Year Paint and Corrosion Warranty**

The apparatus manufacturer shall provide a 10-year limited paint and corrosion perforation warranty. This warranty shall cover paint peeling, cracking, blistering, and corrosion provided the vehicle is used in a normal and reasonable manner.

The paint shall be prorated for 10 years as follows:

Topcoat & Appearance: Gloss, Color Retention, Cracking		Coating System, Adhesion & Corrosion: Includes Dissimilar metal corrosion, Flaking, Blistering, Bubbling	
0 to 72 months	100%	0 to 36 months	100%
73 to 120 months	50%	37 to 84 months	50%
		85 to 120 months	25%

Corrosion perforation shall be covered 100% for 10 years. Corrosion perforation is defined as complete penetration through the exterior metal of the apparatus.

The warranty period shall begin upon delivery of the apparatus to the original user-purchaser. A copy of the warranty document shall be provided with the proposal.

UV paint fade shall be covered in a separate warranty supplied by Akzo Nobel (Sikkens) and shall be for a minimum of 10 years.

## **25 Year Frame Rail Corrosion Warranty**

The chassis manufacturer shall provide a 25 year corrosion warranty on the chassis frame rails. This warranty shall cover the chassis frame rails, including frame rail liners (if equipped), for a period of 25 years after the date on which the vehicle is delivered to the original purchaser. A copy of the warranty document shall be provided with the proposal. Please refer to warranty document for complete details and exclusions.

# **SUPPORT, DELIVERY, INSPECTIONS AND MANUALS**

## **Approval Drawings**

A general arrangement drawing depicting the vehicles appearance shall be provided. The drawing shall consist of left side, right side, front, and rear elevation views.

Vehicles requiring pump controls shall include a general arrangement view of the pump operator's position, scaled the same as the elevation views.

## **Electronic Manuals**

Two (2) copies of all operator, service, and parts manuals **MUST** be supplied at the time of delivery in electronic format (CD-ROMs) -NO EXCEPTIONS! The electronic manuals shall include the following information:

- Operating Instructions, descriptions, specifications, and ratings of the cab, chassis, body, aerial (if applicable), installed components, and auxiliary systems.
- Warnings and cautions pertaining to the operation and maintenance of the fire apparatus and fire fighting systems.
- Charts, tables, checklists, and illustrations relating to lubrication, cleaning, troubleshooting, diagnostics, and inspections.
- Instructions regarding the frequency and procedure for recommended maintenance.
- Maintenance instructions for the repair and replacement of installed components.
- Parts listing with descriptions and illustrations for identification.
- Warranty descriptions and coverage.

The CD-ROM shall incorporate a navigation page with electronic links to the operator's manual, service manual, parts manual, and warranty information, as well as instructions on how to use the manual. Each copy shall include a table of contents with links to the specified documents or illustrations.

The CD must be formatted in such a manner as to allow not only the printing of the entire manual, but to also the cutting, pasting, or copying of individual documents to other electronic media, such as electronic mail, memos, and the like.

A find feature shall be included to allow for searches by text or by part number.

These electronic manuals shall be accessible from any computer operating system capable of supporting portable document format (PDF). Permanent copies of all pertinent data shall be kept file at both the local dealership and at the manufacturer's location.

NOTE: Engine overhaul, engine parts, transmission overhaul, and transmission parts manuals are not included.

## **Fire Apparatus Safety Guide**

Fire Apparatus Safety Guide published by FAMA, latest edition. This safety manual is intended to point out some of the basic safety situations that may be encountered during the normal operation and maintenance of a fire apparatus and to suggest possible ways of dealing with these situations. This manual is NOT a substitute for the E-ONE's fire apparatus operator and maintenance manuals or commercial chassis manufacturer's operator and maintenance manuals.



## Fire Apparatus Quotation for: PEMBROKE PINES FIRE RESCUE



Quotation Number: 80703 Rev: 68

Unit Description: PMPR-TYPH

Quote Description: Pumper, Typhoon

Salesperson: RWILSON

Salescode	Extended Description	Qty	
<b>FRAME ASSEMBLY</b>			
1250-0011	Rear underbody support frame.	1	
1250-0080	Frame assembly with 10.25 x 3.5 x .375 powder coated galvanized rails.	1	
1250-0083	Frame liner 9.375 x 3.125 x .375, galvanized and powder coated.	1	
<b>AXLE OPTIONS</b>			
1025-0017	Meritor RS-25-160 single rear axle 27,000 lb. capacity.	1	
1025-0028	Koni shock absorbers for front axle - adjustable.	1	
1025-0123	Meritor FL941 front axle 19,840 lb.	1	
<b>SUSPENSIONS</b>			
1070-0027	Rear suspension FIREMAAX EX model FMX-272 27,000 lb. single axle air ride.	1	
<b>TIRE OPTIONS</b>			
1060-0005	Four Michelin 12R tires model XZE highway tread for rear axle.	1	
1060-0047	Two Michelin 385 tires model XFE for front axle.	1	
1060-0053	PressurePro tire pressure monitoring system for single rear axle units. Includes bail mounted display in cab.	1	
<b>BRAKE SYSTEMS</b>			
1100-0001	Meritor EX225H 17" disc brakes for front axle.	1	
1100-0002	ArvinMeritor 16-1/2" x 7" S-cam brakes with cast brake drums for a single rear axle.	1	
1100-0005	Brake system air 4X2/4X4.	1	
1100-0006	Parking brake release mounted on the driver's side lower dash.	1	
1100-0020	Compression fittings for all air brake system lines. Includes cab interior air lines as applicable.	1	

Salescode	Extended Description	Qty	
<b>BRAKE SYSTEMS</b>			
1100-0024	G4 Electronic Stability Control (4x2), Includes RSC and ATC. Not available on 4x4, commercial chassis or tiller.	1	
<b>TESTING COMPLIANCE STANDARD</b>			
1001-0065	The E-ONE supplied components of the vehicle shall meet the requirements of NFPA 1901, 2016 edition.	1	
3090-0002	OAH. Unit has no overall height restrictions.	1	
3090-0004	OAL. Unit has no overall length restrictions.	1	
3090-0007	Hosebed hoseload allowance on the apparatus shall be 1200 lbs.	1	
3340-1137-12C	Equipment allowance on the apparatus shall be 2500 lbs. This allowance is in addition to the weight of the hoses and ground ladders listed in the shop order as applicable.	1	
<b>BUMPER TRAYS</b>			
1150-0292	Bumper tray with no slats extending full width of the bumper as applicable based on outboard options. Includes notched frame extensions to provide at least 6" tray depth directly above the extensions. Tray to have multiple depth to meet customer specific requirements.	1	
1150-0302	Raised diamond plate lid with dual chrome grab handles, stainless steel butterfly latches and gas shocks. The lid shall be full width (as applicable based on outboard options) and high enough to accomodate reels, rescue tools and equipment as applicable per customer specific requirements.	1	
<b>BUMPERS</b>			
1160-0001	Bumper 12" high swept back stainless steel.	1	
1160-0008	3/16" Front Bumper Gravel Shield.	1	
1160-0015	24" Front Bumper Gravel Shield Extension.	1	
<b>WHEEL OPTIONS</b>			
1050-0007	Front axle wheel trim kit. Includes stainless steel lug nut covers (chrome plated plastic if applicable) and center cap with E-ONE logo. Note: Center cap will have an inspection port IPO a logo if equipped with Stemco oil seals.	1	
1050-0008	Rear axle (single) wheel trim kit. Includes stainless steel lug nut covers (chrome plated plastic if applicable) and center cap with E-ONE logo. E-ONE custom chassis w/steel wheels will have chrome plated plastic lug covers.	1	
1050-0044	Accuride aluminum wheels for front axle (2).	1	
1050-0045	Accuride aluminum wheels for rear axle (4).	1	

Salescode	Extended Description	Qty	
<b>AIR SYSTEM OPTIONS</b>			
1110-0000-001	Inlet for air system. Location: driver door jamb.	1	
1110-0002	Air dryer Bendix AD-9.	1	
1110-0005	Automatic moisture ejectors, heated.	1	
1110-0006	Air lines nylon.	1	
1110-0027	Isolated air tank. Includes pressure protection valve.	1	
1110-0041	Air horns Grover recessed in bumper (PR).	1	
1110-0043	Auxiliary air tank to be plumbed to the following optional accessories (if equipped): Chassis air horns, brake system air outlet, air reel, light tower, air primer and or customer/dealer supplied pneumatic add-on(s).	1	
<b>ENGINES &amp; TRANSMISSIONS</b>			
1200-0017	Push-button transmission shift selector.	1	
1200-0020	TransSynd synthetic transmission fluid for EVS3000.	1	
1200-0097	Electronic limiting of speed to 68 MPH maximum. Note: Max speed may be set at 65 MPH due to tire rating.	1	
1200-0341	Eng/Trans Cummins L9 450HP/EVS3000 2017 EPA compliant engine.	1	
<b>SECONDARY BRAKING</b>			
1125-0002	Jacobs engine compression brake.	1	
1125-0023	Transmission to seek second gear when Jacobs engine brake or Telma retarder is engaged. N/A with Trans retarder.	1	
<b>COOLING PACKAGE</b>			
1800-0013	Cooling system for use with Cyclone II X, Typhoon X, and Quest chassis. For use with 2010 / 2013 / 2016 EPA engines. Includes coolant recovery system.	1	
<b>FUEL SYSTEMS</b>			
1350-0003	Fuel system 50 gallon.	1	
1350-0008	Fuel water separator Fuel-Pro 382 (Cummins FH2309). Filter is top serviceable.	1	
1350-0009	Fuel line hose braided. Includes fuel pick-up (if applicable).	1	
1350-0012-E69	Fuel shut-off valve. Location: one (1) inlet side of fuel/water separator.	1	
<b>ALTERNATOR</b>			
1700-0005	Alternator Leece Neville 320 amp. 320 amp SAE/275 amp NFPA.	1	
<b>BATTERIES</b>			
1400-0002	Battery four group 31 1000 CCA.	1	

Salescode	Extended Description	Qty	
CHASSIS OPTIONS			
1680-0005	Thermatic fan clutch.	1	
1680-0006	Drivelines 1710.	1	
1680-0008	Tow eyes front painted below bumper/cab (PR).	1	
1680-0011	Tow eyes rear below body, painted.	1	
1680-0250-M58	Diesel Exhaust Fluid (DEF) 5 gallon tank for 2013 / 2016 EPA engines. Location: left side below rear of cab.	1	
1680-0284	Radiator mounted power steering cooler.	1	
CAB MODEL			
1520-0021	Typhoon X long cab with 67.5" CA. Includes barrier style doors.	1	
CAB ROOF TYPE			
1615-0010	Cab roof to be "flat" (non-vista).	1	
CAB BADGE PACKAGE			
1610-0000	Cab and body to have applicable E-ONE logos.	1	
GRILLE			
1620-0006	CIIX stainless steel grille for Typhoon X.	1	
CAB DOOR OPTIONS			
1550-0003	Rear crew cab doors in the medium position.	1	
1550-0005	Driver and officer cab door windows. Include forward vent windows.	1	
1550-0013	Driver and Officer door windows. Includes electric roll-down actuation. Each door to have individual control at door position and the driver door is to have master control for all power window locations.	1	
1550-0024	All cab doors shall have exterior paddle latches.	1	
1550-0038-658	(4) LED cab step area lighting. Locate each light in the cab step well area. Lights to be switched with door ajar.	1	
1550-0072	Cab door panels aluminum painted Zolatone gray.	1	
1550-0077	Interior cab door locks - manual. Will have manual actuation from each respective door. Includes barrel style key lock on each exterior cab door.	1	
1550-0083	All cab exterior access doors to have CH751 keyed locks.	1	
1550-0102	Rear crew cab door windows with rear fixed panel. Includes electric roll-down actuation. Each door to have individual controls. For use with paddle style door latching.	1	

Salescode	Extended Description	Qty	
<b>CAB DOOR OPTIONS</b>			
1550-0114	Map pockets cab front doors aluminum plate painted Zolatone gray.	1	
1550-0178-000-J7	Red/Fluorescent Yellow Green Reflexite V98 chevron "A" stripe on lower cab door panel approx 12" high. Stainless steel/painted door panels only. TyphoonX, CIIX and QST2 only.	1	
<b>CAB STEP OPTIONS</b>			
1640-0045-158	Step below cab door. Open back style with angled corners. Located driver's front door. Steps under front cab doors shall not interfere with approach angle.	1	
1640-0045-159	Step below cab door. Open back style with angled corners. Located officer's front door. Steps under front cab doors shall not interfere with approach angle.	1	
1640-0045-160	Step below cab door. Open back style with angled corners. Located driver's rear door. Steps under front cab doors shall not interfere with approach angle.	1	
1640-0045-161	Step below cab door. Open back style with angled corners. Located officer's rear door. Steps under front cab doors shall not interfere with approach angle.	1	
1640-0047	Lower steps to extend 3.5" past cab. Barrier doors only.	1	
<b>MIRRORS</b>			
1670-0001-274	Ramco 6001FFR mirrors. Remote controlled with top CAS750 convex. Location: mounted on front corners of cab.	1	
1670-0031	2" extension for Ramco mirrors.	1	
<b>MISC EXTERIOR CAB OPTIONS</b>			
1550-0020	Windows cab side fixed driver's side.	1	
1550-0033	Windows cab side fixed officer's side.	1	
1675-0022	Pair of 18" handrails located just behind driver and officer front door one each side.	1	
1675-0023	Pair of 18" handrails located just behind driver and officer rear door (ALS doors if equipped) one each side.	1	
1675-0030	Mud flaps, front, black with E-ONE logo.	1	
1675-0049	Rear cab wall to be smooth 3/16" aluminum plate with a diamond plate overlay.	1	
1675-0212	Mounting plate for battery charger receptacle, indicator, air inlet, etc (if applicable). Plate to be removable polished stainless steel.	1	
1675-0254	Rear cab and vista glass (if so equipped) to be dark tint (smoked glass with approx 30% light transmittance) IPOS. Includes all glass rearward of front cab doors.	1	
<b>HVAC</b>			
1515-0017	Air conditioning for the Typhoon X, CII X and Quest with Cummins ISC/ISL	1	

Salescode	Extended Description	Qty	
HVAC			
	engine and radiator mounted condenser.		
1515-0045	Controls for heating and air conditioning shall be located in the center dash area upper tier offset to driver side. For use with severe duty dash only.	1	
SEATS			
1510-0004	Seats, Bostrom brand.	1	
1510-0008	Seat color gray.	1	
1510-0037	Seat cover material Durawear.	1	
1510-0043	Driver seat to be Bostrom air ride.	1	
1510-0046	Officer seat to be Bostrom air ride SCBA.	1	
1510-0054	Rear facing Bostrom seat with SCBA driver's side.	1	
1510-0057	Rear facing Bostrom seat with SCBA officer's side.	1	
1510-0116-130	Fold-down seat located driver's side outboard.	1	
1510-0116-132	Fold-down seat located officer's side outboard.	1	
1510-0117-147	Bostrom SecureAll mechanical air pack bottle bracket (EA). Location: officer's seat.	1	
1510-0117-148	Bostrom SecureAll mechanical air pack bottle bracket (EA). Location: rear facing driver's side.	1	
1510-0117-215	Bostrom SecureAll mechanical air pack bottle bracket (EA). Location: rear facing officer's side.	1	
1510-0123-131	Fold down seat with Bostrom SCBA back located driver's side inboard.	1	
1510-0123-133	Fold down seat with Bostrom SCBA back located officer's side inboard.	1	
1510-0131-152	Bostrom SecureAll mechanical air pack bottle bracket (EA) for bench / fold-down seat. Location: inboard officer's side rear wall.	1	
1685-0035	Seating capacity tag of eight occupants.	1	
MISC INTERIOR CAB OPTIONS			
1685-0000	Cab interior gray. Does not include engine cover or seat color.	1	
1685-0005	Lexan sun visors, driver and officer's side overhead.	1	
1685-0084	3/16" Aluminum plate on top engine access door. To have swirl finish and be spaced up approx 1/2".	1	
1685-0187	Severe duty engine cover, molded polyurethane.	1	
1685-0369	Severe duty dash package with low profile officer side dash. Includes smooth plate alum center and officer side dash and lower kick panels; all painted to match cab interior.	1	

Salescode	Extended Description	Qty	
<b>CAB ELECTRICAL OPTIONS</b>			
1750-0013-172	Turn signal Whelen 600 LED amber arrow pair located upper headlight bezel.	1	
1750-0016	Pump hourmeter in cab.	1	
1750-0022	Battery charger Kussmaul 40 amp model 1200 with air compressor.	1	
1750-0024-179-04	Auto-Eject receptacle inlet 20 amp located outside driver's door next to handrail with a Yellow cover.	1	
1750-0027	Control push-button switch officer dash for Q2B siren.	1	
1750-0046-195	Cab Headlights. Position: lower.	1	
1750-0061	Control push-button switch officer dash for air horns.	1	
1750-0072-545	12 VDC (or 24VDC) electrical outlet in the cab wired battery hot. Location: In cab driver side on 3 x 3 post rear facing just above engine cover.	1	
1750-0072-592	12 VDC (or 24VDC) electrical outlet in the cab wired battery hot. Location: driver side dash.	1	
1750-0072-593	12 VDC (or 24VDC) electrical outlet in the cab wired battery hot. Location: officer side dash.	1	
1750-0075	English dominant main cab gauge cluster.	1	
1750-0198-A31	Battery charger to be located behind driver's seat.	1	
1750-0199-A31	Air compressor to be located behind driver's seat.	1	
1750-0429-545	Dual USB charging ports in the cab wired battery hot. Location: In cab driver side on 3 x 3 post rear facing just above engine cover.	1	
1750-0429-592	Dual USB charging ports in the cab wired battery hot. Location: driver side dash.	1	
1750-0429-593	Dual USB charging ports in the cab wired battery hot. Location: officer side dash.	1	
1750-0435	Halogen cab headlights. TyphoonX, CIIX and QST2 only.	1	
1750-0449	Momentary DPF regeneration override switch.	1	
5400-0057	Dome lts red/white 4" LED (4). Lights to be located two front and two rear. White light wired through door and light assembly mounted rocker switch. Red light through light assembly mounted rocker switch.	1	
<b>BODY COMPT LEFT SIDE</b>			
3100-0161	Driver side body with 42" wide x 30" high wide forward lower compartmentation and 42" wide x 34.75" high forward upper compartmentation. 42" wide full height rearward compartmentation. Includes (1) 56" wide compartment over the wheel well.	1	
<b>BODY COMPT RIGHT SIDE</b>			
3120-0193	Officer side body with full height 42" wide forward and 42" wide rearward	1	

Salescode	Extended Description	Qty	
BODY COMPT RIGHT SIDE			
	compartmentation. Includes (1) 56" wide compartment over the wheel well and one (1) storage tunnel.		
BODY COMPT REAR			
3110-0013	Full Height Rear Compartment with Officer Side Storage Tunnel. Includes smooth plate panels and storage access door with push button latch.	1	
3340-0116	Bolt-on diamond plate 14" tailboard (full width of body). Includes (2) squared off beavertails (no stanchions) with removable outer panels and handrails- (2) vertical on trailing edge of body and horizontal mounted handrail(s) below hosebed.	1	
DOORS			
3300-0008-003	Door double vertical hinged painted. Location(s): L1.	1	
3300-0017-004	Door roll up short (up to 45") with satin finish ROM. Location(s): L2.	1	
3300-0017-005	Door roll up short (up to 45") with satin finish ROM. Location(s): L3.	1	
3300-0017-016	Door roll up short (up to 45") with satin finish ROM. Location(s): R2.	1	
3300-0019-006	Door roll up tall (greater than 45") with satin finish ROM. Location(s): L4.	1	
3300-0019-015	Door roll up tall (greater than 45") with satin finish ROM. Location(s): R1.	1	
3300-0019-017	Door roll up tall (greater than 45") with satin finish ROM. Location(s): R3.	1	
3300-0019-027	Door roll up tall (greater than 45") with satin finish ROM. Location(s): B1.	1	
3300-0063-003	Keyed roll-up compartment door with #1250 key. Location(s): L1.	1	
3300-0063-004	Keyed roll-up compartment door with #1250 key. Location(s): L2.	1	
3300-0063-005	Keyed roll-up compartment door with #1250 key. Location(s): L3.	1	
3300-0063-015	Keyed roll-up compartment door with #1250 key. Location(s): R1.	1	
3300-0063-016	Keyed roll-up compartment door with #1250 key. Location(s): R2.	1	
3300-0063-017	Keyed roll-up compartment door with #1250 key. Location(s): R3.	1	
3300-0063-027	Keyed roll-up compartment door with #1250 key. Location(s): B1.	1	
SHELVES			
3370-0052-003	Adjustable shelf (J-Style) for non-transverse compartments 16" or greater in depth. Location: L1.	2	
3370-0052-027	Adjustable shelf (J-Style) for non-transverse compartments 16" or greater in depth. Location: B1.	1	
3370-0052-073	Adjustable shelf (J-Style) for non-transverse compartments 16" or greater in depth. Location: R1 lower.	2	

Salescode	Extended Description	Qty	
<b>SHELVES</b>			
3370-0052-075	Adjustable shelf (J-Style) for non-transverse compartments 16" or greater in depth. Location: R3 lower.	2	
3370-0053-074	Adjustable shelf (C-Style) for non-transverse compartments up to 15.99" in depth. Location: R1 upper.	1	
3370-0054-003	Tracks for adjustable shelf and/or adjustable tray in compartments 16" or greater in depth. Location: L1.	1	
3370-0054-004	Tracks for adjustable shelf and/or adjustable tray in compartments 16" or greater in depth. Location: L2.	1	
3370-0054-005	Tracks for adjustable shelf and/or adjustable tray in compartments 16" or greater in depth. Location: L3.	1	
3370-0054-027	Tracks for adjustable shelf and/or adjustable tray in compartments 16" or greater in depth. Location: B1.	1	
3370-0054-073	Tracks for adjustable shelf and/or adjustable tray in compartments 16" or greater in depth. Location: R1 lower.	1	
3370-0054-075	Tracks for adjustable shelf and/or adjustable tray in compartments 16" or greater in depth. Location: R3 lower.	1	
3370-0055-074	Tracks for adjustable shelf in shallow compartments up to 15.99" deep. Location: R1 upper.	1	
<b>TRAYS / TOOLBOARDS</b>			
3380-0015-016	Fixed back wall mounted toolboard. Toolboard to be spaced off wall a half inch. Location(s): R2.	1	
3380-0023-004	Adjustable mounted roll-out/tilt-down tray. Location(s): L2. For use in single depth or rescue style compartments.	1	
3380-0023-005	Adjustable mounted roll-out/tilt-down tray. Location(s): L3. For use in single depth or rescue style compartments.	1	
3380-0049-135	Running board suction tray (floating style). Includes tapered 3" front corner and removable slats in bottom of tray. Location(s): driver side running board.	1	
3380-0049-136	Running board suction tray (floating style). Includes tapered 3" front corner and removable slats in bottom of tray. Location(s): officer side running board.	1	
3380-0076-005	Tray, floor mounted roll-out with gas spring. 500 lbs. capacity. Location: L3.	1	
3380-0076-015	Tray, floor mounted roll-out with gas spring. 500 lbs. capacity. Location: R1.	1	
3380-0076-017	Tray, floor mounted roll-out with gas spring. 500 lbs. capacity. Location: R3.	1	
3380-0076-027	Tray, floor mounted roll-out with gas spring. 500 lbs. capacity. Location: B1.	1	
3380-0077-005	Tray, adjustable roll-out with 500 lbs. capacity and a gas shock. Location(s): L3.	1	
<b>COVERS</b>			

Salescode	Extended Description	Qty	
<b>COVERS</b>			
3305-0023	Nylon black cargo net at rear of diamond plate or vinyl hose bed cover or similar.	1	
3305-0027	Nylon black cargo net on sides of speedlay - one pair per speedlay.	3	
3305-0064-135	Nylon black strap with aluminum quick-release buckle for hose tray. Strap to attach to side walls of tray down low as applicable. Location: driver side running board.	1	
3305-0064-136	Nylon black strap with aluminum quick-release buckle for hose tray. Strap to attach to side walls of tray down low as applicable. Location: officer side running board.	1	
3305-0219	(2) piece light weight aluminum hose bed cover. Includes center hose bed divider with notched rear (as applicable), fill tower(s) access door(s) and handles (as applicable), gas shocks, positive hold opens/hold closed at rear, (2) grab handles front and (2) hand rails rear.	1	
<b>PUMP MODULE</b>			
3130-0167	Pump module to be 76" wide (side to side). Includes upper, lower, crosswalk, speedlay and tranverse module(s) if applicable.	1	
3130-0525	Top mount pump module with walkway and integral double speedlays (9" W). Extruded aluminum with runningboards. Includes formed walkway access steps.	1	
3130-0532	Pump panel opening is 39" wide. Pumper / tanker only.	1	
3130-0552	Pump module height is 85". Pumper / tanker only.	1	
3130-0671	The walkway step(s) shall be offset to the rear to accommodate pole/tripod light or other options located on the back of the cab. If equipped, the tool storage compartment door(s) shall be reduced in size.	1	
<b>PUMP PANELS</b>			
3134-0015	Stainless steel TM control panel, driver and officer side pump panels.	1	
3134-0133	Driver and officer side upper pump access panels to be horizontal hinged with stainless steel doors. Includes (2) push-button latches and (2) hold opens for each.	1	
<b>MISC PUMP PANEL OPTIONS</b>			
4460-0000-282	Air outlet w/snubber valve. Location: driver's side pump panel.	1	
4460-0000-283	Air outlet w/snubber valve. Location: officer's side pump panel.	1	
4460-0003	Pump panel tags color coded per NFPA compliance.	1	
<b>PUMP MODULE OPTIONS</b>			
3136-0000-372	Air horn switch at pump panel. Switch to be labeled "Evacuation Alert". Location: top mount control panel.	1	

Salescode	Extended Description	Qty	
<b>PUMP MODULE OPTIONS</b>			
3136-0011	P-Rubber in flex joint(s) between pump module and/or body modules.	1	
3136-0032	Spacer plate for quartz lights. Requires 4" additional cab to body gap.	1	
3136-0058	E-ONE logo mounted one each side on pump module/preconnect panels. Logos to be sized as applicable to available space on panels.	1	
3136-0073	Removable Poly Speedlay Tray(s). The floor of the tray(s) to be slotted to prevent the accumulation of water and allow for ventilation of wet hose. Includes vertical slotted hand hold cutouts on each end to facilitate easy removal of the hose tray.	2	
3136-0138	Pump module storage pan.	1	
3136-0146	Compartments for TM walkway (PR). Includes hinged door each side with push button latch and LED compartment light. Requires TM pump module with walkway.	1	
<b>WATER TANK</b>			
4010-0099	Fill tower(s) to be located offset to officer side of water tank.	1	
4010-0177	780 Gallon "R" Water Tank. UPF Poly III color fill towers. Note: Any foam cell(s) and/or storage options through the tank will reduce the overall water capacity.	1	
<b>TANK PLUMBING</b>			
4450-0010	2" tank fill Akron manual valve.	1	
4450-0119	3" tank to pump Akron manual valve w/4" tank connection.	1	
<b>FOAM TANK</b>			
4100-0037-590-16	50 gallon integral foam tank for Class A foam. UPF Poly III Green fill tower. Foam tank capacity will reduce the water tank capacity.	1	
<b>LADDER STORAGE / RACKS</b>			
3365-0028	Hard Suction Storage Rack. Driver side compartment top. Includes spring hold downs and scuff plates behind spring mounts (as applicable).	1	
3365-0035	Hard Suction Storage Rack. Officer side compartment top. Includes spring hold downs and scuff plates behind spring mounts (as applicable).	1	
3365-0049	Brand of ladders capable of being carried on unit to be Alco-Lite.	1	
3365-0087-Z71	The length of ladders capable of being stored shall be the following: 24' 2-section, 14' roof ladder and 10' attic ladder w/shoes.	1	
3365-0149-O97	Storage tunnel capable of holding: (1) 2-section, (1) roof, (1) attic, (2) pike poles, (1) backboard in Officer.	1	
<b>HANDRAILS / STEPS</b>			

Salescode	Extended Description	Qty	
<b>HANDRAILS / STEPS</b>			
3330-0035	Recessed folding step box. Officer side rear. To accommodate all steps as applicable.	1	
3330-0073	Step rear intermediate embossed tread plate. Locate rear body. Includes handrail (in place of horizontal hosebed handrail).	1	
3330-0277	Innovative Controls dual lighted LED folding steps rear NFPA. Includes folding steps on driver side rear of the body. (staggered stepped as applicable with tailboard depth) for NFPA hosebed access and handrail mounted on driver side upper hosebed side (as applicable).	1	
3330-0278	Innovative Controls dual lighted LED folding steps rear NFPA. Includes folding steps on officer side (staggered stepped as applicable with tailboard depth) for additional hosebed access and handrail mounted on officer side upper hosebed side (as applicable).	1	
3330-0279-060	Innovative Controls dual lighted LED folding step. Location: officer side front compartment face. Each location requires a minimum of (1) handrail per NFPA.	4	
3330-0279-062	Innovative Controls dual lighted LED folding step. Location: driver side front compartment face. Each location requires a minimum of (1) handrail per NFPA.	4	
<b>MISC BODY OPTIONS</b>			
3340-0004	Hosebed above the booster tank. Includes forward hosebed and tower(s) cover plate work (as applicable). Hosebed adjustable divider extrusion rearward of the furthest tower is to run full width of the hosebed (as is practical with other hosebed mounted equipment).	1	
3340-0015	Diamond plate single axle wheel well. Includes bolt-on composite wheel well liners and aluminum trim fenderettes.	1	
3340-0035	Divider Long. To run full length of hose bed (front to rear).	1	
3340-0058	Recessed fuel fill driver side wheel well.	1	
3340-0063	Divider short. To run full length of hose bed (front to rear) behind dual fill towers or single set back fill tower.	2	
3340-0074	Body mainframe and hosebed side assemblies for a 85" high body.	1	
3340-0089-000-13	Turtle Tile Brand Black Floor Matting covering all applicable Compartment Floors, Shelves, and Rollout Trays.	1	
3340-0093	Mud flaps, rear, black with E-ONE logo.	1	
3340-0110	The rear of each hose bed divider to have a hand hold cut-out(s).	1	
3340-0145	Rub rail for the body and pump area module(s).	1	
3340-0681	Body mainframe layout line to be 24". Includes body and all applicable modules.	1	
<b>SCBA BOTTLE STORAGE</b>			

Salescode	Extended Description	Qty	
<b>SCBA BOTTLE STORAGE</b>			
3320-0100	Strap(s), loop style to retain SCBA bottle(s). Locate one per bottle in each exterior storage compartment.	1	
3320-0185-495	Fire Shopp brand (1) SCBA bottle storage with hinged door and push button latch. Door shall have a brushed stainless steel finish. Door shall NOT cover the recessed fuel fill if located adjacent to the SCBA storage. Location:driver side rear wheel well offset forward	1	
3320-0185-497	Fire Shopp brand (1) SCBA bottle storage with hinged door and push button latch. Door shall have a brushed stainless steel finish. Door shall NOT cover the recessed fuel fill if located adjacent to the SCBA storage. Location:driver side rear wheel well offset rearward	1	
3320-0185-498	Fire Shopp brand (1) SCBA bottle storage with hinged door and push button latch. Door shall have a brushed stainless steel finish. Door shall NOT cover the recessed fuel fill if located adjacent to the SCBA storage. Location:officer side rear wheel well offset forward	1	
3320-0185-500	Fire Shopp brand (1) SCBA bottle storage with hinged door and push button latch. Door shall have a brushed stainless steel finish. Door shall NOT cover the recessed fuel fill if located adjacent to the SCBA storage. Location:officer side rear wheel well offset rearward	1	
<b>PUMPS</b>			
4005-0032	Rating 1750 GPM	1	
4005-0196	Hale QMAX 1000-2250 GPM single stage pump. Requires primer option.	1	
<b>PUMP CERTIFICATION</b>			
4475-0000	Pump certification 750-2250 GPM	1	
<b>PUMP OPTIONS</b>			
4015-0008	Zinc anodes for Hale pump (PR), (1) discharge side and (1) intake side.	1	
4015-0012	Pump shift override, side panel mounted.	1	
4015-0016	Thermal relief valve, Hale TRVL-120.	1	
4015-0038	Pump seal packing for Hale pump.	1	
4015-0053-198	Steamers to be Flush + 1". Location: driver's side.	1	
4015-0053-199	Steamers to be Flush + 1". Location: officer's side.	1	
4015-0098	Manual operated master pump drain. The master drain shall be clearly marked and placed in accessible location on pump panel.	1	
4015-0210	Pump cooler with Innovative Control 1/4 turn valve with "T" handle and label.	1	
4015-0242	Trident primer W/3 barrel push button control. For use with 1250 GPM and larger	1	

Salescode	Extended Description	Qty	
PUMP OPTIONS			
	pumps. Requires 15.6 CFM or large engine air compressor.		
INTAKES			
4440-0004-202	2.5" side suction top mount control handle Akron manual valve. Location: driver side pump panel.	1	
4440-0004-203	2.5" side suction top mount control handle Akron manual valve. Location: officer side pump panel.	1	
4440-0015	5" Front Intake w/5" Air Actuated Valve and Relief.	1	
INTAKE OPTIONS			
4445-0004	Front intake swivel 5" polished chrome.	1	
4445-0016	Intake relief valve, Hale 2.5".	1	
DISCHARGES AND PRECONNECTS			
4415-0008	1.5" front bumper discharge Akron manual valve.	1	
4415-0014-581	2.5" Left Pump Panel Discharge Akron Manual Valve. Location: left side discharge 1.	1	
4415-0014-582	2.5" Left Pump Panel Discharge Akron Manual Valve. Location: left side discharge 2.	1	
4415-0016-584	2.5" Right Pump Panel Discharge Akron Manual Valve. Location: right side discharge 2.	1	
4415-0022-350	2.5" Left Rear Discharge Akron Manual Valve. Location: left rear discharge.	1	
4415-0022-678	2.5" Left Rear Discharge Akron Manual Valve. Location: left rear discharge 2 (inboard or below).	1	
4415-0041	3" Deck Gun Discharge, Akron manual valve.	1	
4415-0057-583	5" Right Pump Panel Discharge with 3" Akron Manual Valve. Location: right side discharge 1.	1	
4415-0065	1.5" Double Speedlay with Akron Manual Valves.	1	
4415-0178-531	Polished Stainless Steel Swivel Located on Top of Bumper driver's side of center tray for Front Bumper Discharge.	1	
4417-0106-L65	Deck gun piping to be positioned centered in deck gun channel.	1	
DISCHARGE OPTIONS			
4417-0176	Innovative Controls 3/4" bleeder/drain valve include lift lever with ergonomic grip.	10	
4417-0182	TM Valve controls to be Innovative Controls T-handles with grip activated lock.	16	
4417-0186	Innovative Controls discharge and intake bezels with color code and verbiage for	1	

Salescode	Extended Description	Qty	
DISCHARGE OPTIONS			
	top mount pump panel.		
PRESSURE GOVERNORS			
4465-0011	Class 1 TPG pressure governor. Includes, water, oil, volt and tachometer.	1	
GAUGES			
4435-0002	Class 1 Intelli-Tank foam tank level gauge. On pump panel.	1	
4435-0026-356	Flowminder System. Discharge: deck gun.	1	
4435-0034	Fuel level gauge on pump operator's panel.	1	
4435-0067-527	Class 1/Whelen PSTank Water Tank Level Gauge Package. Location of Whelen PSTank Strip-Lights: each side of cab rear of front doors.	1	
4435-0246	2.5" Innovative Controls stainless steel case pressure gauge (0-400) with color code bezel.	10	
4435-0247	4" Innovative Controls stainless steel case master pressure gauges with bezel. Intake 30-0-400, and discharge 0-400.	1	
4435-0273	Class 1 flow meter totalizer button. Location Pump operator panel.	1	
FOAM SYSTEMS			
4430-0047-562	125 GPM Akron foam eductor. Location: 1.5 first speedlay.	1	
4430-0079	The foam system performance shall be tested and certified in compliance with the applicable NFPA 1901 requirements.	1	
FOAM SYSTEM OPTIONS			
4432-0054-562	Akron Quick Disconnect Foam Pickup Tube on Driver's Side Pump Panel for Eductor. Located on: 1.5 first speedlay.	1	
ELECTRICAL SYSTEMS			
5010-0013-Y83	Vehicle data recorder - 2009 / 2016 NFPA compliant. Includes occupant detection with display. Display location: inboard on driver's side overhead console.	1	
5010-0036	V-MUX Electrical system for pumper / tanker / rescue.	1	
5010-0059-339	VFD Text display for V-MUX electrical system. Location: center of dash.	1	
LIGHT BARS			
5300-0505	Whelen MK8H 5" high mount for front light bar (PR).	1	
5300-0506-000-4T	Light bar LED color: Red with clear lenses	1	
5300-0507	Light bar Whelen Freedom IV Model F4X7 72" with 14 LED modules. Location: Centered on the front cab roof.	1	
5300-0508-036	Whelen Mini-Freedom IV side facing light bars (PR) 21.5" with 4 LED modules.	1	

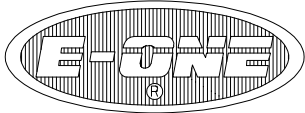
Salescode	Extended Description	Qty	
<b>LIGHT BARS</b>			
	Location: centered above rear cab doors.		
5300-0519	Whelen MK8H 5" high mount for mini side facing light bars (4).	1	
<b>WARNING LIGHT PACKAGES</b>			
5550-0149-534	Whelen M6 Super LED lower level warning light package. Includes (10) red M6R LED light heads w/chrome flanges. Locate side facing lights: at forward most position, centered in rear wheel well, and on side of beavertail.	1	
<b>WARNING LIGHTS</b>			
5600-0078-479-06	Whelen Super LED beacon (PR) model L31H with Red domes. Location rear upper body on aerial style brackets.	1	
5600-0099-439	Warning light Whelen 600 series Super LED (PR) red. Location: (1) each side above quad bezel (outboard).	1	
5600-0099-464	Warning light Whelen 600 series Super LED (PR) red. Location: (1) each side of cab down low just ahead of rear doors.	1	
5600-0099-467	Warning light Whelen 600 series Super LED (PR) red. Location: (1) each side above tail lights.	1	
5600-0105-170	Hazard (door ajar) light 2" LED. Location: center overhead.	1	
5600-0241-457	Warning light Whelen M6R series Linear Super LED (PR) red. Location: (1) each side of body rear facing up high.	1	
5600-0302-471	Warning light Whelen M2 Super LED warning lights. Includes (2) red M2RC LED light heads with clear lenses and chrome flanges (if applicable). Location: (1) each side just behind rear wheels in rubrail if equipped.	1	
5600-0302-742	Warning light Whelen M2 Super LED warning lights. Includes (2) red M2RC LED light heads with clear lenses and chrome flanges (if applicable). Location: (1) each side in pump module rubrail if equipped.	1	
<b>DIRECTIONAL LIGHT BARS</b>			
3340-0125	Directonal light bar to be recess mounted. Located on rear area of body.	1	
5310-0017	Whelen Traffic Advisor model TAL65 LED - 36" long.	1	
5310-0020-846	Directional light bar control is to be located in the center overhead console offset to driver side.	1	
5310-0025	Directional light circuit wiring through upper level warning.	1	
<b>SIRENS</b>			
5500-0011-209	Federal Q2B siren - Pedestal mounted on bumper. Location: driver side front bumper.	1	
5500-0017	Whelen model 295HFSM1 siren with mechanical siren tone and microphone. N/A	1	

Salescode	Extended Description	Qty	
<b>SIRENS</b>			
	in California.		
5500-0024-170	The electronic siren control is to be located on the center overhead.	1	
<b>SPEAKERS</b>			
5510-0007-209	Speaker Cast Products SA2401 100W thru bumper. Location: driver side front bumper.	1	
5510-0007-211	Speaker Cast Products SA2401 100W thru bumper. Location: officer side front bumper.	1	
<b>DOT LIGHTING</b>			
5150-0017	License plate light LED with chrome housing located at the rear of the body.	1	
5150-0056	Whelen 600 series LED vertical mount tail lights. Includes LED stop/tail, arrow turn and back-up lights with vertical Cast 3 housing and weatherproof connectors.	1	
5150-0068	Marker lights Britax LED amber/red rubber housed mounted on the rear body corners angled down.	1	
5150-0151	Marker light package cab / body LED. Body lights to be .75" Dia TecNiq for custom pumpers and tankers.	1	
<b>LIGHTS - COMPARTMENT, STEP &amp; GROUND</b>			
5380-0032	Ground light package LED - large.	1	
5380-0252	Compartment light package ROM V4 LED for medium bodies. Includes two lights per compartment (four if transverse).	1	
5380-0281	Light recessed step TecNiq T440 4" LED. Locate one each side of top mount walkway.	1	
5380-0323	The auxiliary steps below the cab doors to have EON LED lights to illuminate the stepping surface and ground below (IPO lights indicated in the main ground light package).	1	
<b>LIGHTS - DECK AND SCENE</b>			
5390-0007	Deck/scene light circuit wiring through chassis reverse. Requires rear deck or scene light.	1	
5390-0036	Hose bed light circuit wiring through chassis reverse. Requires hose bed light.	1	
5390-0087-396	Whelen M6 Linear Super LED scene lights (PR). Switched in cab (lights mtd on the sides of apparatus to be switched separately). Locate (1) each side rear compartment face up high.	1	
5390-0089	Hose bed light Whelen PFBP12C LED. Locate center front of hose bed. Switched with work light switch in cab.	1	

Salescode	Extended Description	Qty	
<b>LIGHTS - DECK AND SCENE</b>			
5390-0215-395	Deck Lights - Optronics Model TLL44 (PR). Location: rear body/beavertail area on the trailing edge up high.	1	
<b>LIGHTS - NON-WARNING</b>			
5400-0003	Engine compartment light (EA).	1	
5400-0011	LED pump compartment light (EA).	1	
5400-0042-166	Map light, Sunnex at officer's A post.	1	
5400-0061	Golight model 2049 remote control spotlight with black housing. If one is selected it will be located centered on cab roof on a pedestal to rear of light bar. If two are selected, they will be located one each side of cab roof to rear of light bar.	1	
5400-0107	Weldon pump panel LED light package - top mount. Includes (2) lights per side pump panel and (3) lights for top mount panel. Side pump panels over 45" wide may require additional lights. Top mount only.	1	
5400-0109-372	Weldon LED pump panel light - additional (EA). Location: top mount control panel.	1	
<b>CONTROLS / SWITCHES</b>			
5100-0000-198	Foot switch to control air horns located driver's side.	1	
5100-0006-198	Foot switch to control Q2B located driver's side.	1	
<b>CAMERAS / INTERCOM</b>			
5350-0001	Camera back-up Safety Vision LCD model SV-CLCD70BA-625B with audio. For use with up to 2 cameras.	1	
5350-0103-X09	The back-up camera monitor is to be located on the center dash offset driver.	1	
5350-0182	Safety Vision officer's side camera SV-622RS w/ SV-512 cable. Requires Safety Vision back-up camera option. Camera to be located on front cab corner (approx 31" bottom of camera to bottom of cab) interlocked with right turn signal. Camera only - does not include monitor.	1	
<b>MISC ELECTRICAL</b>			
1750-0082-762	12V power distribution module. Includes (6) battery hot and (6) switched hot circuits. 100 amps max (IATS). Location: behind officer's seat.	1	
5110-0017	Back-up alarm 97 dB.	1	
<b>LIGHTS - QUARTZ</b>			
5450-0122-190	Light Whelen Pioneer Plus model PFP2 12V with brow mount (EA). Includes switch in cab accessible to driver (driver and officer side facing lights switched	1	

Salescode	Extended Description	Qty	
<b>LIGHTS - QUARTZ</b>			
	separately). Location(s): center of front cab brow.		
5450-0262-063	Light Whelen Pioneer model PFP2 12V with external bottom raise pole mount. Includes switch accessible to driver. Location(s): officer side back of cab.	1	
5450-0262-064	Light Whelen Pioneer model PFP2 12V with external bottom raise pole mount. Includes switch accessible to driver. Location(s): driver side back of cab.	1	
<b>GROUND LADDERS</b>			
7800-0007	Alco-Lite PRL-14' roof ladder.	1	
7800-0016	Alco-Lite PEL-24' 2-section extension ladder.	1	
7800-0032	Alco-Lite FL-10, 10' folding ladder w/safety shoes.	1	
<b>MISC LOOSE EQUIPMENT</b>			
7900-0014	DOT Required Drive Away Kit - Kit includes three (3) triangular warning reflectors with carrying case. This kit is for the end user and is to remain with the truck.	1	
7900-0277	Wheel chocks 44" NFPA compliant, pair (PR) of Zico AC-44. Up to 44" diameter tires.	1	
<b>EXTERIOR PAINT</b>			
8100-0064	Cab paint break - standard with dip to grille. Break is 31.5" inches below the drip rail on Typhoon X and CII X cabs. Pre-07' emission Typhoon cab break is 33.5" below the drip rail.	1	
8100-0065-000-17	Paint chassis frame rails, springs, cross-members, fire pump, drivelines, fuel and air tanks, axles, front bumper extensions with brackets and front suction piping (if applicable) shall be painted: FLNA3225E-1 Red.	1	
8100-0084	All applicable pump/pre-connect application modules are to have a job color finish. Includes upper and lower pump modules, crosswalk module and/or speedlay/pre-connect module (as applicable). Rear mounted body/pump module to be painted job color.	1	
8100-0116	Rear body surface to have a sanded finish (not painted job color). Includes hinged doors that do not have discrete sales codes and removable panels.	1	
8100-0176-000-17	Paint E-ONE chassis cab - Sikkens paint. Color: FLNA3225E-1 Red.	1	
8100-0177-000-18	Paint cab Sikkens two-tone. Upper area of cab to be painted FLNA4006 White.	1	
8100-0182-000-17	Paint Body - Small - For Pumpers, Rear Mounts, S/A Tankers/Wetsides and Rescues. Sikkens paint. Color: FLNA3225E-1 Red.	1	
<b>INTERIOR PAINT</b>			
8150-0011	The interior of the cab to be painted Zolatone gray.	1	
8150-0024	The lower area of the painted cab interior door panels to be masked off and left	1	

Salescode	Extended Description	Qty	
<b>INTERIOR PAINT</b>			
	un-painted for reflective material.		
<b>STRIPING</b>			
8300-0001	NFPA required reflective striping to be dealer/customer applied.	1	
8300-0042	White rubrail scotchlite insert.	1	
8300-0273-000-J7	Chevron "A" style 6" Reflexite V98 striping on front bumper. Colors to be Red/Fluorescent Yellow Green.	1	
8300-0274-000-J7	Chevron "A" style 6" Reflexite V98 striping full width on rear of body. Includes rear facing extrusions, panels and doors. Colors to be Red/Fluorescent Yellow Green.	1	
8300-0313	Yellow line to indicate designated standing / walking areas above 48" high in compliance with 2016 NFPA 1901. Line to be 1" wide. Steps, ladders and areas with a railing or structure at least 12" high are excluded from requiring the line.	1	
<b>WARRANTY / STANDARD &amp; EXTENDED</b>			
9100-0003	Lifetime Frame Warranty.	1	
9100-0004	10 Year/100,000 Mile Structural Warranty for Alum Cab / Body - Statement of Warranty.	1	
9100-0005	10 Year Stainless Steel Plumbing Warranty - Statement of Warranty.	1	
9100-0019	10 Year Limited Paint and Perforation Warranty - For Sikkens Paint.	1	
9100-0039	1 year full warranty.	1	
9100-0090	25 Year frame rail corrosion warranty. Includes liners (if equipped).	1	
<b>SUPPORT, DELIVERY, INSPECTIONS AND MANUALS</b>			
9300-0009	Manuals, Operator and Service CD-ROM.	1	
9300-0016	Approval Drawings-Standard.	1	
9300-0316	Fire Apparatus Safety Guide published by FAMA, latest edition.	1	
<b>Dealer Supplied Equipment</b>			



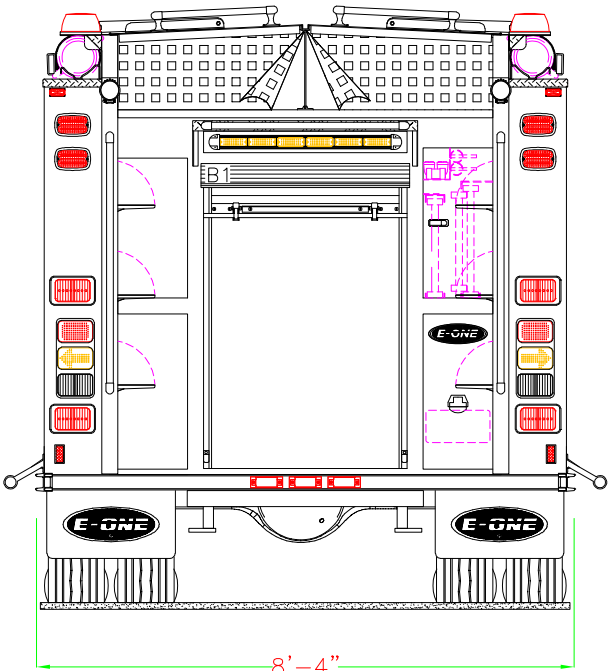
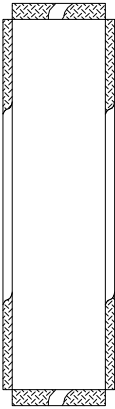
PEMBROKE PINES FIRE RESCUE  
PEMBROKE PINES, FL

Q80703  
RESCUE CAR42 PUMPER  
TYPHOON 2X / 4X2 CHASSIS

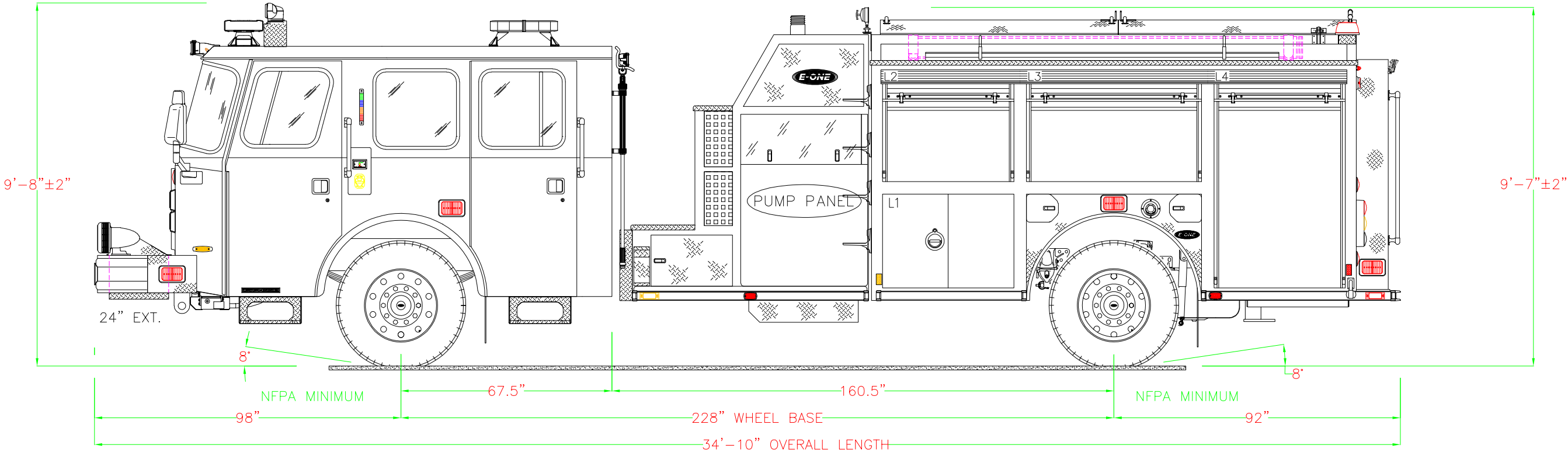
1750 GPM HALE QMAX PUMP			HOSE LOAD:		
730 GALLON WATER			NFPA		
50 GALLON INTEGRAL CLASS "A" FOAM					
COMPT.	OPENING		INTERIOR DIMENSION		
L1	42W	30H	42W	30H	26D
L2	40W	25H	42W 3H 12D	UPPER	
			42W 22H 26D	LOWER	
L3/R2	54W	25H	56W 3H 12D	UPPER	
			56W 22H 26D	LOWER	
L4	40W	59H	42W 3H 12D	UPPER	
			42W 56H 26D	LOWER	
R1/R3	40W	59H	42W 3H 12D	UPPER	
			42W 56H 26D	LOWER	
B1	36W	46H	38W	56H	26D

THIS DRAWING IS FOR REFERENCE PURPOSES. ALL DIMENSIONS ARE SUBJECT TO MINOR VARIATIONS DUE TO MANUFACTURING PROCESSES.

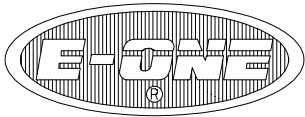
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HOSEBED HEIGHT:  
(FOR REFERENCE ONLY)  
TO TAILBOARD: 68"  
TO GROUND: 92"



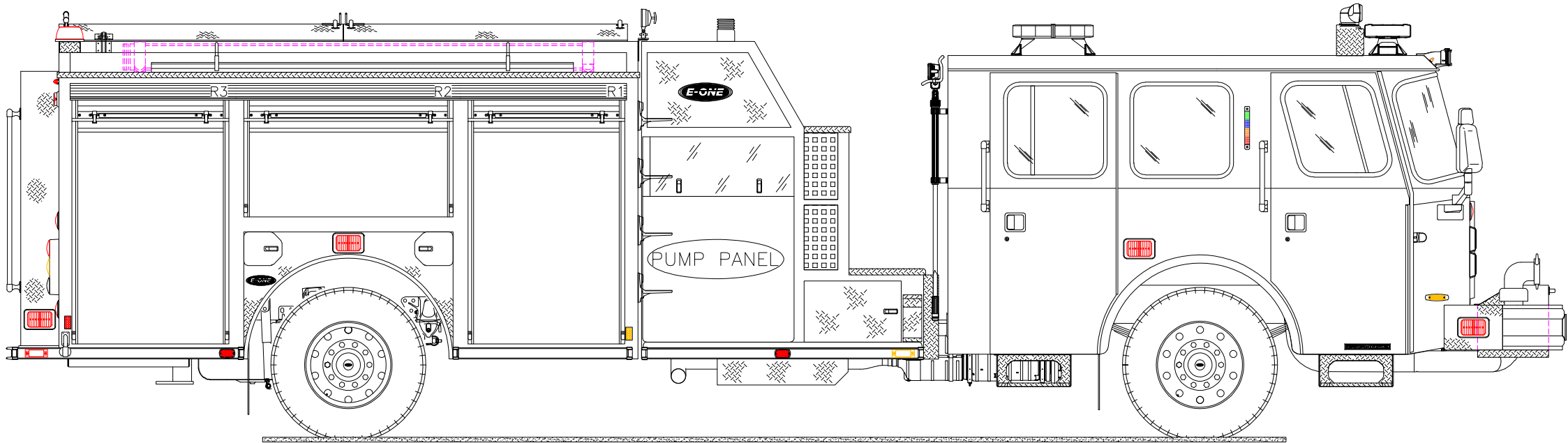
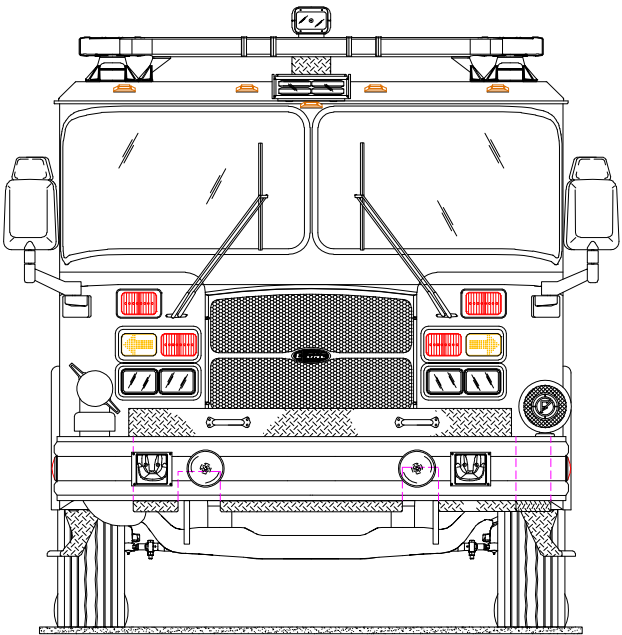
ZSCHULTZ	A	INITIAL RELEASE	2017-FEB-10	ZSCHULTZ
DRAWN BY	REV	DESCRIPTION	DATE	APPROVED
		APPROVAL REVISIONS		SHEET 1 OF 2



PEMBROKE PINES FIRE RESCUE  
PEMBROKE PINES, FL  
*Q80703*  
RESCUE CAR42 PUMPER  
TYPHOON 2X / 4X2 CHASSIS

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ZSCHULTZ	A	INITIAL RELEASE	2017-FEB-10	ZSCHULTZ
DRAWN BY	REV	DESCRIPTION	DATE	APPROVED
		APPROVAL REVISIONS		SHEET 2 OF 2

**Hall-Mark RTC****Item: Pre-Payment Discount Option****Attachments****Signed Vendor Information and W9.pdf**



(OFFICE USE ONLY) Vendor number:

Please complete this vendor information form entirely along with the  
IRS Form W-9, scan and upload it to the [www.bidsync.com](http://www.bidsync.com)

### Vendor Information Form

<b>Operating Name (Payee)</b>	REV RTC d/b/a Hall-Mark RTC		
<b>Legal Name (as filed with IRS)</b>	REV RTC d/b/a Hall-Mark RTC		
<b>Remit-to Address (For Payments)</b>	725 SW 46th AVE Ocala, FL 34474		
<b>Remit-to Contact Name:</b>	Jorge Troyano	<b>Title:</b>	Sales Rep
<b>Email Address:</b>	jtroyano@hall-markfire.com		
<b>Phone #:</b>	(954) 235-4799	<b>Fax #</b>	(352) 629-2018
<b>Order-from Address (For purchase orders)</b>	725 SW 46th Ave Ocala, FL 34474		
<b>Order-from Contact Name:</b>	Dee Daniels	<b>Title:</b>	Director of Sales
<b>Email Address:</b>	dee.daniels@revrtc.com		
<b>Phone #:</b>	(352) 629-6305	<b>Fax #</b>	(352) 629-6305
<b>Return-to Address (For product returns)</b>	725 SW 46th Ave Ocala, FL 34474		
<b>Return-to Contact Name</b>	Dee Daniels	<b>Title:</b>	Director of Sales
<b>Email Address:</b>	dee.daniels@revrtc.com		
<b>Phone #:</b>	(352) 629-6305	<b>Fax #</b>	(352) 629-2018
<b>Payment Terms:</b>	Net 30		

**Type of Business** (please check one and provide Federal Tax identification or social security Number)

- ☒ Corporation  
☐ Sole Proprietorship/Individual  
☐ Partnership  
☐ Health Care Service Provider  
☐ LLC – C (C corporation) – S (S corporation) – P (partnership)  
☐ Other (Specify):

**Federal ID Number:** 47-4454880

**Social Security No.:**

**Name of Applicant / Signature** Dee Daniels

Digitally signed by Dee Daniels  
Date: 2017.02.02 09:19:23 -05'00'

**Title of Applicant** Director of Sales

**Date** 2-2-17

Form **W-9**  
(Rev. December 2014)  
Department of the Treasury  
Internal Revenue Service

## Request for Taxpayer Identification Number and Certification

**Give Form to the  
requester. Do not  
send to the IRS.**

Print or type See Specific Instructions on page 2.	1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. <b>REV RTC, Inc. I/K/ ASV RTC, Inc</b>	
	2 Business name/disregarded entity name, if different from above <b>d/b/a Hall-Mark RTC</b>	
	3 Check appropriate box for federal tax classification; check only <b>one</b> of the following seven boxes: <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ <b>Note.</b> For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner. <input type="checkbox"/> Other (see instructions) ▶ _____	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <small>(Applies to accounts maintained outside the U.S.)</small>
	5 Address (number, street, and apt. or suite no.) <b>725 SW 46th Ave</b>	Requester's name and address (optional)
	6 City, state, and ZIP code <b>Ocala, FL 34474</b>	
7 List account number(s) here (optional)		

### Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

**Note.** If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

<b>Social security number</b>									
<b>or</b>									
<b>Employer identification number</b>									
4	7	-	4	4	5	4	8	8	0

### Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

**Sign  
Here**

Signature of  
U.S. person ▶

Date ▶ **2-2-17**

### General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at [www.irs.gov/fw9](http://www.irs.gov/fw9).

### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding? on page 2.*

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.

**Note.** If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States:

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

**Foreign person.** If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

**Nonresident alien who becomes a resident alien.** Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items:

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

**Example.** Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

## Backup Withholding

**What is backup withholding?** Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

**Payments you receive will be subject to backup withholding if:**

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the Part II instructions on page 3 for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code* on page 3 and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships* above.

## What is FATCA reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code* on page 3 and the Instructions for the Requester of Form W-9 for more information.

## Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

## Penalties

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

## Specific Instructions

### Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account, list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

**Note. ITIN applicant:** Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C Corporation, or S Corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(ii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

**Line 2**

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

**Line 3**

Check the appropriate box in line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box in line 3.

**Limited Liability Company (LLC).** If the name on line 1 is an LLC treated as a partnership for U.S. federal tax purposes, check the "Limited Liability Company" box and enter "P" in the space provided. If the LLC has filed Form 8832 or 2553 to be taxed as a corporation, check the "Limited Liability Company" box and in the space provided enter "C" for C corporation or "S" for S corporation. If it is a single-member LLC that is a disregarded entity, do not check the "Limited Liability Company" box; instead check the first box in line 3 "Individual/sole proprietor or single-member LLC."

**Line 4, Exemptions**

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space in line 4 any code(s) that may apply to you.

**Exempt payee code.**

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)

2—The United States or any of its agencies or instrumentalities

3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

4—A foreign government or any of its political subdivisions, agencies, or instrumentalities

5—A corporation

6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession

7—A futures commission merchant registered with the Commodity Futures Trading Commission

8—A real estate investment trust

9—An entity registered at all times during the tax year under the Investment Company Act of 1940

10—A common trust fund operated by a bank under section 584(a)

11—A financial institution

12—A middleman known in the investment community as a nominee or custodian

13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for ...	THEN the payment is exempt for ...
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 <sup>1</sup>	Generally, exempt payees 1 through 5 <sup>2</sup>
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

<sup>1</sup> See Form 1099-MISC, Miscellaneous Income, and its instructions.

<sup>2</sup> However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

**Exemption from FATCA reporting code.** The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

**Note.** You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

**Line 5**

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns.

**Line 6**

Enter your city, state, and ZIP code.

**Part I. Taxpayer Identification Number (TIN)**

**Enter your TIN in the appropriate box.** If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited Liability Company (LLC)* on this page), enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

**Note.** See the chart on page 4 for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at [www.ssa.gov](http://www.ssa.gov). You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at [www.irs.gov/businesses](http://www.irs.gov/businesses) and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting [irs.gov](http://irs.gov) or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

**Note.** Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

**Caution:** A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

## Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, or 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code* earlier.

**Signature requirements.** Complete the certification as indicated in items 1 through 5 below.

**1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.** You must give your correct TIN, but you do not have to sign the certification.

**2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.** You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

**3. Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.

**4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

**5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

## What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup>
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor <sup>2</sup>
4. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee <sup>1</sup> The actual owner <sup>1</sup>
5. Sole proprietorship or disregarded entity owned by an individual	The owner <sup>3</sup>
6. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor <sup>4</sup>
For this type of account:	Give name and EIN of:
7. Disregarded entity not owned by an individual	The owner
8. A valid trust, estate, or pension trust	Legal entity <sup>4</sup>
9. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
10. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
11. Partnership or multi-member LLC	The partnership
12. A broker or registered nominee	The broker or nominee
13. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
14. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your Individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

<sup>4</sup> List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships* on page 2.

\*Note. Grantor also must provide a Form W-9 to trustee of trust.

Note. If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

## Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Publication 4535, Identity Theft Prevention and Victim Assistance.

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

**Protect yourself from suspicious emails or phishing schemes.** Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to [phishing@irs.gov](mailto:phishing@irs.gov). You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: [spam@uce.gov](mailto:spam@uce.gov) or contact them at [www.ftc.gov/idtheft](http://www.ftc.gov/idtheft) or 1-877-IDTHEFT (1-877-438-4338).

Visit [IRS.gov](http://IRS.gov) to learn more about identity theft and how to reduce your risk.

## Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.



(OFFICE USE ONLY) Vendor number:

Please complete this vendor information form entirely along with the  
IRS Form W-9, scan and upload it to the [www.bidsync.com](http://www.bidsync.com)

### Vendor Information Form

<b>Operating Name (Payee)</b>	REV RTC d/b/a Hall-Mark RTC		
<b>Legal Name (as filed with IRS)</b>	REV RTC d/b/a Hall-Mark RTC		
<b>Remit-to Address (For Payments)</b>	725 SW 46th AVE Ocala, FL 34474		
<b>Remit-to Contact Name:</b>	Jorge Troyano	<b>Title:</b>	Sales Rep
<b>Email Address:</b>	jtroyano@hall-markfire.com		
<b>Phone #:</b>	(954) 235-4799	<b>Fax #</b>	(352) 629-2018
<b>Order-from Address (For purchase orders)</b>	725 SW 46th Ave Ocala, FL 34474		
<b>Order-from Contact Name:</b>	Dee Daniels	<b>Title:</b>	Director of Sales
<b>Email Address:</b>	dee.daniels@revrtc.com		
<b>Phone #:</b>	(352) 629-6305	<b>Fax #</b>	(352) 629-6305
<b>Return-to Address (For product returns)</b>	725 SW 46th Ave Ocala, FL 34474		
<b>Return-to Contact Name</b>	Dee Daniels	<b>Title:</b>	Director of Sales
<b>Email Address:</b>	dee.daniels@revrtc.com		
<b>Phone #:</b>	(352) 629-6305	<b>Fax #</b>	(352) 629-2018
<b>Payment Terms:</b>	Net 30		

**Type of Business** (please check one and provide Federal Tax identification or social security Number)

- ☒ Corporation  
☐ Sole Proprietorship/Individual  
☐ Partnership  
☐ Health Care Service Provider  
☐ LLC – C (C corporation) – S (S corporation) – P (partnership)  
☐ Other (Specify):

**Federal ID Number:** 47-4454880

**Social Security No.:**

Digitally signed by Dee Daniels  
Date: 2017.02.02 09:19:23 -05'00'

**Name of Applicant / Signature** Dee Daniels

**Title of Applicant** Director of Sales

**Date** 2-2-17



# CERTIFICATE OF LIABILITY INSURANCE

7/1/2017

DATE (MM/DD/YYYY)  
1/30/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	Lockton Companies Three City Place Drive, Suite 900 St. Louis MO 63141-7081 (314) 432-0500	CONTACT NAME:	
		PHONE (A/C, No, Ext):	FAX (A/C, No):
		E-MAIL ADDRESS:	
		INSURER(S) AFFORDING COVERAGE	
		NAIC #	
INSURED	REV RTC, Inc. /F/K/A Hallmark 1356298 725 SW 46th Ave. Ocala FL 34474	INSURER A: First Specialty Insurance Corporation	
		INSURER B: Travelers Property Casualty Co of America	
		INSURER C: AXIS Surplus Insurance Company	
		INSURER D: The Charter Oak Fire Insurance Company	
		INSURER E:	
		INSURER F:	

## COVERAGES ALLSP

CERTIFICATE NUMBER: 14488711

REVISION NUMBER: XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y	Y	IRG2001384-03	7/1/2016	7/1/2017	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	N	N	TC2JCAP8E082581TIL16	7/1/2016	7/1/2017	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$	N	N	EAU781897012016	7/1/2016	7/1/2017	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$ XXXXXXXX
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	TC20UB118D488216	7/1/2016	7/1/2017	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
 THE CITY OF PEMBROKE PINES IS ADDITIONALLY INSURED UNDER THE GENERAL LIABILITY AS REQUIRED BY WRITTEN CONTRACT. IN EVENT OF POLICY CANCELLATION, CERTIFICATE HOLDER WILL BE PROVIDED 30 DAYS NOTIFICATION. WAIVER OF SUBROGATION APPLIES AS REQUIRED BY WRITTEN CONTRACT.

## CERTIFICATE HOLDER

## CANCELLATION

14488711  THE CITY OF PEMBROKE PINES 10100 PINES BLVD. PEMBROKE PINES FL 33026	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE  

ACORD 25 (2016/03)

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# LICENSE CERTIFICATE

STATE OF FLORIDA  
DEPARTMENT OF HIGHWAY SAFETY AND  
MOTOR VEHICLES  
DIVISION OF MOTORIST SERVICES

REV RTC INC  
725 SW 46TH AVE  
OCALA, FL 34474-8587

## License

FOR AN INDEPENDENT DEALER IN  
MOTOR VEHICLES

LICENSE NUMBER  
VI/1101217/1

PRIMARY LOT

EFFECTIVE DATE  
05/12/2016

EXPIRATION DATE  
04/30/2018

THIS CERTIFIES, THAT

REV RTC INC  
HALL-MARK RTC

AT 725 SW 46TH AVE  
OCALA, FL 34474-8587

IS HEREBY LICENSED UNDER THE PROVISIONS OF SECTION

320.27, FLORIDA STATUTES TO CONDUCT AND CARRY ON BUSINESS AS  
AN INDEPENDENT DEALER IN MOTOR VEHICLES AT THE ABOVE  
DESCRIBED LOCATION

GIVEN UNDER MY HAND AND SEAL THE ABOVE DATE WRITTEN.

*Julie W. Gentry*

BUREAU CHIEF



*Robert R. Kynoch*

DIRECTOR

HSMV 04103 (REV. 2/11)S

STATE OF FLORIDA

VOID  
IF  
ALTERED

VOID  
IF  
ALTERED

**Hall-Mark RTC**

Item: **Trade-In Value Option for a: 1997 E-One Hush XLT (VIN # 4ENBAAA81V1007640)**

**Attachments**

THE CITY OF PEMBROKE PINES Insurance requirements.pdf



# CERTIFICATE OF LIABILITY INSURANCE

7/1/2017

DATE (MM/DD/YYYY)  
1/30/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Lockton Companies Three City Place Drive, Suite 900 St. Louis MO 63141-7081 (314) 432-0500	<b>CONTACT NAME:</b>	
	<b>PHONE (A/C, No, Ext):</b>	<b>FAX (A/C, No):</b>
	<b>E-MAIL ADDRESS:</b>	
	<b>INSURER(S) AFFORDING COVERAGE</b>	
	<b>INSURER A:</b> First Specialty Insurance Corporation	<b>NAIC #</b> 34916
	<b>INSURER B:</b> Travelers Property Casualty Co of America	25674
<b>INSURED</b> REV RTC, Inc. /F/K/A Hallmark 1356298 725 SW 46th Ave. Ocala FL 34474	<b>INSURER C:</b> AXIS Surplus Insurance Company	26620
	<b>INSURER D:</b> The Charter Oak Fire Insurance Company	25615
	<b>INSURER E:</b>	
	<b>INSURER F:</b>	

## COVERAGES ALLSP

CERTIFICATE NUMBER: 14488711

REVISION NUMBER: XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y	Y	IRG2001384-03	7/1/2016	7/1/2017	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000
B	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	N	N	TC2JCAP8E082581TIL16	7/1/2016	7/1/2017	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX
C	<input type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$	N	N	EAU781897012016	7/1/2016	7/1/2017	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
D	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	TC20UB118D488216	7/1/2016	7/1/2017	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

## DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

THE CITY OF PEMBROKE PINES IS ADDITIONALLY INSURED UNDER THE GENERAL LIABILITY AS REQUIRED BY WRITTEN CONTRACT. IN EVENT OF POLICY CANCELLATION, CERTIFICATE HOLDER WILL BE PROVIDED 30 DAYS NOTIFICATION. WAIVER OF SUBROGATION APPLIES AS REQUIRED BY WRITTEN CONTRACT.

## CERTIFICATE HOLDER

<b>14488711</b> THE CITY OF PEMBROKE PINES 10100 PINES BLVD. PEMBROKE PINES FL 33026	<b>CANCELLATION</b> SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. <b>AUTHORIZED REPRESENTATIVE</b> 
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POLICY NUMBER: IRG 2001384 03

**COMMERCIAL GENERAL LIABILITY**  
**CG 20 10 07 04**

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

### SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
Any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured on your policy.	As per written contract.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

**A. Section II - Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

**B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:**

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

POLICY NUMBER: IRG 2001384 03

**COMMERCIAL GENERAL LIABILITY**  
**CG 24 04 05 09**

## **WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

### **SCHEDULE**

**Name Of Person Or Organization:**

Any person or organization when you and such person or organization have agreed in writing in a contract or agreement that you will waive any right of recovery against such person or organization.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us** of **Section IV – Conditions**:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

Supplier: **Hall-Mark RTC**



*City of Pembroke Pines*

**Attachment A**

---

**CONTACT INFORMATION FORM**

IN ACCORDANCE WITH “IFB # FI-16-01” dated **January 17, 2017** titled “**Fire Engine / Pumper Truck**” attached hereto as a part hereof, the undersigned submits the following:

**A) Contact Information**

The Contact information form shall be electronically signed by one duly authorized to do so, and in case signed by a deputy or subordinate, the principal's properly written authority to such deputy or subordinate must accompany the proposal. This form must be completed and submitted through [www.bidsync.com](http://www.bidsync.com) as part of the bidder's submittal. The vendor must provide their pricing through the designated lines items listed on the BidSync website.

**COMPANY INFORMATION:**

COMPANY: **REV RTC d/b/a Hall-Mark RTC**  
STREET ADDRESS: **725 SW 46th Ave**  
CITY, STATE & ZIP CODE: **Ocala, FL 34474**

**PRIMARY CONTACT FOR THE PROJECT:**

NAME: **Jorge Troya** TITLE: **Sales Rep**  
E-MAIL: **jtroyano@hall-markfire.com**  
TELEPHONE: **(954) 235-4799** FAX: **(352) 629-2018**

**AUTHORIZED APPROVER:**

NAME: **Dee Daniels** TITLE: **Director of Sales**  
E-MAIL: **dee.daniels@revrtc.com**  
TELEPHONE: **(352) 629-6305** FAX: **(352) 629-2018**  
SIGNATURE: **Dee Daniels**

**B) Proposal Checklist**

Are all materials, freight, labor and warranties included?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Does the proposal include two trips for four people to the plant; one trip for a pre-build meeting and the other trip for final inspection?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Is a "Contractor's Specifications", as requested in section 1.4.1 of the bid package, included in your submission?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Do you have any exceptions to the specifications? If so, is a "Exceptions to Specifications", as requested in section 1.4.6 of the bid package, included in your submission?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/>
Pursuant to section 1.4.10, has the manufacturer been in business of making similar apparatus for a minimum of forty-five (45) years?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Pursuant to section 1.4.10, has the manufacturer built at least thirty (30) of similar units in the last five years?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Pursuant to section 1.4.10, is a list of five (5) departments in Florida with similar units, included in your submittal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Pursuant to section 1.4.10, does the manufacturer have a licensed Full Service Center in Florida, preferably within Broward County and within (2.5) hours from the City of Pembroke Pines?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
In addition, does the service center have mobile warranty service?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Pursuant to section 1.4.11, how many years has the manufacturer been producing their own chassis and body?	33years.
Pursuant to section 1.4.12, is the manufacturer a current member of the Fire Apparatus Manufacturer's Association?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Pursuant to section 1.10.12, is a letter stating successful completion of the specified test on the brand of cab being supplied, included in the bid submittal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Pursuant to section 1.10.13, is a copy of the certification letter of the seat belt testing included in the bid submittal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

**C) Sample Proposal Form**

*The following sample price proposal is for information only. The vendor must provide their pricing through the designated lines items listed on the BidSync website.*

<b>Item</b>	<b>Description</b>	<b>Cost</b>
1)	Fire Engine / Pumper Truck Cost (including all parts, materials & labor to furnish and deliver, as specified in the solicitation.)	Price to be Submitted via BidSync
2)	Pre-Payment Discount Option	Price to be Submitted via BidSync
3)	Trade-In Value Option for a: 1997 E-One Hush XLT (VIN # 4ENBAAA81V1007640) with approximately 61,000 miles and 1,900 hours (along with an In-frame Engine rebuild less than 10,000 miles ago) (City Vehicle # 7757)	Price to be Submitted via BidSync
<b>Total Cost Including Pre-Payment Discount and Trade-In Value Options</b>		Price to be Submitted via BidSync

<b>Proposed Equipment and Maintenance Shop</b>	
Fire Engine/Pumper Truck Year, Make and Model	<b>E-ONE RESCUE PUMPER 2018 TYPHOON RESCUE PUMPER 42/56</b>
Maintenance Shop: Name and Location (Must be located in Broward County)	<b>REV RTC DBA HALL-MARK RTC</b>
<p>*If vendor takes exception to having a shop located in Broward County and within 2.5 hours from the City of Pembroke Pines, the vendor must have a dedicated Fire Apparatus repair facility (not an RV repair shop) within a 150 mile radius of the municipal boundaries of Pembroke Pines and must provide mobile/road service. Vendor is required to provide full disclosure on their capabilities for providing road/mobile service, response time to regular calls, response time to emergency service calls, the number of service technicians on staff than are SAE or EVT certified, how many vehicles dedicated to road/mobile service, and approach to handling major repairs such as transmissions, front axels, rear axels, radiators, etc. This information can be provided in a separate document that must be uploaded to <a href="http://www.bidsync.com">www.bidsync.com</a> as part of the proposal package.</p>	

<b>Timeline</b>	
NUMBER OF CALENDAR DAYS TO COMPLETE AND FURNISH THE FIRE ENGINE / PUMPER TRUCK	<b>280Days</b>

**Please note: If you have any exceptions to the specifications listed in the solicitation, you must attach a detailed explanation, of each exception, to this proposal form.**

Supplier: **Hall-Mark RTC**



City of Pembroke Pines

Attachment C

**NON-COLLUSIVE AFFIDAVIT**

BIDDER is the **Officer**,

(Owner, Partner, Officer, Representative or Agent)

BIDDER is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

Such Bid is genuine and is not a collusive or sham Bid;

Neither the said BIDDER nor any of its officers, partners, owners, agents, representative, employees or parties in interest, including this affidavit, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other BIDDER, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted; or to refrain from bidding in connection with such Contract; or have in any manner, directly or indirectly, sought by agreement or collusion, or communications, or conference with any BIDDER, firm, or person to fix the price or prices in the attached Bid or any other BIDDER, or to fix any overhead, profit, or cost element of the Bid Price or the Bid Price of any other BIDDER, or to secure through any collusion conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed Contract;

The price of items quoted in the attached Bid are fair and proper and are not tainted by collusion, conspiracy, connivance, or unlawful agreement on the part of the BIDDER or any other of its agents, representatives, owners, employees or parties in interest, including this affidavit.

Printed Name/Signature **William D. Alm**

Title **VP / GM**

Name of Company **REV RTC /Hall-Mark RTC**

Supplier: **Hall-Mark RTC**



City of Pembroke Pines

Attachment D

**SWORN STATEMENT  
ON PUBLIC ENTITY CRIMES  
UNDER FLORIDA STATUTES CHAPTER 287.133(3)(a).**

1. This sworn statement is submitted **REV RTC d/b/a Hall-Mark RTC** (name of entity submitting sworn statement) whose business address is **725 SW 46th Ave, Ocala, FL 34474** and (if applicable) its Federal Employer Identification Number (FEIN) is **47-4454880**. (If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: .)
2. My name is **William D. Alm** and my  
(Please print name of individual signing)  
  
relationship to the entity named above is **VP / GM**.
3. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid, proposal, reply, or contract for goods or services, any lease for real property, or any contract for the construction or repair of a public building or public work, involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
4. I understand that a "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
5. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:
  1. A predecessor or successor of a person convicted of a public entity crime: or
  2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The Cityship by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
6. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any

natural person or any entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts let by a public entity, or which otherwise transacts or applies to transact business with a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

7. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. **(Please indicate which statement applies.)**

☒ A) Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

☐ B) The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND **(Please indicate which additional statement applies.)**

☐ B1) There has been a proceeding concerning the conviction before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. **(Please attach a copy of the final order.)**

☐ B2) The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. **(Please attach a copy of the final order.)**

☐ B3) The person or affiliate has not been placed on the convicted vendor list. **(Please describe any action taken by or pending with the Department of General Services.)**

William D. Alm

REV RTC d/b/a Hall-Mark 2-2-17

Bidder's Name/Signature

RTC  
Company

Date

**Supplier: Hall-Mark RTC**



City of Pembroke Pines

Attachment E

## LOCAL VENDOR PREFERENCE CERTIFICATION

### SECTION 1 GENERAL TERM

#### LOCAL PREFERENCE

The evaluation of competitive bids is subject to section 35.36 of the City's Procurement Procedures which, except where contrary to federal and state law, or any other funding source requirements, provides that preference be given to local businesses. To satisfy this requirement, the vendor shall affirm in writing its compliance with either of the following objective criteria as of the bid or proposal submission date stated in the solicitation. A local business shall be defined as:

1. "Local Pembroke Pines Vendor" shall mean a business entity which has maintained a permanent place of business with full-time employees within the City limits for a minimum of one (1) year prior to the date of issuance of a bid or proposal solicitation. The permanent place of business may not be a post office box. The business location must actually distribute goods or services from that location. In addition, the business must have a current business tax receipt from the City of Pembroke Pines.

OR;

2. "Local Broward County Vendor" shall mean or business entity which has maintained a permanent place of business with full-time employees within the Broward County limits for a minimum of one (1) year prior to the date of issuance of a bid or proposal solicitation. The permanent place of business may not be a post office box. The business location must actually distribute goods or services from that location. In addition, the business must have a current business tax receipt from the Broward County or the city within Broward County where the business resides.

A preference of five percent (5%) of the total evaluation point, or five percent (5%) of the total price, shall be given to the **Local Pembroke Pines Vendor(s)**; A preference of two and a half percent (2.5%) of the total evaluation point for local, or two and a half percent (2.5%) of the total price, shall be given to the **Local Broward County Vendor(s)**.

#### COMPARISON OF QUALIFICATIONS

The preferences established in no way prohibit the right of the City to compare quality of supplies or services for purchase and to compare qualifications, character, responsibility and fitness of all persons, firms or corporations submitting bids or proposals. Further, the preference established in no way prohibit the right of the city from giving any other preference permitted by law instead of the preferences granted, nor prohibit the city to select the bid or proposal which is the most responsible and in the best interests of the city.

### SECTION 2 AFFIRMATION

#### LOCAL PREFERENCE CERTIFICATION:

- ☐ Place a check mark here only if affirming bidder meets requirements above as a Local Pembroke Pines Vendor.  
In addition, the business must attach a current business tax receipt from the City of Pembroke Pines along with any previous business tax receipts to indicate that the business entity has maintained a permanent place of business for a minimum of one (1) year.
- ☒ Place a check mark here only if affirming bidder meets requirements above as a Local Broward County Vendor.  
In addition, the business must attach a current business tax receipt from the Broward County or the city within Broward County where the business resides along with any previous business tax receipts to indicate that the business entity has maintained a permanent place of business for a minimum of one (1) year.
- ☐ Place a check mark here only if affirming bidder does not meet the requirements above as a Local Vendor.

**Failure to complete this certification at this time (by checking either of the boxes above) shall render the vendor ineligible for Local Preference. This form must be completed by/for the proposer; the proposer WILL NOT qualify for Local Vendor Preference based on their sub-contractors' qualifications.**

COMPANY NAME: REV RTC DBA HALL-MARK RTC

PRINTED NAME / AUTHORIZED SIGNATURE: **DEE DANIELS**

**Supplier: Hall-Mark RTC**



City of Pembroke Pines

Attachment F

## **VETERAN OWNED SMALL BUSINESS (VOSB) PREFERENCE CERTIFICATION**

### **SECTION 1 GENERAL TERM**

#### **VETERAN OWNED SMALL BUSINESS (VOSB) PREFERENCE**

The evaluation of competitive bids is subject to section 35.37 of the City's Procurement Procedures which, except where contrary to federal and state law, or any other funding source requirements, provides that preference be given to veteran owned small businesses. To satisfy this requirement, the vendor shall affirm in writing its compliance with the following objective criteria as of the bid or proposal submission date stated in the solicitation. A veteran owned small business shall be defined as:

1. "Veteran Owned Small Business" shall mean a business entity which has received a "Determination Letter" from the United States Department of Veteran Affairs Center for Verification and Evaluation notifying the business that they have been approved as a Veteran Owned Small Business (VOSB).

A preference of two and a half percent (2.5%) of the total evaluation point, or two and a half percent (2.5%) of the total price, shall be given to the **Veteran Owned Small Business (VOSB)**. This shall mean that if a **VOSB** submits a bid/quote that is within 2.5% of the lowest price submitted by any vendor, the **VOSB** shall have an option to submit another bid which is at least 1% lower than the lowest responsive bid/quote. If the **VOSB** submits a bid which is at least 1% lower than that lowest responsive bid/quote, then the award will go to the **VOSB**. If not, the award will be made to the vendor that submits the lowest responsive bid/quote. If the lowest responsive and responsible bidder is a "**Local Pembroke Pines Vendor**" (**LPPV**) or a "**Local Broward County Vendor**" (**LBCV**) as established in Section 35.36 of the City's Code of Ordinances, entitled "Local Vendor Preference", then the award will be made to that vendor and no other bidders will be given an opportunity to submit additional bids as described herein.

If there is a **LPPV**, a **LBCV**, and a **VOSB** participating in the same bid solicitation and all three vendors qualify to submit a second bid, the **LPPV** will be given first option. If the **LPPV** cannot beat the lowest bid received by at least 1%, an opportunity will be given to the **LBCV**. If the **LBCV** cannot beat the lowest bid by at least 1%, an opportunity will be given to the **VOSB**. If the **VOSB** cannot beat the lowest bid by at least 1%, then the bid will be awarded to the lowest bidder.

If multiple **VOSBs** submit bids/quotes which are within 2.5% of the lowest bid/quote and there are no **LPPV** or **LBCV** as described in Section 35.36 of the City's Code of Ordinance, entitled "Local Vendor Preference", then all **VOSBs** will be asked to submit a **Best and Final Offer (BAFO)**. The award will be made to the **VOSB** submitting the lowest **BAFO** providing that that **BAFO** is at least 1% lower than the lowest bid/quote received in the original solicitation. If no **VOSB** can beat the lowest bid/quote by at least 1%, then the award will be made to the lowest responsive bidder.

#### **COMPARISON OF QUALIFICATIONS**

The preferences established in no way prohibit the right of the City to compare quality of supplies or services for purchase and to compare qualifications, character, responsibility and fitness of all persons, firms or corporations submitting bids or proposals. Further, the preference established in no way prohibit the right of the city from giving any other preference permitted by law instead of the preferences granted, nor prohibit the city to select the bid or proposal which is the most responsible and in the best interests of the city.

### **SECTION 2 AFFIRMATION**

#### **VETERAN OWNED SMALL BUSINESS (VOSB) PREFERENCE CERTIFICATION:**

☐ Place a check mark here only if affirming bidder meets requirements above as a Veteran Owned Small Business.  
In addition, the bidder must attach the "Determination Letter" from the U.S. Dept. of Veteran Affairs Center.

☒ Place a check mark here only if affirming bidder does not meet the requirements above as a VOSB.

**Failure to complete this certification at this time (by checking either of the boxes above) shall render the vendor ineligible for VOSB Preference. This form must be completed by/for the proposer; the proposer WILL NOT qualify for VOSB Preference based on their sub-contractors' qualifications.**

COMPANY NAME: REV RTC d/b/a Hall-Mark RTC

PRINTED NAME / AUTHORIZED SIGNATURE: **Dee Daniels**

Supplier: **Hall-Mark RTC**



City of Pembroke Pines

Attachment G

## EQUAL BENEFITS CERTIFICATION FORM FOR DOMESTIC PARTNERS AND ALL MARRIED COUPLES

Except where federal or state law mandates to the contrary, a Contractor awarded a Contract pursuant to a competitive solicitation shall provide benefits to Domestic Partners and spouses of its employees, irrespective of gender, on the same basis as it provides benefits to employees' spouses in traditional marriages.

The Contractor shall provide the City and/or the City Manager or his/her designee, access to its records for the purpose of audits and/or investigations to ascertain compliance with the provisions of this section, and upon request shall provide evidence that the Contractor is in compliance with the provisions of this section upon each new bid, contract renewal, or when the City Manager has received a complaint or has reason to believe the Contractor may not be in compliance with the provisions of this section. Records shall include but not be limited to providing the City and/or the City Manager or his/her designee with certified copies of the Contractor's records pertaining to its benefits policies and its employment policies and practices.

The Contractor must conspicuously make available to all employees and applicants for employment the following statement:

**“During the performance of a contract with the City of Pembroke Pines, Florida, the Contractor will provide Equal Benefits to its employees with spouses, as defined by Section 35.39 of the City's Code of Ordinances, and its employees with Domestic Partners and all Married Couples”.**

The posted statement must also include a City contact telephone number and email address which will be provided to each contractor when a covered contract is executed.

### SECTION 1 DEFINITIONS

1. **Benefits** means the following plan, program or policy provided or offered by a contractor to its employees as part of the employer's total compensation package which may include but is not limited to sick leave, bereavement leave, family medical leave, and health benefits.
2. **Cash Equivalent** mean the amount of money paid to an employee with a domestic partner or spouse in lieu of providing benefits to the employee's domestic partner or spouse. The cash equivalent is equal to the employer's direct expense of providing benefits to an employee for his or her spouse from a traditional marriage.
3. **Covered Contract** means a contract between the City and a contractor awarded subsequent to the date when this section becomes effective valued at over \$25,000 or the threshold amount required for competitive bids as required in section 35.18(A) of the Procurement Code.
4. **Domestic Partner** shall mean any two (2) adults of the same or different sex who have registered as domestic partners with a governmental body pursuant to state or local law authorizing such registration, or with an internal registry maintained by the employer of at least one of the domestic partners. A contractor may institute an internal registry to allow for the provision of equal benefits to employees with domestic partners who do not register their partnerships pursuant to a governmental body authorizing such registration, or who are

located in a jurisdiction where no such governmental domestic partnership registry exists. A contractor that institutes such registry shall not impose criteria for registration that are more stringent than those required for domestic partnership registration by the City of Pembroke Pines.

5. **Equal benefits** means the equality of benefits between employees with spouses and/or dependents of spouses and employees with domestic partners and/or dependents of domestic partners, and/or between spouses of employees and/or dependents of spouses and domestic partners of employees and/or dependents of domestic partners.
6. **Spouse** means one member of a married pair legally married under the laws of any state within the United States of America or any other jurisdiction under which such marriage is legally recognized, irrespective of gender.
7. **Traditional marriage** means a marriage between one man and one woman.

## SECTION 2 CERTIFICATION OF CONTRACTOR

The firm providing a response, by virtue of the signature below, certifies that it is aware of the requirements of Section 35.39 "City Contractors providing Equal Benefits for Domestic Partners and all Married Couples" of the City's Code of Ordinances, and certifies the following (**Check only one box below**):

- ☒ **A.** Contractor currently complies with the requirements of this section; or
- ☐ **B.** Contractor will comply with the conditions of this section at the time of contract award; or
- ☐ **C.** Contractor will not comply with the conditions of this section at the time of contract award:  
or
- ☐ **D.** Contractor does not comply with the conditions of this section because of the following allowable exemption (**Check only one box below**):
- ☐ **1.** The Contractor does not provide benefits to employees' spouses in traditional marriages;
- ☐ **2.** The Contractor provides an employee the cash equivalent of benefits because the Contractor is unable to provide benefits to employees' Domestic Partners or spouses despite making reasonable efforts to provide them. To meet this exception, the Contractor shall provide a notarized affidavit that it has made reasonable efforts to provide such benefits. The affidavit shall state the efforts taken to provide such benefits and the amount of the cash equivalent. Cash equivalent means the amount of money paid to an employee with a Domestic Partner or spouse rather than providing benefits to the employee's Domestic Partner or spouse. The cash equivalent is equal to the employer's direct expense of providing benefits to an employee's spouse;
- ☐ **3.** The Contractor is a religious organization, association, society, or any non-profit charitable or educational institution or organization operated supervised or controlled by or in conjunction with a religious organization, association, or society;
- ☐ **4.** The Contractor is a governmental agency;

**The certification shall be signed by an authorized officer of the Contractor. Failure to provide such certification (by checking the appropriate boxes above along with completing the information below) shall result in a Contractor being deemed non-responsive.**

COMPANY NAME: **REV RTC d/b/a Hall-Mark RTC**

AUTHORIZED OFFICER NAME / SIGNATURE: **William D. Alm**

Supplier: **Hall-Mark RTC**



*City of Pembroke Pines*

**Attachment H**

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**PROPOSER'S QUALIFICATIONS STATEMENT**

PROPOSER shall furnish the following information. Failure to comply with this requirement will render Bid non-responsive and shall cause its rejection. Additional sheets shall be attached as required.

PROPOSER'S Name and Principal Address:

**REV RTC d/b/a Hall-Mark RTC  
725 SW 46th Ave  
Ocala, FL 34474**

Contact Person's Name and Title: **Jorge Troyano - Sales Rep**

Contact Person's E-mail Address: **jtroyano@hall-markfire.com**

PROPOSER'S Telephone and Fax Number: **(352) 629-6305 (352) 629-2018**

PROPOSER'S License Number: **VI/1101217/1**  
**(Please attach certificate of status, competency, and/or state registration.)**

PROPOSER'S Federal Identification Number: **47-4454880**

Number of years your organization has been in business **24**

State the number of years your firm has been in business under your present business name **1 year 3 months**

State the number of years your firm has been in business in the work specific to this solicitation: **24**

Names and titles of all officers, partners or individuals doing business under trade name:

**Title VP**

**BAMATTER, PAUL  
330 Madison Ave, Flr 28  
New York, NY 10017**

**Title PCEO**

**SULLIVAN, TIM  
4776 NEW BROAD STREET #200  
ORLANDO, FL 32814**

**Title Secretary**

**Krop, Pamela S**  
**4776 NEW BROAD STREET #200**  
**ORLANDO, FL 32814**

**Title CFO**

**Nolden, Dean J**  
**4776 NEW BROAD STREET #200**  
**ORLANDO, FL 32814**

The business is a:      Sole Proprietorship ☐      Partnership ☐      Corporation ☒

IF USING A FICTITIOUS NAME, SUBMIT EVIDENCE OF COMPLIANCE WITH FLORIDA FICTITIOUS NAME STATUTE. (ATTACH IN PROPOSER EXHIBIT SECTION)

Under what former name has your business operated? Include a description of the business. Failure to include such information shall be deemed to be intentional misrepresentation by the City and shall render the proposer RFP submittals non-responsive.

**Hall-Mark Fire Apparatus, Inc.**

At what address was that business located?

**3431 NW 27th Ave**

**Ocala, FL 34474**

Name, address, and telephone number of surety company and agent who will provide the required bonds on this contract:

**Lockton**

**Three CityPLace Drive, Suite 900**

**St. Louis, MO 63146**

Have you ever failed to complete work awarded to you. If so, when, where and why?

**No**

Have you personally inspected the proposed WORK and do you have a complete plan for its performance?

**Yes**

Will you subcontract any part of this WORK? If so, give details including a list of each sub-contractor(s) that will perform work in excess of ten percent (10%) of the contract amount and the work that will be performed by each subcontractor (s).

**No**

The foregoing list of subcontractor(s) may not be amended after award of the contract without the prior written approval of the Contract Administrator, whose approval shall not be reasonably withheld.

List and describe all bankruptcy petitions (voluntary or involuntary) which have been filed by or against the Proposer, its parent or subsidiaries or predecessor organizations during the past five (5) years. Include in the description the disposition of each such petition.

**None**

List and describe all successful Bond claims made to your surety (ies) during the last five (5) years. The list and descriptions should include claims against the bond of the Proposer and its predecessor organization(s).

**None**

List all claims, arbitrations, administrative hearings and lawsuits brought by or against the Proposer or its predecessor organizations(s) during the last (10) years. The list shall include all case names; case, arbitration or hearing identification numbers; the name of the project over which the dispute arose; and a description of the subject matter of the dispute.

**None**

List and describe all criminal proceedings or hearings concerning business related offenses in which the Proposer, its principals or officers or predecessor organization(s) were defendants.

**None**

Has the Proposer, its principals, officers or predecessor organization(s) been CONVICTED OF A Public Entity Crime, debarred or suspended from bidding by any government entity? If so, provide details.

**No**

Are you an ☐ Original provider ☐ sales representative ☒ distributor, ☐ broker, ☐ manufacturer ☐ other, of the commodities/services proposed upon? If other than the original provider, explain below.

**We are the dealer for all E-ONE product in the state of Florida**

Have you ever been debarred or suspended from doing business with any governmental agency? If yes, please explain:

**No**

Describe the firm's local experience/nature of service with contracts of similar size and complexity, in the previous three (3) years:

**We have been in Ocala, FL since 1993 providing sales and service of Emergency Vehicles to cities and counties in the state of Florida.**

The PROPOSER acknowledges and understands that the information contained in response to this Qualification Statement shall be relied upon by CITY in awarding the contract and such information is warranted by PROPOSER to be true. The discovery of any omission or misstatement that materially affects the PROPOSER'S qualifications to perform under the contract shall cause the CITY to reject the Bid, and if after the award, to cancel and terminate the award and/or contract.

**REV RTC d/b/a Hall-Mark RTC**

(Company Name)

**William D. Alm**

(Printed Name/Signature)

**Supplier: Hall-Mark RTC**

**REFERENCES FORM**

Provide specific examples of similar contracts. References should be should be capable of explaining and confirming your firm's capacity to successfully complete the scope of work outlined herein. **This form should be duplicated for each reference and any additional information that would be helpful can be attached.**

**Reference Contact Information:**

Name of Firm, City, County or Agency: **TOWN OF DAVIE**

Address: **6901 ORANGE DR. 33314**

City/State/Zip: **DAVIE, FL**

Contact Name: **FRANK SURIANO** Title: **ASST. CHIEF**

E-Mail Address: **FRANK.SURIANO@DAVIE-FL.GOV**

Telephone: **954 797 1085** Fax: **954 797 1213**

**Project Information:**

Name and location of the project: **RESCUE PUMPER/OCALA,FL**

Nature of the firm's responsibility on the project: **BUILDING OF TRUCK**

Project duration: **ON GOING** Completion (Anticipated) Date: **VARIES**

Size of project: **PUMPERS** Cost of project: **450000**

Work for which staff was responsible: **PUMPER DEVELOPMENT**

Contract Type: **FSA**

The results/deliverables of the project: **PUMPERS**

**REFERENCES FORM**

Provide specific examples of similar contracts. References should be should be capable of explaining and confirming your firm's capacity to successfully complete the scope of work outlined herein. **This form should be duplicated for each reference and any additional information that would be helpful can be attached.**

**Reference Contact Information:**

Name of Firm, City, County or Agency: **SUNRISE FIRE RESCUE**

Address: **10440 W OAKLAND PARK BLVD**

City/State/Zip: **SUNRISE,FL**

Contact Name: **THOMAS DIBERNARDO** Title: **FIRE CHIEF**

E-Mail Address: **tdibernardo@sunrisefl.com**

Telephone: **954-746 3120** Fax: **954 797 3455**

**Project Information:**

Name and location of the project: **RESCUE PUMPER/OCALA,FL**

Nature of the firm's responsibility on the project: **BUILDING OF TRUCK**

Project duration: **ON GOING** Completion (Anticipated) Date: **VARIES**

Size of project: **RESCUE PUMPER** Cost of project: **525000**

Work for which staff was responsible: **PUMPER DEVELOPMENT**

Contract Type: **FSA**

The results/deliverables of the project: **ON GOING**

**REFERENCES FORM**

Provide specific examples of similar contracts. References should be should be capable of explaining and confirming your firm's capacity to successfully complete the scope of work outlined herein. **This form should be duplicated for each reference and any additional information that would be helpful can be attached.**

**Reference Contact Information:**

Name of Firm, City, County or Agency: **MIRAMAR FIRE RESCUE**

Address: **14801 SW 27TH ST**

City/State/Zip: **MIRAMAR,FL**

Contact Name: **PALMER** Title: **FIRE CHIEF**

E-Mail Address: **MIRAMARFIRE@MIRAMARFD.ORG**

Telephone: **954 602 4802** Fax: **954 602 4802**

**Project Information:**

Name and location of the project: **RESCUE PUMPER**

Nature of the firm's responsibility on the project: **BUILDING OF TRUCK**

Project duration: **6 MONTHS** Completion (Anticipated) Date: **FEB 20**

Size of project: **RESCUE PUMPER** Cost of project: **490000**

Work for which staff was responsible: **PUMPER DEVELOPMENT**

Contract Type: **FSA**

The results/deliverables of the project: **FEB 20**

**REFERENCES FORM**

Provide specific examples of similar contracts. References should be should be capable of explaining and confirming your firm's capacity to successfully complete the scope of work outlined herein. **This form should be duplicated for each reference and any additional information that would be helpful can be attached.**

**Reference Contact Information:**

Name of Firm, City, County or Agency: **MARTIN COUNTY FIRE RESCUE**

Address: **4725 SE DIXIE HWY**

City/State/Zip: **STUART,FL 34997**

Contact Name: **ED STAGMILLER** Title: **FLEET DIRECTOR**

E-Mail Address: **estagmil@martin.fl.us**

Telephone: **772 221 2342** Fax: **772 288 5400**

**Project Information:**

Name and location of the project: **rescue pumpers /ocala,fl**

Nature of the firm's responsibility on the project: **BUILDING OF TRUCK**

Project duration: **8 MTHS** Completion (Anticipated) Date: **7/16**

Size of project: **RESCUE PUMPER** Cost of project: **534000**

Work for which staff was responsible: **PUMPER DEVELOPMENT**

Contract Type: **FSA**

The results/deliverables of the project: **7/16**

**REFERENCES FORM**

Provide specific examples of similar contracts. References should be should be capable of explaining and confirming your firm's capacity to successfully complete the scope of work outlined herein. **This form should be duplicated for each reference and any additional information that would be helpful can be attached.**

**Reference Contact Information:**

Name of Firm, City, County or Agency: **CITY OF HIALEAH**

Address: **83 E 5TH ST**

City/State/Zip: **HIALEAH, FL 33010**

Contact Name: **FREDDY PEREZ** Title: **DIVISION CHIEF**

E-Mail Address: **hlperez@hialeahfl.gov**

Telephone: **786 525 3562** Fax: **305 883 5800**

**Project Information:**

Name and location of the project: **RESCUE PUMPER/OCALA, FL**

Nature of the firm's responsibility on the project: **BUILDING OF TRUCK**

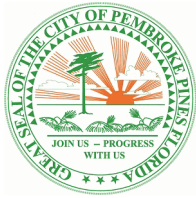
Project duration: **7 MTHS** Completion (Anticipated) Date: **12/16**

Size of project: **PUMPER** Cost of project: **454000**

Work for which staff was responsible: **PUMPER DEVELOPMENT**

Contract Type: **FSA**

The results/deliverables of the project: **12/16**



# City of Pembroke Pines, FL

601 City Center Way  
Pembroke Pines, FL  
33025  
www.ppines.com

## Agenda Request Form

### Agenda Number: 1.

**File ID:** 17-0066

**Type:** Bid

**Status:** Passed

**Version:** 0

**Agenda  
Section:**

**In Control:** City Commission

**File Created:** 02/21/2017

**Short Title:** Award IFB # FI-16-01 "Fire Engine/Pumper Truck"

**Final Action:** 04/05/2017

**Title:** MOTION TO AWARD IFB # FI-16-01 "FIRE ENGINE/PUMPER TRUCK" TO THE MOST RESPONSIVE/RESPONSIBLE BIDDER, REV RTC D/B/A HALL-MARK RTC, IN THE AMOUNT OF \$449,866.

**\*Agenda Date:** 04/05/2017

**Agenda Number:** 1.

#### Internal Notes:

**Attachments:** 1. FI-16-01 - Bid Tabulation, 2. Proposal from Hall-Mark RTC, 3. FI-16-01 Fire Engine-Pumper Truck

0 City Commission 04/05/2017 approve Pass

**Action Text:** A motion was made to approve on the Consent Agenda

Aye: - 5 Mayor Ortis, Commissioner Castillo, Commissioner Shechter,  
Commissioner Schwartz, and Commissioner Siple

Nay: - 0

MOTION TO AWARD IFB # FI-16-01 "FIRE ENGINE/PUMPER TRUCK" TO THE MOST RESPONSIVE/RESPONSIBLE BIDDER, REV RTC D/B/A HALL-MARK RTC, IN THE AMOUNT OF \$449,866.

**SUMMARY EXPLANATION AND BACKGROUND:**

1. On January 11, 2017, the City Commission authorized the advertisement of IFB # FI-16-01 "Fire Engine/Pumper Truck," which was later advertised on January 17th, 2017.

2. The purpose of this bid is to provide the Fire Department with a Fire Engine/Pumper Truck that will meet their needs, and to enter into a contract that will allow for the Fire Department to buy additional Fire Engine/Pumper Trucks in future years, if needed.

3. On February 14, 2017, the City opened three (3) bids from the following vendors:

Vendor	Unit Price	Pre-Payment		Total Cost
		Discount	Trade-In	
Hall-Mark Fire Apparatus	\$ 468,480.00	\$13,114.00	\$5,500.00	\$449,866.00
South Florida Emergency	\$ 481,577.68	\$ 8,828.92	\$3,500.00	\$469,248.76
Ten-8 Fire Equipment Inc.	\$ 525,512.00	\$16,600.00	\$5,000.00	\$503,912.00

4. The Fire Department has reviewed the bids and has deemed Hall-Mark RTC to be the most responsive/responsible bidder.

5. In addition, Hall-Mark RTC has completed the Equal Benefits Certification Form and has stated that the "Contractor currently complies with the requirements of this section."

6. Recommend City Commission to award IFB # FI-16-01 "Fire Engine/Pumper Truck" to the most responsive/responsible bidder, REV RTC d/b/a/ Hall-Mark RTC, in the amount of \$449,866.00.

**FINANCIAL IMPACT DETAIL:**

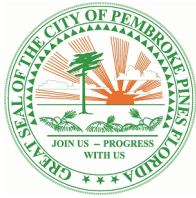
a) **Initial Cost:** \$449,866.

b) **Amount budgeted for this item in Account No:** Funds are available in account # 1-529-4003-64450 (Fire engine).

c) **Source of funding for difference, if not fully budgeted:** Not Applicable.

d) **5 year projection of the operational cost of the project:** Not Applicable.

e) **Detail of additional staff requirements:** Not Applicable.



# City of Pembroke Pines, FL

601 City Center Way  
Pembroke Pines, FL  
33025  
www.ppines.com

## Agenda Request Form

### Agenda Number: 3.

**File ID:** 17-0663

**Type:** Purchase

**Status:** Passed

**Version:** 1

**Agenda  
Section:**

**In Control:** City Commission

**File Created:** 09/19/2017

**Short Title:** Purchase of Fire Engine Pumper Truck

**Final Action:** 10/18/2017

**Title:** MOTION TO APPROVE THE PURCHASE OF A FIRE ENGINE/PUMPER TRUCK FROM REV RTC D/B/A HALL-MARK RTC, IN THE AMOUNT OF \$456,893.20, UTILIZING PRICING ESTABLISHED IN THE AGREEMENT RESULTING FROM IFB # FI-16-01.

**\*Agenda Date:** 10/18/2017

**Agenda Number:** 3.

#### Internal Notes:

**Attachments:** 1. Agreement for the Purchase of Fire Engine Pumper Truck - REV RTC Hall-Mark, 2. Fire EnginePumper Truck Trade-In Proposal

1	City Commission	10/18/2017	approve	Pass
<b>Action Text:</b> A motion was made to approve on the Consent Agenda				
Aye: - 5 Mayor Ortis, Commissioner Castillo, Commissioner Schwartz, Commissioner Siple, and Commissioner Monroig				
Nay: - 0				

MOTION TO APPROVE THE PURCHASE OF A FIRE ENGINE/PUMPER TRUCK FROM REV RTC D/B/A HALL-MARK RTC, IN THE AMOUNT OF \$456,893.20, UTILIZING PRICING ESTABLISHED IN THE AGREEMENT RESULTING FROM IFB # FI-16-01.

**SUMMARY EXPLANATION AND BACKGROUND:**

1. On April 5, 2017, the City Commission awarded IFB # FI-16-01 "Fire Engine/Pumper Truck" to REV RTC d/b/a/ Hall-Mark RTC and authorized the purchase of a fire engine/pumper truck for the 2016-17 budget year while also entering into a three (3) year agreement, through April 4, 2020, that would allow for the Fire Department to buy additional Fire Engine/Pumper Trucks in future years, if needed.
2. The Fire Department has included in their 2017-18 fiscal year budget, the replacement of one (1) Fire Engine/Pumper Truck. The new Fire Engine/Pumper Truck will replace vehicle # 7755 that has reached the end of it's useful life.
3. The agreement between the City and REV RTC d/b/a/ Hall-Mark RTC, includes the following prices for future purchases throughout the term of the contract:

<u>Description</u>	<u>Order Information</u>	<u>Cost</u>
Fire Rescue/Pumper Truck	Orders prior to 05/14/17	\$468,480.00
Fire Rescue/Pumper Truck	Orders between 05/15/2017 & 02/14/2019	\$475,507.20
Fire Rescue/Pumper Truck	Orders between 02/15/2018 & 02/14/2019	\$489,772.42
Fire Rescue/Pumper Truck	Orders between 02/15/2019 & 02/14/2020	\$504,465.59
Fire Rescue/Pumper Truck	Orders between 02/15/2020 & 04/04/2020	\$519,599.56
Pre-Payment Discount	Per vehicle	(\$13,114.00)

4. In addition, REV RTC d/b/a/ Hall-Mark RTC has provided a proposal of \$5,500 for the trade of the old unit.

5. As a result, the total cost per unit is:

<u>Description</u>	<u>Order Information</u>	<u>Cost</u>
Fire Rescue/Pumper Truck	Orders between 05/15/2017 & 02/14/2018	\$475,507.20
Pre-Payment Discount	Per vehicle	(\$13,114.00)
Trade-In Value Option	1996 E-One Hush 1006698	(\$5,500.00)
<b>Total</b>		<b>\$456,893.20</b>

6. Request Commission to approve the purchase of a Fire Engine/Pumper Truck from REV RTC d/b/a/ Hall-Mark RTC, in the amount of \$456,893.20, utilizing pricing established in the agreement resulting from IFB # FI-16-01.

**FINANCIAL IMPACT DETAIL:**

- a) **Initial Cost:** \$456,894
- b) **Amount budgeted for this item in Account No:** Funds are budgeted in account # 1-529-4003-64450 (Fire Engine).
- c) **Source of funding for difference, if not fully budgeted:** Not Applicable.

- d) **5 year projection of the operational cost of the project:** Not Applicable.
- e) **Detail of additional staff requirements:** Not Applicable.



725 SW 46<sup>th</sup> Avenue  
Ocala, Florida 34474  
T (352) 629-6305  
M (352) 239-2928  
F (352) 629-2018

## Apparatus Proposal

DATE: October 11, 2017  
The Proposal has been prepared for:  
**Pembroke Pines Fire Rescue**  
**9500 Pines Boulevard Building B**  
**Pembroke Pines, FL 33024**

Hall-Mark RTC. is pleased to offer Pembroke Pines Fire Rescue 2017 Pumper on a Typhoon chassis. This vehicle shall be in accordance with the attached specifications. The purchase price shall include all vehicle components and NFPA equipment as requested by the fire department as detailed in the Hall-Mark RTC Proposal.


Delivery will be F.O.B. Customer Location and will be made approximately 330 Calendar days after receipt of Purchase Order. Terms of payment shall be pre-payment (**pre-payment must be received within 30 days of the purchase order. If the payment is received more than 30 days after purchase order, only simple interest discounts will apply**) or net 30 at delivery.

<b>Typhoon Rescue Pumper</b>	<b>\$</b>	<b>475,507.20</b>
Pre-Payment Discount (no performance bond)	(\$	13,114.00)
Trade 1996 E-ONE Hush 1006698	(\$	5,500)
<b>Total</b>	<b>\$</b>	<b>456,893.20</b>

This quote is valid until October 31<sup>st</sup> 2017 unless extended in writing.

This proposal is deemed acceptable by the undersigned. In witness whereof, The Company and the Purchaser shall execute and agreement to this proposal with signatures and authorizations representatives as of the date set forth by each.

  
Dee Daniels – Director of Apparatus Sales

  
Date



# CERTIFICATE OF LIABILITY INSURANCE

7/1/2018

DATE (MM/DD/YYYY)

6/30/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Lockton Companies Three City Place Drive, Suite 900 St. Louis MO 63141-7081 (314) 432-0500	<b>CONTACT NAME:</b>	
	<b>PHONE (A/C, No. Ext):</b> <b>FAX (A/C, No):</b>	
<b>INSURED</b> 1356298 REV RTC, Inc. D/B/A Hall-Mark RTC 725 SW 46th Ave. Ocala FL 34474	<b>E-MAIL ADDRESS:</b>	
	<b>INSURER(S) AFFORDING COVERAGE</b>	<b>NAIC #</b>
	<b>INSURER A:</b> Great American E & S Insurance Company	37532
	<b>INSURER B:</b> Travelers Property Casualty Co of America	25674
	<b>INSURER C:</b> AXIS Surplus Insurance Company	26620
	<b>INSURER D:</b> The Charter Oak Fire Insurance Company	25615
<b>INSURER E:</b>		
<b>INSURER F:</b>		

**COVERAGES** AIPHO60 **CERTIFICATE NUMBER:** 14585580 **REVISION NUMBER:** XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y	N	PL1744639	7/1/2017	7/1/2018	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ XXXXXXXX PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 \$
B	<input checked="" type="checkbox"/> <b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	N	N	TC2JCAP8E082581TIL17	7/1/2017	7/1/2018	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
C	<input type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$	N	N	EAU781897012017	7/1/2017	7/1/2018	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$ XXXXXXXX
D	<input checked="" type="checkbox"/> <b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	TC20UB118D488217	7/1/2017	7/1/2018	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
CITY OF PEMBROKE PINES IS ADDITIONAL INSURED UNDER THE GENERAL LIABILITY AS REQUIRED BY WRITTEN CONTRACT.

**CERTIFICATE HOLDER****CANCELLATION**

<b>14585580</b> CITY OF PEMBROKE PINES 601 City Center Way PEMBROKE PINES FL 33025	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 

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City of Pembroke Pines  
 Bid Tabulation - Procurement  
 IFB #FI-16-01  
 Fire Engine/Pumper Truck

Vendor	REV RTC d/b/a Hall-Mark RTC	South Florida Emergency Vehicles LLC	Ten-8 Fire Equipment Inc.
<b>Contact Information (From Attachment A)</b>	<b><u>Company Information:</u></b> 725 SW 46th Ave Ocala, FL 34474 <b><u>Primary Contact:</u></b> Jorge Troyaon, Sales Rep Phone: 235-4799 FAX: (352) 629-2018 jtroyano@hall-markfire.com <b><u>Authorized Approver:</u></b> Dee Daniels, Director of Sales Phone: (352) 629-6305 Fax: (352) 629-2018 dee.daniels@revrtc.com	<b><u>Company Information:</u></b> 6450 Eiterman Rd Dublin, OH 43016 <b><u>Primary Contact:</u></b> David Stontisch, Sales E-MAIL: dstonitsch@hotmail.com TELEPHONE: 2392675300 FAX: 2395909246 <b><u>Authorized Approver:</u></b> Drew Sutphen TITLE: President E-MAIL: drew@sutphencorp.com TELEPHONE: 800-848-5860 FAX: 614-889-0874	<b><u>Company Information:</u></b> 2904 59th Ave. Dr. E. Bradenton, FL 34203 <b><u>Primary Contact:</u></b> Mike Schneider Sales Rep E-MAIL: mjsfiretruck@aol.com TELEPHONE: 561-339-3492 FAX: 941-755-9510 <b><u>Authorized Approver:</u></b> Stacey Abraham Sales & Marketing Manager E-MAIL: sabraham@ten8fire.com TELEPHONE: 941-756-7779 FAX: 941-755-9510
Attachment A - Contact Information Form	Yes.	Yes.	Yes.
Attachment B - Vendor Information Form and W-9	Yes.	Yes.	Yes.
Attachment C - Non-Collusive Affidavit	Yes.	Yes.	Yes.
Attachment D - Sworn Statement on Public Entity Crimes Form	A. Neither the entity nor any officers who are active in management nor any affiliate have been charged with a public entity crime.	A. Neither the entity nor any officers who are active in management nor any affiliate have been charged with a public entity crime.	A. Neither the entity nor any officers who are active in management nor any affiliate have been charged with a public entity crime.
Attachment E - Local Vendor Preference Certification	Claiming Local Vendor Preference as a Local Broward County Vendor, however business tax receipts were not submitted.	Does not meet the requirements above as a Local Vendor.	Claiming Local Vendor Preference as a Local Broward County Vendor, however business tax receipts were not submitted.
Attachment F - Veteran Owned Small Business Preference Certification	Does not qualify for VOSB Preference Certification.	Does not qualify for VOSB Preference Certification.	Does not qualify for VOSB Preference Certification.
Attachment G - Equal Benefits Certification Form	A. Contractor currently complies with the requirements of this section.	A. Contractor currently complies with the requirements of this section.	C. Contractor will not comply with the conditions of this section at the time of contract award
Attachment H - Proposer's Qualification Statement	Yes.	Yes.	Yes.
Attachment K - References Form	Yes.	Yes.	Yes.
Bid Security (N/A, Bid Bond, Cashier's Check, Not Submitted)	N/A	N/A	N/A
Method of Submittal	BidSync	BidSync	BidSync
Total Cost	\$468,480.00	\$481,577.68	\$525,512.00
Pre-Payment Discount Option	(\$13,114.00)	(\$8,828.92)	(\$16,600.00)
Trade-In Value Option	(\$5,500.00)	(\$3,500.00)	(\$5,000.00)
Total Cost	<b>\$449,866.00</b>	<b>\$469,248.76</b>	<b>\$503,912.00</b>

[View by Line Item](#) | [View by Supplier](#)

[Email Tabulation](#) | [Generate PDF](#) | [View Printable](#)

## Bid #FI-16-01 - Fire Engine / Pumper Truck

Creation Date **Jan 16, 2017**

End Date **Feb 14, 2017 2:00:00 PM EST**

Start Date **Jan 17, 2017 8:04:38 AM EST**

Awarded Date **Not Yet Awarded**

<b>Hall-Mark RTC</b>		<b>\$449,866.00 (6/6 items)</b>		
Bid Contact <b>Dee Daniels</b> <a href="mailto:ddaniels@hall-markfire.com">ddaniels@hall-markfire.com</a> Ph 352-629-6305		Address <b>725 SW 46th Ave</b> <b>Ocala, FL 34474</b>		
<b>Agency Notes:</b>		<b>Supplier Notes:</b>		
<b>Item #</b>	<b>Line Item</b>	<b>Unit Price</b>	<b>Qty/Unit</b>	<b>Total Price</b>
FI-16-01--01-01	Fire Engine / Pumper Truck Cost - First Offer	\$468,480.00	1 / each	\$468,480.00
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> Confirm <b>Supplier Notes:</b> Typhoon/Rescue Pumper 42-56		
FI-16-01--01-02	Pre-Payment Discount Option - First Offer	(\$13,114.00)	1 / each	(\$13,114.00)
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> Confirm <b>Supplier Notes:</b> Pre-Payment in Required 30 Days after Receipt of PO.		
FI-16-01--01-03	Trade-In Value Option for a: 1997 E-One Hush XLT (VIN # 4ENBAAA81V1007640) - First Offer	(\$5,500.00)	1 / each	(\$5,500.00)
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> Confirm <b>Supplier Notes:</b>		
FI-16-01--01-04	Proposed Equipment (Fire Engine/Pumper Truck Year, Make and Model) - First Offer		1 / each	<b>Product Feedback</b>

<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b>	
FI-16-01--01-05	Maintenance Shop Name and Location - First Offer		1 / each
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b>	
FI-16-01--01-06	Number of Calendar Days to Complete and Furnish the Fire Engine / Pumper Truck - First Offer		1 / each
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b>	

<b>South Florida Emergency Vehicles LLC</b>		<b>\$469,248.76 (6/6 items)</b>	
Bid Contact <b>Guy Lombardo</b> <b>dstonitsch@hotmail.com</b> <b>Ph 239-267-5300</b> Supplier Code 235232		Address <b>4655 Cummins Ct</b> <b>Fort Myers, FL 33905</b>	
<b>Agency Notes:</b>		<b>Supplier Notes:</b>	
<b>Item #</b>	<b>Line Item</b>	<b>Unit Price</b>	<b>Qty/Unit</b>
FI-16-01--01-01	Fire Engine / Pumper Truck Cost - First Offer	\$481,577.68	1 / each
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b> Cost of Apparatus with no prepayment discount	
FI-16-01--01-02	Pre-Payment Discount Option - First Offer	(\$8,828.92)	1 / each
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b> This is for a 100% down payment, see attached list for small down payment discounts	
FI-16-01--01-03	Trade-In Value Option for a: 1997 E-One Hush XLT (VIN # 4ENBAAA81V1007640) - First Offer	(\$3,500.00)	1 / each
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b>	
FI-16-01--01-04	Proposed Equipment (Fire Engine/Pumper Truck Year, Make and Model) - First Offer		1 / each
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b>	
FI-16-01--01-05	Maintenance Shop Name and Location - First Offer		1 / each
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b>	
FI-16-01--01-06	Number of Calendar Days to Complete and Furnish the Fire Engine / Pumper Truck - First Offer		1 / each
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b>	

<b>Ten-8 Fire Equipment Inc.</b>		<b>\$503,912.00 (6/6 items)</b>	
Bid Contact <b>Mark Jones</b> <b>bscott@ten8fire.com</b> <b>Ph 941-756-7779</b>		Address <b>2904 59th Ave Drive East</b> <b>Bradenton, FL 34203</b>	
<b>Agency Notes:</b>		<b>Supplier Notes:</b>	
<b>Item #</b>	<b>Line Item</b>	<b>Unit Price</b>	<b>Qty/Unit</b>
FI-16-01--01-01	Fire Engine / Pumper Truck Cost - First Offer	\$525,512.00	1 / each
<b>Product Code:</b> <b>Agency Notes:</b>		<b>Supplier Product Code:</b> <b>Supplier Notes:</b> Vehicle specifications, warranties, and certificates are attached in Section FI-16-01--01-04 below.	
FI-16-01--01-02	Pre-Payment Discount Option - First Offer	(\$16,600.00)	1 / each
<b>Product Code:</b>		<b>Supplier Product Code:</b>	<b>Product Feedback</b>

<b>Agency Notes:</b>			<b>Supplier Notes:</b>		
FI-16-01--01-03	Trade-In Value Option for a: 1997 E-One Hush XLT (VIN # 4ENBAAA81V1007640) - First Offer		(\$5,000.00)	1 / each	(\$5,000.00)
<b>Product Code:</b>			<b>Supplier Product Code:</b>		
<b>Agency Notes:</b>			<b>Supplier Notes:</b>		
FI-16-01--01-04	Proposed Equipment (Fire Engine/Pumper Truck Year, Make and Model) - First Offer			1 / each	
<b>Product Code:</b>			<b>Supplier Product Code:</b>		
<b>Agency Notes:</b>			<b>Supplier Notes:</b>	2017 Pierce Saber Pumper	
FI-16-01--01-05	Maintenance Shop Name and Location - First Offer			1 / each	
<b>Product Code:</b>			<b>Supplier Product Code:</b>		
<b>Agency Notes:</b>			<b>Supplier Notes:</b>	Ten-8 Fire Equipment, Inc. 2651 Wiles Road Pompano Beach, FL 33073 954-272-1430 <a href="http://www.ten8fire.com">www.ten8fire.com</a>	
FI-16-01--01-06	Number of Calendar Days to Complete and Furnish the Fire Engine / Pumper Truck - First Offer			1 / each	
<b>Product Code:</b>			<b>Supplier Product Code:</b>		
<b>Agency Notes:</b>			<b>Supplier Notes:</b>	360 - 390 days	

Questions? Contact a BidSync representative: 800-990-9339 or email: [support@bidsync.com](mailto:support@bidsync.com)

