

Solicitation 12658-822

Fire Pumper Apparatus

Bid Designation: Public



City of Fort Lauderdale

Bid 12658-822

Fire Pumper Apparatus

Bid Number **12658-822**

Bid Title **Fire Pumper Apparatus**

Bid Start Date **Apr 5, 2022 3:16:27 PM EDT**

Bid End Date **May 18, 2022 2:00:00 PM EDT**

Question & Answer End Date **Apr 27, 2022 5:00:00 PM EDT**

Bid Contact **Laurie Platkin, NIGP-CPP, CPPB**
Senior Procurement Specialist
Finance - Procurement Division
954-828-5138
lplatkin@fortlauderdale.gov

Contract Duration **One Time Purchase**

Contract Renewal **Not Applicable**

Prices Good for **120 days**

Bid Comments **The City of Fort Lauderdale, Florida (City) is seeking bids from qualified, experienced, and licensed firm(s), hereinafter referred to as the Contractor or Bidder, to provide new fire pumper apparatus for the City, in accordance with the terms, conditions, and specifications contained in this Invitation to Bid (ITB).**

For additional information go to www.BidSync.com.
 Added on Apr 20, 2022:
ADDENDUM 1

This addendum is being issued to make the following change(s):

1. In response to Question 5, Section 3.7.15.1 added as follows:

3.7.15 A compartment shall be provided under the forward-facing crew seats on the back wall of the cab. The front of the compartment shall be open and enclosed with black nylon webbing. The webbing shall be secured with plastic buckles. Compartment dimensions are 91.5"L x 14"H x 19"W.

3.7.15.1 Storage cabinet behind front passenger seat (officer seat) Dimensions:
Length -22 inches, Depth - 24 inches and Height - 27.5 inches. With one adjustable shelf and a removable netting mesh to cover the opening.

All other terms, conditions, and specifications remain unchanged.

Added on Apr 28, 2022:
 Addendum 2 has been added to the Documents page. It deletes the requirement to be paid via the City's Procurement Card.
 Added on May 10, 2022:
ADDENDUM 3

This addendum is being issued to make the following change(s):

Bid End Date Changed from May 11, 2022 2 pm to May 18th, 2022 2 pm.

All other terms, conditions, and specifications remain unchanged.

Addendum # 1[New Documents](#)[Addendum 2.pdf](#)**Item Response Form**

Item **12658-822--01-01 - Fire-Rescue: Pumper Apparatus**

Quantity **3 each**

Unit Price

Delivery Location **City of Fort Lauderdale**

Fleet Services Buildings

220 SW 14 Ave

Fort Lauderdale FL 33312

Qty 3

Description

See Section III - Technical Specifications for a full description.

Bidder shall attach a comprehensive line item quote with their bid.

City of Fort Lauderdale
Fire Pumper Apparatus
ITB # 12658-822

SECTION I – INTRODUCTION AND INFORMATION

1.1 Purpose

The City of Fort Lauderdale, Florida (City) is seeking bids from qualified, experienced, and licensed firm(s), hereinafter referred to as the Contractor or Bidder, to provide **new fire pumper apparatus** for the City, in accordance with the terms, conditions, and specifications contained in this Invitation to Bid (ITB).

- 1.1.2** The purpose of this document is to provide minimum specifications and test parameters for the manufacture of custom fire pumpers that meet the needs and desires of the City. It establishes essential criteria for the design, performance, equipment, and appearance of the vehicle. The object is to provide a vehicle that is in accordance with all applicable and nationally recognized standard guidelines.

City Staff have researched various trucks on the market and selected features that staff feels are beneficial for their needs. These features have been compiled into the specifications that make up this ITB. *We have referenced quality levels, safety items, etc. that we desire, but they are not intended to be of a proprietary nature.* Staff have made attempts to be careful not to include items that were of a proprietary nature in this document; however, a few specifications may inadvertently remain. If, upon your review of this document, you see a requirement that you feel is proprietary to only one vendor, please bring that to our attention for our review. It is our hope that we have prepared a competitive specification that is as impartial as possible, without compromising necessary and desired features and attributes for which Fire-Rescue had expressed a strong need to do their job safely and efficiently.

In an area where the bidder's proposed apparatus varies or doesn't meet the specifications within the ITB then please provide clarification on how the bidder's specifications meet the intended result(s).

1.2 Point of Contact

For information concerning procedures for responding to this solicitation, contact Senior Procurement Specialist, Laurie Platkin, at (954) 828-5138 or email at platkin@fortlauderdale.gov. Such contact shall be for clarification purposes only.

For information concerning technical specifications, please utilize the question / answer feature provided by BidSync at www.bidsync.com. Questions of a material nature must be received prior to the cut-off date specified in the ITB schedule. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum. (See addendum section of BidSync Site). Bidders please note: No part of your bid can be submitted via FAX. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the Bidder has familiarized themselves with the nature and extent of the work, and the equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation. The questions and answers submitted in BidSync shall become part of any contract that is created from this ITB.

1.3 Pre-bid Conference and/or Site Visit

There will not be a pre-bid conference or site visit for this ITB.

It will be the sole responsibility of the Bidder to become familiar with the scope of the City's requirements and systems prior to submitting a bid. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the

Bidder has familiarized themselves with the nature and extent of the work, equipment, materials, and labor required.

1.4 BidSync

The City of Fort Lauderdale uses BidSync (www.bidsync.com) to administer the competitive solicitation process, including but not limited to soliciting proposals, issuing addenda, posting results and issuing notification of an intended decision. There is no charge to register and download the ITB from BidSync. Bidders are strongly encouraged to read the various vendor Guides and Tutorials available in BidSync well in advance of their intention of submitting a proposal to ensure familiarity with the use of BidSync. The City shall not be responsible for a Bidder's inability to submit a Proposal by the end date and time for any reason, including issues arising from the use of BidSync.

It is the sole responsibility of the Bidder to ensure that their bid is submitted electronically through BidSync at www.bidsync.com no later than the time and date specified in this solicitation. PAPER BID SUBMITTALS WILL NOT BE ACCEPTED. BIDS MUST BE SUBMITTED ELECTRONICALLY VIA WWW.BIDSYNC.COM.

1.5 Electronic Bid Openings

Please be advised that effective immediately, and until further notice, all Invitation to Bids, Request for Proposals, Request for Qualifications, and other solicitations led by the City of Fort Lauderdale will be opened electronically via BIDSYNC.COM at the date and time indicated on the solicitation. All openings will be held on the BIDSYNC.COM platform.

Anyone requesting assistance or having further inquiry in this matter must contact the Procurement Specialist indicated on the solicitation, via the Question-and-Answer forum on Bidsync.com before the Last Day for Questions indicated in the Solicitation.

END OF SECTION

SECTION II - SPECIAL TERMS AND CONDITIONS

2.1 General Conditions

ITB General Conditions (Form G-107, Rev. 09/20) are included and made a part of this ITB.

2.2 Addenda, Changes, and Interpretations

It is the sole responsibility of each firm to notify the Procurement Specialist utilizing the question / answer feature provided by BidSync and request modification or clarification of any ambiguity, conflict, discrepancy, omission, or other error discovered in this competitive solicitation. Requests for clarification, modification, interpretation, or changes must be received prior to the Question and Answer (Q & A) Deadline. Requests received after this date may not be addressed. Questions and requests for information that would not materially affect the scope of services to be performed or the solicitation process will be answered within the question / answer feature provided by BidSync and shall be for clarification purposes only. Material changes, if any, to the scope of services or the solicitation process will only be transmitted by official written addendum issued by the City and uploaded to BidSync as a separate addendum to the ITB. Under no circumstances shall an oral explanation given by any City official, officer, staff, or agent be binding upon the City and should be disregarded. All addenda are a part of the competitive solicitation documents, and each firm will be bound by such addenda. It is the responsibility of each to read and comprehend all addenda issued.

2.3 Changes and Alterations

Bidder may change or withdraw a Bid at any time prior to Bid submission deadline; however, no oral modifications will be allowed. Modifications shall not be allowed following the Bid deadline.

2.4 Bidder's Costs

The City shall not be liable for any costs incurred by Bidders in responding to this ITB.

2.5 Pricing/Delivery

All pricing should be identified on the Cost page provided in this ITB. No additional costs may be accepted, other than the costs stated on the Cost page. Failure to use the City's Cost page and provide costs as requested in this ITB may deem your bid non-responsive.

Bidder shall quote a firm, fixed price for all services stated in the ITB. All costs including travel shall be included in your cost. The City shall not accept any additional costs including any travel associated with coming to the City of Fort Lauderdale.

All pricing must include delivery and installation and be quoted FOB: Destination.

The chassis and body shall be ordered within fifteen (15) days of awarded vendors receipt of purchase order. Verification of order shall be sent to Fleet Services at sleonard@fortlauderdale.gov.

2.6 Price Validity

Prices provided in this Invitation to bid (ITB) shall be valid for at least One-Hundred and Twenty (120) days from time of ITB opening unless otherwise extended and agreed upon by the City and Bidder. The City shall award contract within this time period or shall request to the recommended awarded vendor an extension to hold pricing, until products/services have been awarded.

2.7 Invoices/Payment

The City will accept invoices no more frequently than once per month. Each invoice shall fully detail the related costs and shall specify the status of the particular task or project as of the date of the invoice with regard to the accepted schedule for that task or project. Payment will be made within forty-five (45) days

after receipt of an invoice acceptable to the City, in accordance with the Florida Local Government Prompt Payment Act. If, at any time during the contract, the City shall not approve or accept the Contractor's work product, and agreement cannot be reached between the City and the Contractor to resolve the problem to the City's satisfaction, the City shall negotiate with the Contractor on a payment for the work completed and usable to the City.

2.8 Related Expenses/Travel Expenses

All costs including travel are to be included in your bid. The City will not accept any additional costs.

2.9 Payment Method

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to payment by credit card via MasterCard or Visa. This allows you as a vendor of the City of Fort Lauderdale to receive your payment fast and safely. No more waiting for checks to be printed and mailed. Payments will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, firms must presently have the ability to accept credit card payment or take whatever steps necessary to implement acceptance of a credit card before the commencement of a contract. See Contract Payment Method form attached.

2.10 Mistakes

The Bidder shall examine this ITB carefully. The submission of a bid shall be prima facie evidence that the Bidder has full knowledge of the scope, nature, and quality of the work to be performed; the detailed requirements of the specifications; and the conditions under which the work is to be performed. Ignorance of the requirements will not relieve the Bidder from liability and obligations under the Contract.

2.11 Acceptance of Bids / Minor Irregularities

2.11.1 The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variances to specifications contained in bids which do not make the bid conditional in nature and minor irregularities in the solicitation process. A minor irregularity shall be a variation from the solicitation that does not affect the price of the contract or does not give a bidder an advantage or benefit not enjoyed by other bidders, does not adversely impact the interests of other firms, or does not affect the fundamental fairness of the solicitation process. The City also reserves the right to reissue an ITB.

2.11.2 The City reserves the right to disqualify Bidder during any phase of the competitive solicitation process and terminate for cause any resulting contract upon evidence of collusion with intent to defraud or other illegal practices on the part of the Bidder.

2.12 Modification of Services

2.12.1 While this contract is for services provided to the department referenced in this ITB, the City may require similar work for other City departments. Successful Bidder agrees to take on such work unless such work would not be considered reasonable or become an undue burden to the Successful Bidder.

2.12.2 The City reserves the right to delete any portion of the work at any time without cause, and if such right is exercised by the City, the total fee shall be reduced in the same ratio as the estimated cost of the work deleted bears to the estimated cost of the work originally planned.

2.12.3 The City may require additional items or services of a similar nature, but not specifically listed in the contract. The Successful Bidder agrees to provide such items or services and shall provide the City prices on such additional items or services. If the price(s) offered are not

acceptable to the City, and the situation cannot be resolved to the satisfaction of the City, the City reserves the right to procure those items or services from other vendors, or to cancel the contract upon giving the Successful Bidder thirty (30) days written notice.

- 2.12.4** If the Successful Bidder and the City agree on modifications or revisions to the task elements, after the City has approved work to begin on a particular task or project, and a budget has been established for that task or project, the Successful Bidder will submit a revised budget to the City for approval prior to proceeding with the work.

2.13 Non-Exclusive Contract

Bidder agrees and understands that the contract shall not be construed as an exclusive arrangement and further agrees that the City may, at any time, secure similar or identical services from another vendor at the City's sole option.

2.14 Sample Contract Agreement

A sample of the formal agreement template, which may be required to be executed by the awarded vendor can be found at our website: <https://www.fortlauderdale.gov/home/showdocument?id=1212>.

2.15 Responsiveness

In order to be considered responsive to the solicitation, the firm's bid shall fully conform in all material respects to the solicitation and all of its requirements, including all form and substance.

2.16 Responsibility

In order to be considered as a responsible firm, firm shall be fully capable to meet all of the requirements of the solicitation and subsequent contract, must possess the full capability, including financial and technical, to perform as contractually required, and must be able to fully document the ability to provide good faith performance.

2.17 Minimum Qualifications

To be eligible for award of a contract in response to this solicitation, the Bidder must demonstrate that they have successfully completed services, as specified in the Technical Specifications / Scope of Services section of this solicitation, are normally and routinely engaged in performing such services, and are properly and legally licensed to perform such work. In addition, the Bidder must have no conflict of interest with regard to any other work performed by the Bidder for the City of Fort Lauderdale.

- 2.17.1** Firm or principals shall have no record of judgments, pending lawsuits against the City or criminal activities involving moral turpitude and not have any conflicts of interest that have not been waived by the City Commission.

- 2.17.2** Neither firm nor any principal, officer, or stockholder shall be in arrears or in default of any debt or contract involving the City, (as a party to a contract, or otherwise); nor have failed to perform faithfully on any previous contract with the City.

2.18 Lobbying Activities

ALL CONTRACTORS PLEASE NOTE: Any contractor submitting a response to this solicitation must comply, if applicable, with City of Fort Lauderdale Ordinance No. C-11-42 & Resolution No. 07-101, Lobbying Activities. Copies of Ordinance No. C-11-42 and Resolution No. 07-101 may be obtained from the City Clerk's Office on the 7th Floor of City Hall, 100 N. Andrews Avenue, Fort Lauderdale, Florida. The ordinance may also be viewed on the City's website at: <http://www.fortlauderdale.gov/home/showdocument?id=6036>.

2.19 Local Business Preference

2.19.1 Section 2-186, Code of Ordinances of the City of Fort Lauderdale, provides for a local business preference. In order to be considered for a local business preference, a Bidder must include the Local Business Preference Certification Statement of this ITB, as applicable to the local business preference class claimed at the time of Bid submittal:

2.19.2 Upon formal request of the City, based on the application of a Local Business Preference the Bidder shall within ten (10) calendar days submit the following documentation to the Local Business Preference Class claimed:

- a. Copy of City of Fort Lauderdale current year business tax receipt, or Broward County current year business tax receipt, and
- b. List of the names of all employees of the Bidder and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

2.19.3 Failure to comply at time of Proposal submittal shall result in the Bidder being found ineligible for the local business preference.

2.19.4 The complete local business preference ordinance may be found on the City's web site at the following link:

<https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services>.

2.19.5 Definitions

- a. The term "Class A business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
- b. The term "Class B business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, or shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
- c. The term "Class C business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of Broward County.
- d. The term "Class D business" shall mean any business that does not qualify as a Class A, Class B, or Class C business.

2.20 Disadvantaged Business Enterprise Preference

2.20.1 Section 2-185, Code of Ordinances of the City of Fort Lauderdale, provides for a disadvantaged business preference. In order to be considered for a disadvantaged business preference, a Bidder must include a certification from a government agency, as applicable to the disadvantaged business preference class claimed at the time of Bid/Proposal submittal:

2.20.2 Upon formal request of the City, based on the application of a Disadvantaged Business Preference the Bidder shall within ten (10) calendar days submit the following documentation to the Disadvantaged Business Enterprise Preference Class claimed:

- a. Copy of City of Fort Lauderdale current year business tax receipt, or the Tri-County (Broward, Dade, West Palm Beach) current year business tax receipt, or proof of active Sunbiz status and
- b. List of the names of all employees of the Bidder and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or the Tri- County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

2.20.3 Failure to comply at time of Bid/Proposal submittal shall result in the Bidder being found ineligible for the Disadvantaged Business Enterprise Preference business preference.

2.20.4 The complete disadvantaged business preference ordinance may be found on the City's web site at the following link: <https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services>.

2.20.5 Definitions

- a. The term "Disadvantaged Class 1 Enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the city's Procurement Manual.
- b. The term "Disadvantaged Class 2 Enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the city with full-time employees and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the city's Procurement Manual.
- c. The term "Disadvantaged Class 3 Enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- d. The term "Disadvantaged Class 4 Enterprise" shall mean any disadvantaged business enterprise that does not qualify as a Class A, Class B, or Class C business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

2.21 Protest Procedure

2.21.1 Any Bidder who is not recommended for award of a contract and who alleges a failure by the city to follow the city's procurement ordinance or any applicable law, may follow the protest procedure as found in the city's procurement ordinance within five (5) days after a notice of intent to award is posted on the city's web site at the following link:
<https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services/notices-of-intent-to-award>.

2.21.2 The complete protest ordinance may be found on the city's web site at the following link: https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_C_H2AD_ARTVFI_DIV2PR_S2-182.1PRSO.

2.22 Public Entity Crimes

Bidder, by submitting a bid, certifies that neither the Bidder nor any of the Bidder's principals has been placed on the convicted vendor list as defined in Section 287.133, Florida Statutes (2018), as may be amended or revised. 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, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies 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 s. 287.017 for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list.

2.23 Sub-Contractors

2.23.1 If the Contractor proposes to use sub-contractors in the course of providing these services to the City, this information shall be a part of the bid response. Such information shall be subject to review, acceptance, and approval of the City, prior to any contract award. The City reserves the right to approve or disapprove of any sub-contractor candidate in its best interest and to require Contractor to replace sub-contractor with one that meets City approval.

2.23.2 Contractor shall ensure that all of Contractor's sub-contractors perform in accordance with the terms and conditions of this Contract. Contractor shall be fully responsible for all of Contractor's sub-contractors' performance, and liable for any of Contractor's sub-contractors' non-performance and all of Contractor's sub-contractors' acts and omissions. Contractor shall defend, at Contractor's expense, counsel being subject to the City's approval or disapproval, and indemnify and hold harmless the City and the City's officers, employees, and agents from and against any claim, lawsuit, third-party action, or judgment, including any award of attorney fees and any award of costs, by or in favor of any Contractor's sub-contractors for payment for work performed for the City.

2.23.3 Contractor shall require all of its sub-contractors to provide the required insurance coverage as well as any other coverage that the Contractor may consider necessary, and any deficiency in the coverage or policy limits of said sub-contractors will be the sole responsibility of the Contractor.

2.24 Bid Security

2.24.1 A bid security payable to the City of Fort Lauderdale shall be submitted with the proposal response in the amount of five percent (5%) of the total proposed amount. A bid security can be in the form of a bid bond or cashier's check. Bid security will be returned to the unsuccessful contractor as soon as practicable after opening of proposals. bid security will be returned to the successful Bidder after acceptance of the Payment and Performance Bond, if required; acceptance of insurance coverage, if required; and full execution of contract documents, if required; or other conditions as stated in Special Conditions or elsewhere in the ITB.

2.24.2 BidSync allows bidders to submit bid bonds electronically directly through their system using **Surety 2000**. For more information on this feature and to access it, contact BidSync customer care department.

2.24.3 The bidder may choose to mail their original executed bid bond or upload the bid bond on BidSync to accompany their electronic proposal and then deliver the original, signed, and sealed bid bond within five (5) business days from the solicitation end date or it will be determined as non-responsive. A bid security in the form of a cashier's check must be an original document and must be submitted at time of the bid due date. If choosing the cashier's check method, plan in advance to send via United States Postal Service or air freight carrier to ensure cashier's check arrives on or before bid opening deadline.

a. Deliver via United States Postal Service or air freight carrier to:

City of Fort Lauderdale City Hall

Procurement Services Division, 6th Floor, Suite 619

100 N. Andrews Avenue

Fort Lauderdale, FL 33301

b. Include company name, solicitation number and title clearly indicated outside of the envelope.

2.24.4 Failure of the successful Bidder to execute a contract, provide a Performance Bond, and furnish evidence of appropriate insurance coverage, as provided herein, within thirty (30) days after written notice of award has been given, shall be just cause for the annulment of the award and the forfeiture of the proposal security to the City, which forfeiture shall be considered, not as a penalty, but as liquidation of damages sustained.

2.25 Payment and Performance Bond

2.25.1 The Bidder shall within fifteen (15) working days after notification of award, furnish to the City a Payment and Performance Bond, in the amount of the bid price as surety for faithful performance under the terms and conditions of the contract. If the bond is on an annual coverage basis, renewal for each succeeding year shall be submitted to the City thirty (30) days prior to the termination date of the existing Payment and Performance Bond. The Performance Bond must be executed by a surety company or recognized standing to do business in the State of Florida and having a resident agent.

2.25.2 The Bidder must have a Financial Size Categories (FSC) rating of no less than "A-" by the latest edition of Best's Key Rating Guide, or acceptance of insurance company that holds a valid Florida Certificate of Authority issued by the State of Florida, Department of Insurance, and are members of the Florida Guarantee Fund.

2.25.3 Acknowledgement and agreement is given by both parties that the amount herein set for the Payment and Performance Bond is not intended to be nor shall be deemed to be in the nature of liquidated damages nor is it intended to limit the liability of the Contractor to the City in the event of a material breach of this Agreement by the Contractor.

2.26 Insurance Requirements

2.26.1 As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at its sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be primary insurance

for all applicable policies. The limits of coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be through insurers authorized or eligible to write policies in the State of Florida and possess an A.M. Best rating of A-, VII or better, subject to approval by the City's Risk Manager.

2.26.2 The coverages, limits, and endorsements required herein protect the interests of the City, and these coverages, limits, and/or endorsements shall in no way be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposures, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

2.26.3 The following insurance policies and coverages are required:

Commercial General Liability

Coverage must be afforded under a Commercial General Liability policy with limits not less than:

- \$1,000,000 each occurrence and \$2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$1,000,000 each occurrence and \$2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for contractual liability and independent contractors.

The City, a Florida municipal corporation, its officials, employees, and volunteers are to be covered as an additional insured with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage with respect to liability arising out of activities performed by or on behalf of the Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officials, employees, and volunteers.

Business Automobile Liability

Coverage must be afforded for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than \$1,000,000 combined single limit each accident.

If the Contractor does not own vehicles, the Contractor shall maintain coverage for Hired and Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

Garage Keepers Legal Liability

Coverage shall be purchased for the Contractor's liability for damage or other loss, including comprehensive and collision risks, to the vehicles while in the care, custody, and control of the Contractor. Coverage form must be on a direct primary basis with limits equal to the highest possible replacement cost value of vehicles in the care, custody, and control of the Contractor at any one time.

Garage Liability

Coverage must be afforded in an amount not less than \$1,000,000 per occurrence and must cover the Contractor and the Contractor's employees for the Contractor's garage and related operations while any and all vehicles covered under this Agreement are in the care, custody, and control of the Contractor.

Workers' Compensation and Employer's Liability

Coverage must be afforded per Chapter 440, Florida Statutes. Any person or entity performing work for or on behalf of the City must provide Workers' Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statute.

The Contractor waives, and the Contractor shall ensure that the Contractor's insurance carrier waives, all subrogation rights against the City, its officials, employees, and volunteers for all losses or damages. The City requires the policy to be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or equivalent.

The Contractor must be in compliance with all applicable State and federal workers' compensation laws, including the U.S. Longshore Harbor Workers' Act and the Jones Act, if applicable.

2.26.4 Insurance Certificate Requirements

- a. The Contractor shall provide the City with valid Certificates of Insurance (binders are unacceptable) no later than ten (10) days prior to the start of work contemplated in this Agreement.
- b. The Contractor shall provide to the City a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
- c. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
- d. In the event the Agreement term or any surviving obligation of the Contractor following expiration or early termination of the Agreement goes beyond the expiration date of the insurance policy, the Contractor shall provide the City with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.
- e. The Certificate of Insurance shall indicate whether coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
- f. The City shall be named as an Additional Insured on all liability policies, with the exception of Workers' Compensation.
- g. The City shall be granted a Waiver of Subrogation on the Contractor's Workers' Compensation insurance policy.
- h. The title of the Agreement, Bid/Proposal/Contract number, event dates, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:

City of Fort Lauderdale
Procurement Services Division
100 N. Andrews Avenue
Fort Lauderdale, FL 33301

- 2.26.5** The Contractor has the sole responsibility for all insurance premiums and shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the operation of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for adding the City as an Additional Insured shall be at the Contractor's expense.

- 2.26.6** If the Contractor's primary insurance policy/policies do not meet the minimum requirements, as set forth in this Agreement, the Contractor may provide evidence of an Umbrella/Excess insurance policy to comply with this requirement.
- 2.26.7** The Contractor's insurance coverage shall be primary insurance as respects to the City, a Florida municipal corporation, its officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, a Florida municipal corporation, its officials, employees, or volunteers shall be non-contributory.
- 2.26.8** Any exclusion or provision in any insurance policy maintained by the Contractor that excludes coverage required in this Agreement shall be deemed unacceptable and shall be considered breach of contract.
- 2.26.9** All required insurance policies must be maintained until the contract work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage shall be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate should any policies expire prior to the expiration of this Agreement. The City reserves the right to review, at any time, coverage forms and limits of Contractor's insurance policies.
- 2.26.10** The Contractor shall provide notice of any and all claims, accidents, and any other occurrences associated with this Agreement shall be provided to the Contractor's insurance company or companies and the City's Risk Management office as soon as practical.
- 2.26.11** It is the Contractor's responsibility to ensure that any and all of the Contractor's independent contractors and subcontractors comply with these insurance requirements. All coverages for independent contractors and subcontractors shall be subject to all of the applicable requirements stated herein. Any and all deficiencies are the responsibility of the Contractor.

2.27 Insurance – Sub-Contractors

Contractor shall require all its Sub-Contractors to provide the aforementioned coverage as well as any other coverage that the Contractor may consider necessary, and any deficiency in the coverage or policy limits of said Sub-Contractors will be the sole responsibility of the Contractor.

2.28 Insurance for Collection of Credit Card Payments

The successful Contractor will need to provide proof that they maintain insurance coverage in an amount of not less than \$1,000,000 specifically for cyber related crimes relating to the transmission of credit card information over their website that can include but are not limited to criminal activity involving the information technology infrastructure, including illegal access (unauthorized access), illegal interception (by technical means of non-public transmissions of computer data to, from or within a computer system), data interference (unauthorized damaging, deletion, deterioration, alteration or suppression of computer data), systems interference (interfering with the functioning of a computer system by inputting, transmitting, damaging, deleting, deteriorating, altering or suppressing computer data), misuse of devices, forgery (ID theft), and electronic fraud.

2.29 Award of Contract

Contractor must bid on all items. Partial bids will not be considered.

The City also reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City.

A Contract (the "Agreement") may be awarded by the City Commission. The City reserves the right to execute or not execute, as applicable, a contract with the Bidder(s) that is determined to be in the City's best interests. The City reserves the right to award a contract to more than one Bidder, at the sole and absolute discretion of the in the City.

2.30 Damage to Public or Private Property

Extreme care shall be taken to safeguard all existing facilities, site amenities, irrigation systems, vehicles, etc. on or around the job site. Damage to public and/or private property shall be the responsibility of the Contractor and shall be repaired and/or replaced at no additional cost to the City.

2.31 Safety

The Contractor(s) shall adhere to the Florida Department of Transportation's Uniform manual on Traffic Control for construction and maintenance work zones when working on or near a roadway. It will be the sole responsibility of the Contractor to make themselves and their employees fully aware of these provisions, especially those applicable to safety.

2.32 Uncontrollable Circumstances ("Force Majeure")

The City and Contractor will be excused from the performance of their respective obligations under this agreement when and to the extent that their performance is delayed or prevented by any circumstances beyond their control including, fire, flood, explosion, strikes or other labor disputes, act of God or public emergency, war, riot, civil commotion, malicious damage, act or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment, or service from a public utility needed for their performance, provided that:

2.32.1 The non-performing party gives the other party prompt written notice describing the particulars of the Force Majeure including, but not limited to, the nature of the occurrence and its expected duration, and continues to furnish timely reports with respect thereto during the period of the Force Majeure;

2.32.2 The excuse of performance is of no greater scope and of no longer duration than is required by the Force Majeure;

2.32.3 No obligations of either party that arose before the Force Majeure causing the excuse of performance are excused as a result of the Force Majeure; and

2.32.4 The non-performing party uses its best efforts to remedy its inability to perform. Notwithstanding the above, performance shall not be excused under this Section for a period in excess of two (2) months, provided that in extenuating circumstances, the City may excuse performance for a longer term. Economic hardship of the Contractor will not constitute Force Majeure. The term of the agreement shall be extended by a period equal to that during which either party's performance is suspended under this Section.

2.33 Canadian Companies

In the event Contractor is a corporation organized under the laws of any province of Canada or is a Canadian federal corporation, the City may enforce in the United States of America or in Canada or in both countries a judgment entered against the Contractor. The Contractor waives any and all defenses to the City's enforcement in Canada, of a judgment entered by a court in the United States of America. All monetary amounts set forth in this Contract are in United States dollars.

2.34 News Releases/Publicity

News releases, publicity releases, or advertisements relating to this contract, or the tasks or projects associated with the project shall not be made without prior City approval.

2.35 Approved Equal or Alternative Product Bids

The Technical Specifications contained in this solicitation are to be used as a reference only and are not to be considered of a proprietary nature. These specifications represent a level of quality and features that are desired by the City of Fort Lauderdale. The City is receptive to any product that would be considered by qualified City personnel as an approved equal.

The Contractor must state clearly in their bid pages any variance to the specifications. If proposing an approved equal or alternate product, it will be the Contractor's responsibility to provide adequate information in their proposal to enable the City to ensure that the Contractor meets the required criteria. If adequate information is not submitted with the bid, it may be rejected.

The City of Fort Lauderdale will be the sole judge in determining if the product proposed qualifies as approved equal. The City reserves the right to award to that Contractor which will best serve the interest of the City as determined by the City. The City further reserves the right to waive minor variations to specifications and in the bidding process.

2.36 Contract Period – N/A**2.37 Cost Adjustments – N/A****2.38 Service Test Period – N/A****2.39 Contract Coordinator**

The City may designate a Contract Coordinator whose principal duties shall be:

- Liaison with Contractor.
- Coordinate and approve all work under the contract.
- Resolve any disputes.
- Assure consistency and quality of Contractor's performance.
- Schedule and conduct Contractor performance evaluations and document findings.
- Review and approve for payment all invoices for work performed or items delivered.

2.40 Contractor Performance Reviews and Ratings

The City Contract Coordinator may develop a contractor performance evaluation report. This report shall be used to periodically review and rate the Contractor's performance under the contract with performance rating as follows:

Excellent	Far exceeds requirements.
Good	Exceeds requirements
Fair	Just meets requirements.
Poor	Does not meet all requirements and contractor is subject to penalty provisions under the contract.
Non-compliance	Either continued poor performance after notice or a performance level that does not meet a significant portion of the requirements.

This rating makes the Contractor subject to the default or cancellation for cause provisions of the contract.

The report shall also list all discrepancies found during the review period. The Contractor shall be provided with a copy of the report and may respond in writing if he takes exception to the report or wishes to comment on the report. Contractor performance reviews and subsequent reports will be used in determining the suitability of contract extension.

2.41 Substitution of Personnel – N/A

2.42 Ownership of Work – N/A

2.43 Condition of Trade-In Equipment – N/A

2.44 Conditions of Trade-In Shipment and Purchase Payment – N/A

2.45 Verification of Employment Status

Any Contractor/Consultant assigned to perform responsibilities under its contract with a State agency is required to utilize the US Department of Homeland Security's E-Verify system (per Executive Order Number 11-02) to verify the employment eligibility of: (a) all persons employed during the contract term by the Contractor to perform employment duties within Florida; and (b) all persons (including subcontractors) assigned by the Contractor to perform work pursuant to the contract with the State agency.

E-VERIFY Affirmation Statement must be completed and submitted with Bidder's response to this ITB.

2.46 Service Organization Controls – N/A

2.47 Warranties of Usage

Any estimated quantities listed are for information and tabulation purposes only. No warranty or guarantee of quantities needed is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.

2.48 Rules and Submittals of Bids

The signer of the bid must declare that the only person(s), company or parties interested in the proposal as principals are named therein; that the bid is made without collusion with any other person(s), company or parties submitting a bid; that it is in all respects fair and in good faith, without collusion or fraud; and that the signer of the bid has full authority to bind the principal bidder.

2.49 Bid Tabulations/Intent to Award

Notice of Intent to Award Contract/Bid, resulting from the City's Formal solicitation process may be found at: <https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services/notices-of-intent-to-award>. Tabulations of receipt of those parties responding to a formal solicitation may be found at: <https://www.fortlauderdale.gov/government/departments-a-h/finance/procurement-services/bid-results>, or any interested party may call the Procurement Services Division at 954-828-5933.

2.50 Public Records

All bids will become the property of the City. The Bidder's response to the ITB is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters, or other material submitted in connection with this ITB and any resulting Contract to be executed for this ITB, subject to the provisions of Chapter 119.07 of the Florida Statutes. Any language contained in the Bidder's response to the ITB purporting to require confidentiality of any portion of the Bidder's response to the ITB, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Bidder submits any documents or other information to the City which the Bidder claims is Trade Secret information and exempt from

Florida Statutes Chapter 119.07 ("Public Records Laws"), the Bidder shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Bidder must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Bidder's response to the ITB constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the Bidder agrees to defend, indemnify, and hold harmless the city and the city's officers, employees, and agent, against any loss or damages incurred by any person or entity as a result of the city's treatment of records as public records. In the event of Contract award, all documentation produced as part of the Contract shall become the exclusive property of the City.

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'S OFFICE, 100 N. ANDREWS AVENUE, FORT LAUDERDALE, FLORIDA 33301 PRRCONTRACT@FORTLAUDERDALE.GOV, 954-828-5002.

Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service.
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, Florida Statutes (2017), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of this Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically 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.

2.51 PCI (Payment Card Industry) Compliance – N/A

END OF SECTION

SECTION III - TECHNICAL SPECIFICATIONS

3.0 The City of Fort Lauderdale, Florida, hereinafter referred to as the "City", is seeking competitive bids from qualified Fire Pumper Apparatus providers, hereinafter referred to as the "bidder", to provide new Fire Pumper Apparatus vehicles as described herein for the City's Fire Rescue Department, in accordance with the terms and conditions and specifications/scope of services contained in this Invitation to Bid (ITB).

3.0.1 All specifications within this document are meant to be a minimum, but not all inclusive, list of equipment. Any deviations from what is listed must be notated, explained and if there is a price change due to it then it must be listed as well.

3.1 Chassis Specifications

3.1.1 A Severe Duty Cab and Chassis system shall be provided. The chassis shall be manufactured in the factory of the awarded 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.

3.1.2 The chassis frame shall be of a ladder type design utilizing industry accepted engineering best practices. The frame shall be specifically designed for fire pumper 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 cubic in.³. The resistance to bending moment (RBM) shall be a minimum of 3,498,000 in./lbs.

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.

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.

.625-inch, grade 8 flange Huck Bolt fasteners, shall be used on any attachments with frame contact, to eliminate the need for bolt re-tightening. Additional hardware will be Grade 8 Zinc coated flange head locking fasteners. If the Huck bolt design is not offered as the fastening method when attaching permanent items to the truck frame, then bidder shall submit engineering specifications that explain durability, required inspections for loosening of bolts and elongation prevention of the bolt and hole contact that meet or exceed the specifications of the Huck Bolt design.

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

3.1.3 There shall be two front tow eyes with 3" diameter holes attached directly to the chassis frame, accessible below the front bumper. The front tow eyes shall be painted to match the color of the chassis frame.

3.1.4 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.

- 3.1.5** 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.
- 3.1.6** 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.
- 3.1.7** The chassis shall be equipped with a minimum 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.

- 3.1.8** 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.
- 3.1.9** Installed on the apparatus fuel system shall be an Air-To-Liquid aluminum fuel cooler. The fuel cooler shall be in the lowest module of the cooling system.
- 3.1.10** 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 (Diesel Exhaust Fluid) 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.

3.2 Powertrain Specifications

3.2.1 Engine

- 3.2.1.1** Cummins Diesel, L9, 8.9L Displacement
- 3.2.1.2** Horsepower: 450 HP @ 2,100 RPM and 1,250 ft/lb Torque @ 1,400 RPM
- 3.2.1.3** 6 Cylinders
- 3.2.1.4** 4.49" (114mm) Bore
- 3.2.1.5** 5.69" (145mm) Stroke
- 3.2.1.6** A lube oil cooler and a full flow lube oil filter shall be provided.
- 3.2.1.7** The engine shall have a five (5) year or 100,000-mile warranty and approval by Cummins Diesel for Full Engine Coverage Plan (RVF) – which is their most complete engine coverage plan, which includes EGR components installation in the chassis. There shall be no deductible for the first two years.
- 3.2.1.8** 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.
- 3.2.1.9** 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.
- 3.2.1.10** A Cummins approved Fleetguard FF63009 fuel filter will be remote mounted to the rear of the engine.
- 3.2.1.11** 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.
- 3.2.1.12** 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.
- 3.2.1.13** 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.

3.2.1.14 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.

3.2.1.15 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.

3.2.1.16 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.

3.2.1.17 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.

3.2.1.18 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 overflow 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.

3.2.1.19 A 360 ampere Niehoff alternator shall be provided. The alternator shall be serpentine belt driven. A low voltage alarm, audible and visual, shall be provided.

3.2.1.20 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.

3.2.2 Transmission

3.2.2.1 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 pumper apparatus vocation, in concert with the specified engine.

- 3.2.2.2** 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.
- 3.2.2.3** 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.
- 3.2.2.4** 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
- 3.2.2.5** The transmission shall come filled with an Allison approved Synthetic Transmission Fluid that meets the Allison specification.
- 3.2.2.6** 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.
- 3.2.2.7** 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.

3.2.3 Exhaust System

- 3.2.3.1** 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 2017 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 degrees

Fahrenheit 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 to protect personnel while servicing the engine compartment.

- 3.2.3.2** 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.

3.3 Drivability System

3.3.1 Front Axle & Components

- 3.3.1.1** The front suspension shall be a parabolic taper-leaf spring design, 56" long and 4" wide. Long life, maintenance free, threaded pin bushings in 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. Progressive rate bump stop, and custom tuned passive hydraulic damper shall be supplied. There will be NO EXCEPTIONS made to this specification.
- 3.3.1.2** A Hendrickson STEERTEK NXT non-driving, front steer axle with a capacity of 20,000 pound shall be provided. The axle shall have a 3.74" drop and will have a fabricated boxed shaped cross section, a one-piece knuckle, and serviceable king pin. Adjustable Ackerman settings shall be available and determine based on wheelbase. The axle shall have 10 bolt hub piloted and furnished with oil seals.
- 3.3.1.3** A steer assist device shall be installed. The steer assist provides driver assistance when turning the vehicle left or right while in motion.
- 3.3.1.4** 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.

3.3.2 Rear Axle & Components

- 3.3.2.1** 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.
- 3.3.2.2** 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.
- 3.3.2.3** 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.

3.3.3 Tires & Wheels

- 3.3.3.1** The front tires shall be Goodyear 425/65R22.5, 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.
- 3.3.3.2** Rear tires shall be Goodyear 12R22.5, load range H, Endurance RSA 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.
- 3.3.3.3** A Quick Pressure mechanical tire pressure sensor/indicator shall be provided for each wheel. The pressure sensor shall indicate if the tire is properly inflated. Each indicator shall have a green & red display visible inside a sight glass on the sensor.

Full green indicates that the pressure is correct. Partial green/red indicates that the tire is under inflated by as little as 10%. Full red indicates that the tire is under inflated by 25% or more. The indicators shall replace the standard valve stem caps. A total of six (6) indicators shall be provided.

- 3.3.3.4** The front and rear wheels shall be ACCURIDE® brand aluminum. ACCU-SHIELD™ finish shall be provided on the front and outside-rear wheels.
- 3.3.3.5** Polished stainless steel hub covers shall be provided for the front and rear axle.
- 3.3.3.6** Chrome plated lug nut caps shall be provided for the front and rear wheels.

3.3.4 Air Brake System

- 3.3.4.1** 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.
- 3.3.4.2** 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 ±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.

- 3.3.4.3** Each air tank in the chassis braking system shall consist of an automatic moisture ejector to assist in keeping the air tanks and air lines free of debris and moisture. A manual pull cable shall be incorporated.

- 3.3.4.4** An air system inlet/fill connection shall be provided. The inlet shall be connected to the air brake to allow constant air feed. The location of the inlet shall be on the left-hand side of the driver's step well.
- 3.3.4.5** A Kussmaul 091-9B-1-AD 120V 100 PSI air compressor shall be provided and installed in the cab. The vehicle mounted air compressor shall ensure that the air brake system is properly pressurized for immediate response of the unit. A pressure switch shall regulate operation and shall automatically sense low air pressure in the brake system and restore the proper pressure. The unit shall have an auto drain which shall be installed on the outlet side of the air compressor and shall automatically purge water from the air discharge output. The water shall be ejected from the water separator bowl every time the compressor cycles off via a 120-volt solenoid.

The compressor shall be wired to the 120V shoreline connection.

- 3.3.4.6** A Kussmaul 091-150-115 auto pump timer shall be provided to reduce wear on the Kussmaul Auto Pump AC compressor. The timer shall limit the duty cycle to one hour running followed by a one hour "OFF" time.
- 3.3.4.7** 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 electromagnetic interference. The electronic control unit shall monitor the speed of each wheel sensor and a microcomputer shall evaluate wheel slip in milliseconds.

- 3.3.4.8** All air-line fittings installed on the chassis shall be compression style fittings. The following locations shall utilize push-on fittings:
- a) Pressure protection valve (accessory block)
 - b) Double check valve (braking system, park brake)
 - c) One way check valve (brake valve tank)
 - d) Elbow Male Modified 1/4" tube x 1/4" MP (low air switch)
 - e) Elbow Male 1/4" tube x 3/8"MP (brake pedal solenoid)
 - f) Connector 1/4" x 3/8"MPT (brake pedal solenoid)
 - g) Switch stoplight (Wabco sealed switch/brake light and service brake switch)
 - h) Low pressure switch (PTC) (Wabco sealed switch/low air switch)
- 3.3.4.9** Each air tank in the chassis braking system shall consist of an automatic moisture

ejector to assist in keeping the air tanks and air lines free of debris and moisture. A manual pull cable shall be incorporated.

- 3.3.4.10** An air system inlet/fill connection shall be provided. The inlet shall be connected to the air brake to allow constant air feed. The location of the inlet shall be on the left-hand side of the driver's step well.

3.3.5 Battery / Charging System

- 3.3.5.1** The battery system shall be a single system consisting of four (4) 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. The batteries shall include a one-year warranty which 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.

- 3.3.5.2** 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.

- 3.3.5.3** A Floyd Bell TXB-V86-515-QF low voltage alarm, audible and visual, shall be provided.

- 3.3.5.4** The apparatus shall be equipped with a 120V shoreline inlet to provide power to the battery charger from an external source. The inlet shall include a Kussmaul 091-55-194X-XXX Super 20 Auto Eject featuring a built-in digital display on the cover. Also featuring a 12-volt solenoid which shall eject the shoreline cord away from vehicle path upon sensing engine start. After ejection, a weatherproof cover shall snap into position over inlet.

A 20-amp connector shall be provided and shipped loose for connecting the external shoreline cord to the inlet.

- 3.3.5.5** A 120-volt outlet shall be provided and wired to the shoreline inlet. The auto-eject receptacle shall be located on the driver's side behind the driver's front door and forward of the rear door.

- 3.3.5.6** A Kussmaul Auto Charge LPC 40 model #091-200-12-IND low profile 40-amp battery charger shall be provided and installed in the cab. The unit shall include an auxiliary 15-amp output circuit with power source selector for operating accessory loads. The charger shall be wired to the 120V shoreline inlet.

- 3.3.5.7** 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".

3.4 Cab & Components

3.4.1 The cab shall be a full tilt 8-person 10" rear raised roof 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.

3.4.2 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.

The cab roof shall utilize 5" x 5" honeycomb re-enforced 6061 T6 aluminum extrusion, 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 ½" x 3" x 3/16" 6061 T6 extruded door pillars 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 ¾" x 4" x 3/16" 6061 T6 extruded box tubing 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.

3.4.3 The cab shall be mounted to a 4" x 4" x 3/8" steel box tube 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.

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

Cab Width (excluding mirrors) 98" Cab Length (from C/L of front axle)

To front of cab (excluding bumper) 68" To rear of cab 73"

Total Cab Length (excluding bumper) 141"

3.4.5 Notices in Cab

3.4.5.1 Fluid capacity plate affixed below driver's seat

3.4.5.2 Chassis filter part number plate affixed below driver's seat.

3.4.5.3 Maximum rated tire speed plaque near driver.

3.4.5.4 Cab occupancy capacity label affixed next to transmission shifter.

3.4.5.5 Do not wear helmet while riding plaque for each seating position.

3.4.5.6 NFPA compliant seat belt and standing warning plates provided.

3.4.5.7 Tire pressure label near each wheel location.

3.4.6 The cab shall be of a one-half 10" raised roof design with side drip rails and shall satisfy the following minimum height dimensions:

Cab Dimensions Interior Front 59", Rear 65"

Cab Dimensions Exterior Front 65", Rear 75"

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

3.4.8 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 will be allowed to this specification.

3.4.9 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.

3.4.10 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.

3.4.11 The lower cab steps shall be no more than 22" from the ground. An intermediate step shall be provided, mid-way 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.

3.4.12 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.

- 3.4.13** The cab of the apparatus shall be designed and so 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.

- 3.4.14** 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.

- 3.4.15** Cab lockdown latches shall be provided to prevent the cab from being tilted in the down position. Once the cab tilt switch is engaged the cab latches will release to allow the cab to be tilted.
- 3.4.16** 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 and shall be hard wired into the chassis.

The hydraulic lift cylinders will be connected to a steel cab sub-frame, and not directly to the cab. There will be no exceptions on this specification.

- 3.4.17** 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.
- 3.4.18** 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 doorstep 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:

3.4.18.1 Door Opening:

Front: 36.5" x 73"

Rear: 36.5" x 73"

- 3.4.19** The lower cab steps shall be no more than 22" from the ground. Grip strut material shall be installed on the stepping surface.

An intermediate step shall be provided, mid-way between the lower cab step, and the cab floor. The intermediate step shall be slightly inset to provide for safer ingress and egress. Diamond plate material shall be installed on the stepping surface.

All steps shall be covered with material that meets or exceeds the NFPA requirements for stepping surfaces.

- 3.4.20** A white Federal Signal Complex 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.
- 3.4.21** 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.
- 3.4.22** 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.
- 3.4.23** The crew cab windows and doors, except for 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.
- 3.4.24** 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. The windshield wipers shall be deactivated when the parking brake is engaged.
- 3.4.25** A four-quart capacity windshield washer reservoir shall be provided. The fill access shall be located in the forward officer's step well area. Washer bottle is a remote fill with a four-quart capacity. Washer fill is located just inside of officer cab door.
- 3.4.26** Two (2) Lang Mekra 300 Series smooth chrome plated Aero style main and convex mirrors shall be installed on each side of the vehicle. The main mirror shall be 4-way remote adjustable 7" x 16" 2nd surface chromed flat glass. The convex shall be 6" x 8" 2nd surface chromed 400 mm radius glass. Each mirror housing assembly shall be constructed of lightweight textured chrome ABS with on truck glass and housing back cover replacement. In the event the mirror breaks the glass shall be replaceable in (3) minutes or less. The glass shall include a safety adhesive backing to keep broken glass in place. The mirror assembly shall be supported by a "C" loop bracket constructed of polished stainless-steel tube utilizing two-point mounting

reducing vibration of mirror glass during normal vehicle operation. The lower section of the holder shall include a spring-loaded single detent position 20 degrees forward with easy return to operating position without refocusing.

- 3.4.27** One (1) Velvac 8" diameter exterior blind spot mirror assembly shall be provided and mounted on the brow of the cab, officer's side.
- 3.4.28** The front of the cab shall be equipped with a raised, box structured, 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.
- 3.4.29** The front of the cab shall be equipped with a polished stainless steel lower grille. The design shall allow proper airflow into the cooling system and engine compartment. Plastic chrome plated lower grille shall not be acceptable.
- 3.4.30** The exterior cab compartments will have mirrored stainless steel jam protectors.
- 3.4.31** There shall be a 12" high painted formed steel wrap-around (45 degree) bumper provided at the front of the apparatus. The bumper shall be mounted to a reinforcement plate constructed of 1/4" x 12" x 70" carbon steel. The frame rail extension shall be a reinforced four-sided boxed frame rail for superior safety protection. A gravel shield shall be provided, constructed of .188" aluminum diamond plate. The bumper extension shall be approximately 30".
- 3.4.32** The sides of the bumper shall also be painted steel in lieu of diamond plate. Each side shall feature a recessed painted steel pocket for the marker light and any auxiliary lighting option selected. The pocket shall be a welded integral part of the bumper skin.
- 3.4.33** A Raptor texture coating shall be provided along the top edge of the front steel bumper. The color of the coating shall be determined at pre-construction stage.
- 3.4.34** There shall be three (3) storage compartments located in the front bumper. The two outer compartments shall both accommodate an air, cord, or hydraulic reel. These compartments shall be tapered up at the front to increase the angle of approach. The center compartment shall be approximately 35-3/4" long x 21-3/4" wide x 6-3/4" deep to accommodate rescue tools. All three compartments shall be constructed of .125" smooth aluminum plate.
- 3.4.35** There shall be a 1/8" diamond plate cover with latches provided to cover all three front bumper storage wells. The cover shall have a 6" rise to accommodate large storage options. One (1) LED strip light shall be provided and installed under the lid to illuminate the reels and tools.
- 3.4.36** A white TecNiq E44 LED strip light shall be installed on the underside of the front bumper trough lid and shall illuminate the entire trough when the lid is opened.
- 3.4.37** Two (2) stainless steel guide rods shall be attached, one each side to the front bumper. The guide rods shall be constructed from stainless steel and be attached to the apparatus with corrosion resistant hardware. An amber light shall be provided in each guide rod.
- 3.4.38 Air Horns**
 - 3.4.38.1** Two (2) Grover 2040 Stuttertone rectangular, chrome plated, air horns shall be provided.
 - 3.4.38.2** The air horns shall be installed behind perforations in the front bumper.
 - 3.4.38.3** 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.
 - 3.4.38.4** The air horns shall be activated by a split "Y" lanyard in cab ceiling.
- 3.4.39 Sirens**
 - 3.4.39.1** 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.
 - 3.4.39.2** One (1) Cast Products SA4201-5-A 100-watt weatherproof siren speaker shall be

provided and wired to the electronic siren.

- 3.4.39.3** The electronic siren speaker(s) shall be installed behind the main cab grille.
- 3.4.39.4** 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.
- 3.4.39.5** The mechanical siren shall be wired through the steering wheel button. A selector switch shall be provided on the instrument panel to switch between functions.
- 3.4.39.6** A foot switch for the mechanical siren shall be provided on the driver's side.
- 3.4.39.7** A momentary switch for the mechanical siren shall be provided on the officer's side dash.
- 3.4.39.8** A brake switch for the mechanical siren shall be provided in the lower command console for both the driver's and officer's position.
- 3.4.39.9** The Q2B will be tied to the emergency master switch.

3.4.40 Exterior Lighting

- 3.4.40.1** Exterior lighting and reflectors shall meet or exceed Federal Motor Vehicle Safety Standards and National Fire Protection Association requirements.
- 3.4.40.2** The front low and high beam headlights shall be FIRETECH model FT-4X6 LED, rectangular shaped, quad style installed in custom rectangular shaped stainless-steel housings on the front of the cab. Each housing shall accommodate a forward-facing turn signal in the outboard location and a side-facing warning light.

An additional pair of rectangular shaped stainless-steel housings shall be installed on the front of the cab above the headlight housings. Each housing shall accommodate two (2) forward-facing warning lights and a side-facing turn signal.

- 3.4.40.3** The interior components of the headlights shall have a chrome finish.
- 3.4.40.4** The headlights shall have an alternating flash feature for emergency response use.
- 3.4.40.5** There shall be four (4) Whelen 400 Series Model 40A00AAR LED rectangular amber turn signal lights mounted one (1) each side in the front of the headlight housings and one (1) mounted on the side of each warning light housing.
- 3.4.40.6** Five (5) Gorte 47183 ICC/marker lights shall be provided on top of the roof of the cab to meet D.O.T. requirements.
- 3.4.40.7** There will be an additional pair of turn signals mounted on rear of cab, each side of the truck.

- 3.4.41** There shall be four (4) 24" long, handrails provided and installed, one 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 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.

- 3.4.42** There shall be a coat hook installed on the upper portion of the two exterior cab handrails, on the driver's side, for hanging of coats, turnout gear, etc.
- 3.4.43** There shall be a pair of knurled stainless-steel handrails on the front face of the cab, below the windshields.
- 3.4.44** 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.

- 3.4.45** There shall be two (2) 1.25" diameter knurled stainless steel handrails shall be provided and mounted, one on the inside of each rear crew door, just above the windowsill. The handrails shall be approximately 22" long.

- 3.4.46** There shall be a cabinet constructed of .125 aluminum plate recessed in the cab behind driver's side rear crew door. The compartment shall be approximately 38" high x 15" wide x 22.25" deep.

The compartment shall have a hinged door that is hinged at the front. The doors shall have an Austin Hardware slam catch single-point "D"-ring door closure and held open with gas struts.

The compartment shall be operated by an individual switch and illuminated with (1) LED light.

- 3.4.47** The exterior door shall be equipped with a lock and key.

- 3.4.48** The exterior cab compartment on the driver's side shall be open to the crew cab seat compartment.

- 3.4.50** There shall be a cabinet constructed of .125 aluminum plate recessed in the cab behind officer's side rear crew door. The compartment shall be approximately 38" high x 15" wide x 20.25" deep (12.75" deep if front suction)

The compartment shall have a hinged door that is hinged at the front. The doors shall have an Austin Hardware slam catch single-point "D"-ring door closure and held open with gas struts.

The compartment shall be operated by an individual switch and illuminated with (1) LED light.

- 3.4.51** The exterior door shall be equipped with a lock and key.

- 3.4.52** The exterior cab compartment on the officer's side shall be open to the crew cab seat compartment.

- 3.4.53** The transverse compartment shall be provided with storage for up to two (2) pike poles mounted on the back wall. The pike pole compartment shall be approximately 7" wide x 10" high x 84" long.

- 3.4.54** Stainless steel scuff plates shall be provided on the outside of two cab doors. They shall be approximately nine (9) inches tall where the top of the scuff plate shall be flush with the top of the front bumper. The scuff plates shall be cut to the width of each cab door they are to be applied.

- 3.4.55** The rear exterior section roof of the cab shall have a diamond plate overlay. The overlay shall be constructed of .125" aluminum embossed diamond plate and measure 56" x 91".

- 3.4.56** 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 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. There will be no exceptions to this specification.

- 3.4.57** The top of the engine enclosure shall be covered with Scorpion 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.
- 3.4.58** 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.
- 3.4.59** An LED work light shall be installed in the engine enclosure with an individual switch located on the base of the light.
- 3.4.60** There shall be a flat work surface in front of the officer's seat.
- 3.4.61** Each upper cab crew door area shall remain open and painted to match the cab interior.

3.4.62 Interior Components

- 3.4.62.1** The metal surfaces of the cab interior shall be coated and sealed with MultiSpec black 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.
- 3.4.62.2** The interior of the cab entry doors shall have a 304 brushed stainless steel scuff plate, contoured to the door, from the door windowsill down.
- 3.4.63.3** 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.
- 3.4.63.4** The cab interior floor shall be covered with a 5/16" thick, black 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.
- 3.4.63.5** A department designed custom cabinet will be provided and installed in crew seat two location. The cabinet will be the same Zolatone color as the color as in the interior of the cab and be built to Department requirements.
- 3.4.63.6** Four (4) Steamlight LED Lantern model Vulcan 180 (orange) will be provided and installed.
- 3.4.63.7** Four (4) orange Nightstick Intrans Model XPP5566 with chargers will be provided.

3.5 Wiring and Electrical

- 3.5.1** 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.
- 3.5.2** 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 (ie: 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.

3.5.3 The main dash shroud, which covers the area directly in front of the driver from the doorpost to the engine hood, shall be constructed of vacuum formed ABS material with scorpion texture. 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 with a .125" aluminum panel, covered with a scratch resistant reverse printed and laminated poly carbonite.

The gauges shall be AMETEK Vehicular Instrumentation Systems (VIS), Next Generation Instrumentation System (NGI) 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.

- 3.5.4** 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.

3.5.5 Instrumentation

3.5.5.1 Instrumentation on dash panel in front of the driver:

- 3.5.5.1.1** Tachometer/hourmeter with high exhaust system regeneration temperature, and instrument malfunction indicators
- 3.5.5.1.2** Speedometer/odometer with built in turn signal, high beam, and re-settable trip odometer
- 3.5.5.1.3** Voltmeter
- 3.5.5.1.4** Diesel fuel gauge
- 3.5.5.1.5** DEF (Diesel Exhaust Fluid) gauge
- 3.5.5.1.6** Engine oil pressure
- 3.5.5.1.7** Transmission temperature
- 3.5.5.1.8** Engine temperature
- 3.5.5.1.9** Primary air pressure
- 3.5.5.1.10** Secondary air pressure

3.5.5.2 Indicators and warning lights in front of the driver:

- 3.5.5.2.1** Parking brake engaged
- 3.5.5.2.2** Low air with buzzer
- 3.5.5.2.3** Antilock brake warning
- 3.5.5.2.4** Check transmission
- 3.5.5.2.5** Transmission temperature
- 3.5.5.2.6** Upper power indicator
- 3.5.5.2.7** Seat belt
- 3.5.5.2.8** Engine temperature
- 3.5.5.2.9** Low oil indicator
- 3.5.5.2.10** Low voltage indicator
- 3.5.5.2.11** Air filter restriction light
- 3.5.5.2.12** Low coolant indicator
- 3.5.5.2.13** High idle indicator
- 3.5.5.2.14** Power on indicator
- 3.5.5.2.15** Check engine
- 3.5.5.2.16** Stop engine
- 3.5.5.2.17** Check engine
- 3.5.5.2.18** MIL lamp
- 3.5.5.2.19** DPF indicator
- 3.5.5.2.20** High exhaust temperature
- 3.5.5.2.21** Wait to start

3.5.5.3 Other Indicator and Warning Lights

- 3.5.5.3.1** Differential locked
- 3.5.5.3.2** PTO (s) engaged
- 3.5.5.3.3** Auto-slip response
- 3.5.5.3.4** Retarder engaged
- 3.5.5.3.5** Retarder temperature

- 3.5.5.3.6 ESC indicator
- 3.5.5.4 **Controls located on main dash panel in front of the driver:**
 - 3.5.5.4.1 Master power disconnect with ignition switch
 - 3.5.5.4.2 Engine start switch
 - 3.5.5.4.3 Headlight switch
 - 3.5.5.4.4 Windshield wiper/washer switch
 - 3.5.5.4.5 Differential lock switch
 - 3.5.5.4.6 Dimmer switch for backlighting
- 3.5.5.5 **Controls included in the steering column:**
 - 3.5.5.5.1 Horn button
 - 3.5.5.5.2 Turn signal switch
 - 3.5.5.5.3 Hi-beam low-beam switch
 - 3.5.5.5.4 4-way flasher switch
 - 3.5.5.5.5 Tilt-telescopic steering wheel controls
- 3.5.5.6 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 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.
- 3.5.5.7 **Controls located in the console conveniently accessible to the driver and the officer (center):**
 - 3.5.5.7.1 Transmission shifter
 - 3.5.5.7.2 Pump shift control with OK TO PUMP and PUMP ENGAGED lights
 - 3.5.5.7.3 Remote mirror control
 - 3.5.5.7.4 Illuminated rocker switches to control high idle
 - 3.5.5.7.5 Jacob's brake,
 - 3.5.5.7.6 Siren/horn
 - 3.5.5.7.7 Siren brake
 - 3.5.5.7.8 Master emergency
 - 3.5.5.7.9 12V power point
- 3.5.5.8 **Controls located in the console conveniently accessible to the officer:**
 - 3.5.5.8.1 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
 - 3.5.5.8.2 Surface to recess siren head, radio head, or other desired items as space permits
 - 3.5.5.8.3 12V power point
- 3.5.5.9 **Driving compartment warning labels shall include:**
 - 3.5.5.9.1 Height of Vehicle
 - 3.5.5.9.2 Occupants must be seated and belted when apparatus is in motion

- 3.5.5.9.3 Do not use auxiliary braking systems of wet or slippery roads
 - 3.5.5.9.4 Exit Warnings
 - 3.5.5.10 **Additional Labels Include:**
 - 3.5.5.10.1 Computer Code
 - 3.5.5.10.2 Switch ABS Code
 - 3.5.5.10.3 Fluid Data
 - 3.5.5.10.4 Tag Chassis
 - 3.5.5.10.5 Data Tag
- 3.5.6 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.

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
- 3.5.7 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

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 section 3.5.5.3 Indicators and Warning Lights.
- 3.5.8 An electronic pump shift module with yellow knob toggle switch for shifting road mode/none/pump mode shall be within easy reach of the driver. The module shall be constructed of an aluminum composite panel and flush mount LED indicators with backlit verbiage. A gear lockup will be provided interlocked with park brake to hold the transmission in direct drive for pump operation.
- 3.5.9 A Whelen TIR3 LED light shall be installed in the cab near the driver. The light shall illuminate when the parking brake is released, and any cab or body door is open or any other item on the apparatus is not properly stowed that may cause damage.
- 3.5.10 A door ajar alarm with silence button shall be provided. The location of the button shall be determined at the preconstruction conference.
- 3.5.11 Load manager shall have the ability to sequence loads on and off. The Super Node II has twenty-four (24) inputs and twenty-four (24) outputs. Eighteen (18) are positive polarity

outputs and six (6) are ground polarity outputs. It shall also be able to establish a 8 priority levels to shedding loads when the vehicle is stationary, starting at 12.8 volts lowest priority load to be shed, then respectively at 12.7, 12.5, 12.3, 12.1, 11.9, 11.5 and never shed volts DC. An output is shed (turned OFF) when the system voltage drops below the designated priority level's shed voltage for thirty (30) seconds. If the voltage has dropped below multiple priority level shed voltages then each higher priority level will shed before the lower priority levels. An output is unshed (turned back ON) when the system voltage rises above the designated priority level's unshed voltage for ten (10) seconds. If the voltage has risen above multiple priority level unshed voltages then each lower priority level will unshed before the upper priority levels.

- 3.5.12** All outputs can be tied or not tied to the stage switch. In fire pumper apparatus this switch is typically referred to as the master switch. The state of the stage switch is controlled by Utility Module output memory space 3.

When this output is active the stage switch is active. Any output tied to the stage switch will be OFF if the stage switch is not active regardless of the output's multiplex equation. Set an output's to be tied to the stage switch by checking the stage switch box in its "Output Port Load Settings" under the "Settings" tab. The name of the stage switch can be changed from the standard "stage" to anything desired by modifying the text in the "Output Port Load Settings" area.

- 3.5.13** 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.
- 3.5.14** Four (4) 12-volt 20-ampere auxiliary lighter socket type plug-ins, shall be provided in the cab.
- 3.5.15** 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 handheld spotlights, radio chargers, hand lantern chargers and other miscellaneous 12-volt electrical components.
- 3.5.16** 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:

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

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

The studs shall be wired as follows:

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

- 3.5.17** 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.

- 3.5.18** A power and ground stud block will need to be added to the overhead compartment for electrical needs.

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

3.5.19 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.

3.5.20 Interior lighting shall be provided inside the crew cab for passenger safety. Two (2) Whelen 6" round 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.

3.5.21 One (1) Whelen 500 series TIR6 model 50*03Z*R LED light shall be installed in a chrome plated bezel inside each of the lower cab doors. The lights shall be wired to flash when the ignition is on, and the cab door is open.

3.5.22 The apparatus shall be equipped with a 120V shoreline inlet to provide power to the battery charger from an external source. The inlet shall include a Kussmaul 091-159-30-120 Super 30 Auto Eject featuring a 12-volt solenoid which shall eject the shoreline cord away from vehicle path upon sensing engine start. After ejection, a weatherproof cover shall snap into position over inlet.

A 30-amp connector shall be provided and shipped loose for connecting the external shoreline cord to the inlet.

3.5.23 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 degrees 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 with 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.

- 3.5.24** 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.

3.6 HVAC

- 3.6.1** There shall be a minimum 80,000 cool BTU 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.)

- 3.6.2** The heater/defroster/air conditioning controls 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.
- 3.6.3** There shall be ductwork routed forward towards the driver/officer positions. The vents shall provide a/c to the face of the driver/officer and to the front of cab area.
- 3.6.4** 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.

- 3.6.5** There shall be a 3/16" smooth aluminum plate installed on top of the heat/ air conditioning 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 a/c unit and shall be secured with screws for easy replacement.

- 3.6.6** A Duo Therm 15,000 BTU 120 VAC roof mounted RV air conditioner shall be installed and wired to the shoreline. The unit shall be mounted in a drip pan with condensation routed to a "catch tank" under the apparatus to prevent condensation from accumulating on the firehouse floor.
- 3.6.7** An aluminum treadplate branch guard shall be provided, mounted in front and on the sides of the RV A/C.
- 3.6.8** Power and ground studs installed in overhead storage compartment. These will be located on officer side of compartment and include the following:
 - 3.6.8.1** (1) 12-volt 40-amp controlled by the battery switch.
 - 3.6.8.2** (1) 12-volt 60-amp controlled by the ignition switch.
 - 3.6.8.3** (1) 12-volt 60-amp, direct to the battery.
 - 3.6.8.4** (1) 12-volt 100-amp ground.
- 3.6.9** Run 12V 20amp power to bottom of EMS cabinet with butt connector on the end.

3.7 Interior

- 3.7.1** 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 Low Seam Durawear Plus material.
- 3.7.2** 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.
- 3.7.3** 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 Low Seam Durawear Plus material.
- 3.7.4** 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.
- 3.7.5** There shall be a cabinet constructed of .125 aluminum plate and painted to match the interior of the cab. The cabinet dimensions shall be approximately 21" wide x 22" deep x 39" high. The cabinet shall come complete with a locking roll up door and two adjustable shelves. Strip lighting shall be provided in the cabinet. The location of the cabinet shall be in place of the rear facing crew seat behind the driver.
- 3.7.6** The compartment shall come complete with a single interior access opening, and 1" nylon black webbing with black plastic buckles to cover the opening.
- 3.7.7** There shall be an adjustable shelf provided and installed in the compartment. The shelf shall be fabricated of .188 aluminum plate and have two 1.5" x 1.5" x .188" aluminum angles welded to the underside of the shelf for support.
- 3.7.8** 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 Low Seam Durawear Plus material.
- 3.7.9** 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.

- 3.7.10** One (1) H.O. Bostrom Tanker 300CT ABTS SCBA flip-up base seat shall be installed in the officer'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 Low Seam Durawear Plus material.
- 3.7.11** 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.
- 3.7.12** The cab seat upholstery shall be black in color. Bostrom Durawear
- 3.7.13** Each SCBA seat in the cab shall feature an H.O. Bostrom Secure All 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 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.

- 3.7.14** 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.
- 3.7.15** A compartment shall be provided under the forward-facing crew seats on the back wall of the cab. The front of the compartment shall be open and enclosed with black nylon webbing. The webbing shall be secured with plastic buckles. Compartment dimensions are 91.5"L x 14"H x 19"W.
- 3.7.16 Overhead Storage in Forward Raised Roof**
 - 3.7.16.1** (1) Black Net with standard clips on Driver's side / half
 - 3.7.16.2** Divider to split overhead storage in half (front to back)
 - 3.7.16.3** (1) Fold-up Locking door on Officers side

3.8 Fire Pumper Apparatus

3.8.1 Fire Pump

- 3.8.1.1** The fire pump shall be a Hale model QTWO-150
- 3.8.1.2** The pump shall be midship mounted. The fire pump shall have two impellers and be of the series-parallel, two-stage design. The pump shall be equipped with an all bronze waterway transfer valve, capable of switching from one pump mode to the other with two and one-half turns of the transfer valve control handwheel. The transfer valve shall be equipped with a positive mechanical

indicator to register the position of the transfer valve at all times. The transfer valve shall not be electrically operated.

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 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 of 1500 gallons per minute in accordance with NFPA #1901.

The pump shaft shall be rigidly supported by three bearings for 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.

3.8.1.3

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.

3.8.1.4

The pump seal shall be a maintenance free pump type seal.

3.8.1.5

A manual emergency override shift shall be provided on the pump panel and may be used by placing both the chassis transmission and the pump air shift control in "neutral" position.

3.8.1.6

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.

3.8.1.7

The pump shall be tested and certified by Mistras Group, Inc., a third-party independent testing agency, in accordance with NFPA 1901. A Three (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. If the apparatus is equipped with a water tank, the water tank-to-pump test shall also be included.

- 3.8.1.8** 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.
- 3.8.1.9** All suction and discharge lines (except pump manifolds) one (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.
- 3.8.1.10** The booster tank shall be connected to the intake side of the pump with a check valve. The three (3") tank to pump line shall run from a bottom sump into the three (3") valve. To prevent damage due to chassis flexing or vibration, a short three (3") flexible rubber hose coupling shall be used to connect the tank to the intake valve.
- 3.8.1.11** 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.
- 3.8.1.12** The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.
- 3.8.1.13** A two (2") tank fill line shall be provided, using a quarter turn full flow ball valve controlled from the pump operator's panel.
- 3.8.1.14** 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.
- 3.8.1.15** The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.
- 3.8.1.16** Fire Research PumpBoss model PBA400-A00 pressure governor and monitoring display kit shall be installed. The kit shall include a control module, two (2) 600 psi pressure sensors, and cables. The control module case shall be waterproof and have dimensions not to exceed 6 3/4" high by 4 5/8" wide by 1 3/4" deep. Inputs for monitored information shall be from a J1939 databus or

independent sensors. Outputs for engine control shall be on the J1939 databus or engine specific wiring.

3.8.1.17

The following continuous displays shall be provided:

- 3.8.1.17.1** CHECK ENGINE and STOP ENGINE warning LEDs
- 3.8.1.17.2** Engine RPM; shown with four daylight bright LED digits more than 1/2" high Engine OIL PRESSURE; shown on an LED bar graph display in 10 psi increments
- 3.8.1.17.3** Engine TEMPERATURE; shown on an LED bar graph display in 10-degree increments
- 3.8.1.17.4** Transmission TEMPERATURE; shown on an LED bar graph display in 10-degree increments
- 3.8.1.17.5** BATTERY VOLTAGE; shown on an LED bar graph display in 0.5-volt increments
- 3.8.1.17.6** PSI / RPM setting; shown on a dot matrix message display PSI and RPM mode LEDs
- 3.8.1.17.7** THROTTLE READY LED.

3.8.1.18

A dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options when selected by the operator.

The program shall store the accumulated operating hours for the pump and engine, previous incident hours, and current incident hours in a non-volatile memory. Stored elapsed hours shall be displayed at the push of a button. It shall monitor inputs and support audible and visual warning alarms for the following conditions:

- 3.8.1.18.1** High Engine RPM
- 3.8.1.18.2** High Transmission Temperature Low Battery Voltage (Engine Off)
- 3.8.1.18.3** Low Battery Voltage (Engine Running) High Battery Voltage
- 3.8.1.18.4** Low Engine Oil Pressure
- 3.8.1.18.5** High Engine Coolant Temperature

The governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A control knob that uses optical technology shall adjust pressure or RPM settings. It shall be two (2") in diameter with no mechanical stops, a serrated grip, and have a red idle push button in the center.

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

The pressure governor and monitoring display shall be programmed to interface with the engine.

- 3.8.1.19** There shall be a Task Force Tips A1831 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 NPT pipe thread. System is field adjustable.
- 3.8.1.20** The fire pump shall not be painted. The pump shall remain in its natural finish.
- 3.8.1.21** The plumbing shall not be painted. All fittings, pipe, and valves shall remain in their natural finish.
- 3.8.1.22** 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. The priming system shall have a five-year warranty.
- 3.8.1.23** A single panel mounted control will activate the priming pump and open the priming valve to the pump.

3.8.2 Valves and Fittings

3.8.2.1 Two (2.5") Left Side Inlet.

- 3.8.2.1.1** A two (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.
- 3.8.2.1.2** 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.
- 3.8.1.3** 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.

The above shall terminate with National Standard Threads.

3.8.2.2 Six (6") Inlet.

- 3.8.2.2.1** A six (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.

3.8.2.3 Two (2.5") Right Side Inlet.

- 3.8.2.3.1** A two (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.
- 3.8.2.3.2** 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.

3.8.2.3.3 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.

The above shall terminate with National Standard Threads.

3.8.2.4 Discharge #1 – Left.

3.8.2.4.1 The discharge in position one (#1) on the left side of the apparatus shall include the following features. A two (2.5") discharge shall be provided on the left side of the apparatus.

3.8.2.4.2 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.

3.8.2.4.3 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.

3.8.2.4.4 An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be two (2.5") in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.

3.8.2.4.5 Discharge Termination. The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

The above shall terminate with National Standard Threads.

3.8.2.5 Discharge Two (2) – Left.

3.8.2.5.1 The discharge in position two (#2) on the left side of the apparatus shall include the following features.

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

3.8.2.5.2 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.

3.8.2.5.3 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.

3.8.2.5.4 An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be two (2.5") in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.

3.8.2.5.5 Discharge Termination. The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

The above shall terminate with National Standard Threads.

3.8.2.6 Discharge #3 – Right.

3.8.2.6.1 The discharge in position three (#3) on the right side of the apparatus shall include the following features.

A four (4") discharge shall be provided on the right side of the apparatus.

3.8.2.6.2 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.

3.8.2.6.3 The valve shall be controlled by an Akron handwheel control with position indicator located at the operator's panel.

3.8.2.6.4 Two (2.5") Pressure Gauge. An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be two (2.5") in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.

3.8.2.6.5 Discharge Termination. The discharge valve shall be equipped with a straight termination that is capped and chained.

The above shall terminate with National Standard Threads.

3.8.2.6.6 One (1) Task Force Tips #AA3ST-NP 4" NST female x 5" Storz adapter with #A01ST 5" Storz cap and chain shall be provided for the above discharge.

3.8.2.7 Discharge #4 – Right.

3.8.2.7.1 The discharge in position #4 on the right side of the apparatus shall include the following features.

A two (2.5") discharge shall be provided on the right side of the apparatus.

- 3.8.2.7.2** 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.
- 3.8.2.7.3** 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.
- 3.8.2.7.4** An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be two (2.5") in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.
- 3.8.2.7.5** The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

The above shall terminate with National Standard Threads.

3.8.2.8 Two (2.5") Rear Discharge.

- 3.8.2.8.1** There shall be a two (2.5") gated discharge piped to the right rear, adjacent to the hose bed. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be two (2.5") piping and a full flow two (2.5") ball valve with the control at the pump operator's panel.
- 3.8.2.8.2** 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.
- 3.8.2.8.3** The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.
- 3.8.2.8.4** An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be two (2.5") in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.
- 3.8.2.8.5** The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

The above shall terminate with National Standard Threads.

3.8.2.9 Two (2.5") Rear Discharge

- 3.8.2.9.1** There shall be a two (2.5") gated discharge piped to the right

rear, adjacent to the hose bed. The discharge shall be installed with proper clearance for spanner wrenches or adapters. Plumbing shall be two (2.5") piping and a full flow two (2.5") ball valve with the control at the pump operator's panel.

3.8.2.9.2 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.

3.8.2.9.3 The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.

3.8.2.9.4 An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be two (2.5") in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.

3.8.2.9.5 The discharge valve shall be equipped with a 30° elbow termination that is capped and chained.

The above shall terminate with National Standard Threads.

3.8.2.9.6 A three (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.

3.8.2.9.7 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.

3.8.2.9.8 The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.

3.8.2.9.9 An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be two (2.5") in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.

3.8.2.10 The deck gun piping shall terminate with NPT threads.

3.8.2.11 A Task Force Tips model XG18 manually telescoping waterway shall be provided and installed. The Extend-a- gun shall be capable of being raised to an extended height of 18" by lifting a quick release latch located at the base of

the extension tube. The aluminum riser shall have a three (3") waterway; hardcoat anodized finish and be furnished with a three (3") NPT or three (3") Victaulic inlet and a three (3") male NPT outlet. The unit shall have a unique serial number and be covered by a five-year warranty.

3.8.2.12

Crosslays

3.8.2.12.1 Two (2) crosslay hose beds shall be supplied. The piping and valves shall be two (2"), the swivel shall be one (1.5"). The valves shall be the "drop-out" style, push/pull controlled from the pump panel.

3.8.2.12.2 Each compartment shall hold 200 ft. of 1.75" double jacket hose. Both beds shall be of the same dimension.

3.8.2.12.3 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.

3.8.2.12.4 The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.

3.8.2.12.5 An Innovative Controls liquid filled individual line pressure gauge shall be provided. The gauge shall be two (2.5") in diameter with white faces and black lettering. The gauge shall have a pressure range of 0-400 psi.

The above shall terminate with National Standard Threads.

3.8.2.12.6 An aluminum diamond plate cover shall be installed over the crosslay hose beds. It shall include a chrome grab handle at each end for opening and closing the cover. The cover shall be equipped with vinyl flaps on the sides, capable of being securely fastened.

3.8.2.12.7 Width of crosslay areas will be a minimum of 14.25"

3.8.2.13

Booster Reel and Equipment

3.8.2.13.1 One (1) bright aluminum electric rewind booster reel with sealed joints, leak proof ball bearings, and an adjustable friction brake. The reel shall have a heavy frame to keep the drum, bearings, and rewind mechanism in alignment at all times. The reel shall have roller guides to prevent hose damage while it is being taken on and off of the reel. The electric rewind shall be located for convenience and safety of operation. Positive rewind power shall be assured by the use of sprocket and chain in conjunction with a geared manual crank.

The reel shall be located in the L1 compartment.

The reel shall be equipped with 200 ft. 1" best grade booster hose with Bar-Way couplings and a 30 gpm nozzle mounted in a tulip bracket.

3.8.2.13.2 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.

3.8.2.13.3 The valve shall be controlled by an Innovative Controls push/pull handle located at the operator's panel.

The above shall terminate with National Standard Threads.

3.8.2.14 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.

3.8.2.15 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.

3.8.2.16 The apparatus shall be equipped with a FoamPro 2002 electric, fully automatic, variable speed, discharge side foam proportioning system. The system shall be capable of handling class A and most types of class B foam. The system shall be equipped with a 12-volt electric motor driven positive displacement foam concentrate pump, rated up to 5.0 gpm, with operating pressures up to 400 psi.

A digital computer control display shall be provided, and display shall include the following functions:

- a) Push-button control of foam proportioning foam
- b) Current flow-per-minute of water
- c) Volume of water discharged
- d) Flow rate simulation
- e) Set-up and diagnostic functions
- f) "Low Concentrate" warning light
- g) "No Concentrate" warning light

3.8.2.17 Foam Tank

3.8.2.17.1 There shall be a 30-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.

3.8.2.17.2 The Foam Pro 2002 will be plumbed to Five (5) discharges: Right Rear, Second Rear, 1st Crosslay, 2nd Crosslay and Booster Reel.

3.8.2.18 The pump controls and gauges shall be located at the left side of the apparatus. The pump and gauge panels shall be flush mounted.

Pump panels on both sides shall be easily removable. The gauge and control 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 one (1) hinged access door as large as possible located over the right-side pump panel. This door shall have a full-length stainless-steel hinge and a 1/4 turn latching mechanism.

The control panel shall be laid out in a user-friendly manner. All valve controls shall have the corresponding discharge gauge located immediately adjacent to control handle to allow operator to view the discharge pressure without searching the panel.

3.8.2.19 The panels shall be constructed of black Raptor textured coating that covers the aluminum for maximum protection against abrasion caused during normal use.

3.8.2.20 The pump panel shall be equipped with color-coded removable escutcheon plates around the suction and discharge valves.

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

- a) #1 Discharge - Yellow
- b) #2 Discharge – White
- c) #3 Discharge – Navy Blue
- d) #4 Discharge - Black
- e) #5 Discharge - Green
- f) #1 Pre-Connect - Orange
- g) #2 Pre-Connect - Red
- h) #3 Pre-Connect - Brown
- i) #4 Pre-Connect - Magenta
- j) Front Bumper Line - Turquoise
- k) Large Diameter Discharge – Yellow with White Border
- l) Left Hose Bed Pre-Connect - Tan
- m) Right Hose Bed Pre-Connect - Lavender
- n) Left Rear Discharge - Olive
- o) Right Rear Discharge – Light Blue
- p) Deck Gun – Silver
- q) Inlets – Burgundy
- r) Tank Fill - Lime Green
- s) Tank to Pump – Burgundy

3.8.2.22 The pump module framework shall be painted as specified by the customer at the pre-construction meeting. The paint finish shall be applied before the installation of any wiring, gauge lines, valve linkages, or operator's panel. The paint shall be the same material used for the finished body and cab.

3.8.2.23 The exterior dunnage panels shall be constructed of aluminum diamond plate.

3.8.2.24 Labels will be provided above each discharge gauge in addition

to label on the actuator. Color cording will be consistent with existing units in the FLFR fleet.

3.9 Pump Panel

- 3.9.1** The driver's side pump panel controls and gauges shall be illuminated by a full width white Federal Signal LED light strip, controlled at the pump panel.
- 3.9.2** The officer's side pump panel shall be illuminated by a full width white Federal Signal LED light strip, controlled at the pump panel.
- 3.9.3** The following gauges and controls shall be provided at the pump panel:
 - a) Two (2) certified laboratory test gauge outlets.
 - b) Pump primer control.
 - c) Master drain control and additional drains as needed.
 - d) Tank-fill and pump cooler valve controls.
 - e) Tank to pump valve control.
 - f) Pump capacity rating plate.
 - g) All discharge controls.
 - h) Two (2) master pump gauges.
 - i) Gauges on all 1-1/2" and larger discharge lines.
- 3.9.4** Compression style fittings shall be provided on air lines within the pump module.
- 3.9.5** One (1) air chuck shall be provided adjacent to the pump operator's panel on the driver's side. The system shall tie into the accessory tank of the brake system and include an 85-psi pressure protection valve in the outlet line to prevent the brake system from losing all air.
- 3.9.6** There shall be a Hale TRV-L Thermal Relief Valve supplied. The valve shall automatically dump a controlled amount of water to atmosphere when the pump water exceeds 120 degrees Fahrenheit. The valve shall reset 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.
- 3.9.7** A high temperature transmission indicator shall be provided at the pump operator's panel. The indicator shall consist of a light and audible with buzzer.
- 3.9.8** A push button switch shall be provided on pump operators panel to activate the air horns.
- 3.9.9** Innovative Controls liquid filled pump pressure and vacuum gauges shall be provided. The gauges shall be four (4") in diameter with white faces and black lettering. The gauges shall have a pressure range of 30"-0-400 psi.

3.10 Water Tank

- 3.10.1** An Innovative Controls weatherproof encapsulated (14) super bright LED light indicator shall monitor the water tank level and shall be mounted on the pump operator's panel. The fourteen LED lights are arranged in a "V" pattern for easy identification of liquid level. When the liquid level reaches less than a 1/4 full the refill level begins to flash. The tank-sensing probe shall be chemical resistant PVC with stainless steel sensing wires. The cover plate shall be aluminum sub-plate, black background and blue graphics, with an outdoor exposure rated composite overlay.
- 3.10.2** Two (2) Whelen PSTANK2 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.
- 3.10.3** An Innovative Controls weatherproof encapsulated (14) super bright LED light indicator shall monitor the foam tank level and shall be mounted on the pump operator's panel. The fourteen LED lights are arranged in a "V" pattern for easy identification of liquid level. When the liquid level reaches less than a 1/4 full the refill level begins to flash. The tank-sensing probe shall

be chemical resistant PVC with stainless steel sensing wires. The cover plate shall be aluminum sub-plate, black background and red graphics, with an outdoor exposure rated composite overlay.

- 3.10.4** 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 pumper 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

3.10.5 The water tank shall have a capacity of a minimum of 712 U.S. gallons.

3.11 Apparatus Body

3.11.1 The body shall be constructed of 3/16" #5052 aluminum sheet, #3003 bright aluminum diamond plate 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.

3.11.2 Rear Step Compartmentation

3.11.2.1 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.

3.11.3 Left Side Compartmentation

3.11.3.1 L1- There shall be a compartment ahead of the rear wheels approximately 43" wide x 66" high x 27-1/4" deep.

3.11.3.2 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.

3.11.3.3 L3- There shall be a compartment behind the rear wheels approximately 53" wide x 66" high x 27-1/4" deep.

3.11.4 Right Side Compartmentation

3.11.4.1 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.

3.11.4.2 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.

3.11.4.3 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.

3.11.5 The rear of the body shall be equipped with up to six (6) Innovative Control fold-down steps with integrated step lights mounted on each side of the front face of body to provide access to the rear hose bed area.

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

- 3.11.6** 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.
- 3.11.7** All load bearing aluminum treadplate running boards shall be .155 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 .125" thick bright annealed finish. In areas where aluminum treadplate shall function as a load-bearing surface, there shall be a heavy steel sub-structure. This structure shall consist of 3" channel and 1-1/2" angle welded support. This shall assure that there shall be no flexing or cracking of running boards. The aluminum shall be insulated from the steel by closed cell foam body barrier material.

Treadplate locations:

1. Skirting around front bumper.
 2. The step at the cab entrance.
 3. The jump seat steps.
 4. The body header.
 5. The running boards.
 6. The rear step.
 7. The top of the compartments.
 8. The rear of the apparatus.
 9. The rear fenders.
- 3.11.8** The rear step corners shall be fully mitered starting from the body on each side of the rear step, and taper inward at a 45-degree angle to the rear edge.
- 3.11.9** There shall be four (4) spare breathing air cylinder compartments recessed in the rear fender wells, two (2) left and two (2) right. The interior compartment shall be constructed of a high-density polyethylene plastic.
- 3.11.10** The single or double SCBA compartments shall have a brushed stainless door equipped with a weather resistant flush fitting thumb latch. The interior of the door shall incorporate a rubber seal to keep the compartment free of road debris and moisture.
- 3.11.11** Two sections 10' long of Kochel lightweight suction hose will be supplied and mounted in the ladder chute.
- 3.11.12** A 6" Kochek barrel strainer shall be provided.
- 3.11.13** The rear side fenders shall be removable aluminum treadplate panels. The wheel liners shall be constructed of pre-formed material to provide a maintenance free, damage resistant surface.
- 3.11.14** 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.

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

- 3.11.16** A Cast Products LP0013 cast aluminum license plate bracket with LED light shall be provided at the rear of the apparatus.
- 3.11.17** A trough shall be provided in the running boards on both the driver's side and officer's side, each capable of holding a 15-foot length of five (5") hose. The troughs must be tested to verify (5") hose
- 3.11.18** Black, hard rubber mud flaps shall be provided for front tires and should display no identifying markings.
- 3.11.19** Black, hard rubber mud flaps shall be provided for rear tires and should display no identifying markings.
- 3.11.20** There shall be a backboard storage compartment installed in the main hose bed. The compartment shall be constructed from smooth aluminum and shall be approximately 3.25" wide X 16.75" tall x 75" long inside. A Velcro strap shall be installed vertically over the rear opening to secure the backboard.

- 3.12** 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. There will be no exceptions allowed to this specification.

3.13 Upper Body Compartments – Each Side

- 3.13.1** Each compartment shall have a lift-up type compartment door hinged on the outboard side. Each door shall be fabricated from 3/16" aluminum tread plate. Each door shall have two (2) pneumatic type cylinders, one (1) at each end, attached to cast aluminum brackets mounted to the interior surface of the door to hold the door in both the opened and closed positions. Each door shall be mounted using 16" long, equally spaced, 14-gauge stainless steel hinges, with 1/4" stainless steel pin. A polyester barrier film gasket shall be placed between stainless steel hinge and the body mounting surface as necessary to prevent corrosion caused by dissimilar metals.
- 3.13.2** Each compartment door shall overlap a 2" vertical lip on the body roof to prevent entry of moisture and sealed with automotive type rubber molding to provide a weather resistant seal.
- 3.13.3** Each roof compartment door shall have a chrome 7" handle bolted to center of each door.
- 3.13.4** Tailboard will be 15" full depth on entire rear of apparatus with 45-degree corners.
- 3.13.5** Ladder chute will be centered in rear of body to accommodate ladders and additional equipment.
- 3.13.6 Hose Bed**
 - 3.13.6.1** 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.
 - 3.13.6.2** 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.
 - 3.13.6.3** A removable aluminum support bar shall be provided at the rear of the hose bed to support the aluminum hose bed cover.
 - 3.13.6.4** A vinyl flap shall be provided and installed on the rear of the hose bed to prevent the hose from unintentional deployment. The vinyl flap shall be secured and fastened to the rear of the hose bed.

- 3.13.6.5** The hose bed cover shall be secured with black bungee cords with orange pull tabs.
 - 3.13.6.6** The hose bed shall be divided by two (2) 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.
 - 3.13.6.7** A Federal Signal Complex LED light strip shall be provided, located on the interior of the front hose bed wall.
 - 3.13.6.8** There will be a weather-stripping seal on the front of the hard hose bed cover to minimize air and water infiltration.
- 3.13.7** 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.

- 3.13.8** There shall be up to five (5) Innovative Control fold-down steps with integrated step lights mounted on each side of the front face of body to provide access to the top of the pump module and dunnage area.

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

- 3.13.9** There shall be up to five (5) Innovative Control fold-down steps with integrated step lights mounted on each side of the front face of body to provide access to the top of the pump module and dunnage area.

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

3.14 Interior Compartmentation

3.14.1 Compartment L1

3.14.1.1 In the L1 compartment on the left side of the apparatus, there shall be an adjustable shelf provided and installed. The shelf shall be fabricated of .188" aluminum plate.

3.14.1.2 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".

3.14.2 Compartment L2

3.14.2.1 In the L2 compartment on the left side of the apparatus, there shall be an adjustable shelf provided and installed. The shelf shall be fabricated of .188" aluminum plate.

3.14.3 Compartment L3

3.14.3.1 In the L3 compartment on the left side of the apparatus, there shall be an adjustable shelf provided and installed. The shelf shall be fabricated of .188" aluminum plate.

3.14.3.2 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 100% of its depth. The tray shall be fabricated of .188" aluminum plate and have a formed lip that measures 2".

3.14.4 Compartment R1

3.14.4.1 In the R1 compartment on the right side of the apparatus, there shall be an adjustable shelf provided and installed. The shelf shall be fabricated of .188" aluminum plate.

3.14.5 Compartment R2

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

A swing-out tool board with 250 lbs. 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.

3.14.6 Compartment R3

3.14.6.1 In the R3 compartment on the right side of the apparatus, there shall be an adjustable shelf provided and installed. The shelf shall be fabricated of .188" aluminum plate.

3.14.6.2 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 two (2").

3.14.7 Compartment A1

3.14.7.1 The A1 compartment on the rear of the apparatus shall include the following features: No compartment options were selected for A1.

3.14.8 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.

3.14.9 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 with a satin finish. The doors shall have the following features:

- a) Manufactured wholly in the United States.
- b) Concave individual slat design to prevent loose equipment from hindering door operation.
- c) Co-Extruded stretch resistant inner seal between slats to prevent metal-to-metal contact and inhibit moisture and dust penetration.
- d) Interlocking swaged/dimpled end shoes shall be utilized to provide a tight-fitting assembly and allow for easy removal in the event of damage.
- e) Effective counter balancing for ease of lifting and lowering the doors.
- f) One-piece side rail and track to provide an unobstructed slide area and reduce the risk of binding.
- g) Non-abrasive replaceable water and dust barrier to keep compartment equipment clean

and dry.

- h) A magnetic type switch integral to the door shall be supplied for door ajar indication and compartment light activation.
- i) 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.

A 3M clear protective material shall be provided along the outer edge of the compartment floor to protect this area from scratches that could occur when installing or removing equipment from the compartments.

- 3.14.10** The rear compartment door shall be equipped with ROM brand roll-up door in a satin finish.
- 3.14.11** The interior non-painted surface of the compartments shall have a smooth, natural finish.
- 3.14.12** The compartment doors shall be equipped with locks. The locks shall all be keyed alike.
- 3.14.13** Each compartment shall be equipped with two (2) white AMDOR LED light strips which shall provide a consistent pattern to illuminate to entire compartment.
- 3.14.14** Turtle Tile interlock matting material shall be provided in each compartment and on each shelf in each compartment.

3.15 Lighting

- 3.15.1** The rear stop/tail/turn/reverse lights shall be Whelen 600 series lights installed in quad housings one (1) each side on the rear of the apparatus body. The stop/taillights shall be LED model 60BTT located in the top position of the housing. The amber arrow turn signals shall be LED model 60A00TAR located below the stop/taillights. The reverse lights shall be LED model 60C00WCR (maximum intensity) located below the turn signals. The bottom position of the housing shall accommodate a Whelen 600 series warning light.
- 3.15.2** LED type ICC/marker lights shall be provided to meet D.O.T. requirements.
- 3.15.3** 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 or individually mounted lights shall be provided at the rear of the body to illuminate all stepping surfaces based on the body style.

- 3.15.4** 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.
- 3.15.5** 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.

A momentary rocker switch shall be provided near the driver and labeled Master Emergency to energize all of the optical warning devices provided. A secondary momentary rocker switch shall be provided near the officer. All lights shall operate at not less than the minimum flash rate per minute as specified by NFPA.

- 3.15.6** The upper level shall be divided into Zones A (front), B (officer's side), C (rear) and D (driver's side).

Zone A (front) shall have one (1) Whelen Freedom IV 72" Model F4N7QLED light bar, with twelve (12) LED modules. The light bar shall have two (2) end red LED modules, two (2) corner red LED modules, six (6) forward-facing red LED modules and two (2) forward-facing white LED modules. The light bar shall have all clear outer lenses. The light bar shall be installed on the cab roof as far forward as possible with two (2) MK8H 5" cast aluminum risers.

Zone B (officer's side) shall be covered by the module from the light bar and the side-facing warning light.

Zone C (rear) shall have four (4) Whelen M9V2 series model M9V2* LED warning lights installed on the upper rear of the apparatus. The lights shall be installed one (1) each side on the upper rear surface of the body (rear-facing) and one (1) each side on the driver and officer sides of the body in the upper rear corners (side-facing).

Zone D (driver's side) shall be covered by the module from the light bar and the side-facing warning light.

- 3.15.7** The lower level shall be divided into zones A (front), B (officer's side), C (rear) and D (driver's side). Zone A (front) shall have four (4) Whelen 600 series model 60*02F*R Super LED warning lights.

The lights shall be installed two (2) each side on the front of the cab in the warning light housings.

Zone B (officer's side) shall have two (2) Whelen 600 series model 60*02F*R Super LED warning lights and one (1) Whelen ION T-Series TLI* Super LED warning light.

The lights shall be installed one (1) near the front corner of the apparatus, one (1) near the rear axle, and one (1) near the rear corner of the apparatus.

Zone C (rear) shall have two (2) Whelen 600 series model 60*02F*R Super LED warning lights installed one (1) each side on the lower rear of the apparatus.

Zone D (driver's side) shall have two (2) Whelen 600 series model 60*02F*R Super LED warning lights and one (1) Whelen ION T-Series TLI* Super LED warning light.

The lights shall be installed one (1) near the front corner of the apparatus, one (1) near the rear axle, and one (1) near the rear corner of the apparatus.

- 3.15.8** There shall be two (2) additional Whelen 600 series model 60*02F*R Super LED warning lights installed on the apparatus.
- 3.15.9** Two (2) additional Whelen M9V2* LED series warning lights shall be installed on the apparatus.
- 3.15.10** One (1) Whelen TAL65 36" LED traffic advisor shall be installed at the rear of the apparatus. The advisor shall have six (6) amber LED light heads. A diamond plate lip shall be installed above the traffic advisor to protect it from hose couplings. The TACTL5 control head shall be mounted in a location specified by the fire department.
- 3.15.11** One (1) Fire Research Spectra SPA811-Q15 brow mounted LED scene light shall be provided. The lamp head shall operate at 12 volts DC, draw 13 amps, and generate 15,000 lumens of light. The light shall be mounted at the front brow of the cab and shall be controlled from a switch in the cab.
- 3.15.12** One (1) Fire Research Spectra SPA530-Q15-SR LED telescopic scene light shall be provided. The lamp head shall operate at 12 volts DC, draw 13 amps, and generate 15,000 lumens of

light. The light shall be installed at a fire department specified location with Steady Rest bottom bracket and shall be controlled from a switch in the cab.

3.16 Finish & Painting

3.16.1 All exposed metal surfaces that are 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.

3.16.2 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"

3.16.3 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 pre-coat #80. This procedure shall be strictly adhered to for corrosion prevention and damage to the finish painted surfaces.

3.16.4 The following paint process shall be utilized:

Surface Preparation:

1. Wash surface thoroughly with mild detergent.
2. Clean and de-grease with Prep-Sol 3812S.
3. Sand and feather edge using 400 grit or finer on a dual action sander.
4. Remove sanding dust with a cleaner compatible with polyurethane base coat/clear coat final finish.

Substrate Treatment:

1. Use a Metal Conditioner followed with a Conversion Coating product.

Priming:

1. Use a priming 615S pretreatment.
2. Use a self-etching primer applied to achieve a 1.5 mil dry film thickness (dft) minimum.
3. Use Prime N Seal sealer compatible with polyurethane base coat.

Color Coat:

1. Apply polyurethane base coat 1-2 mil dft minimum.

Clear Coat:

1. Apply polyurethane clear coat 2 mil dft minimum.

3.16.5 The apparatus shall be painted using color L0166 EW (Vermillion).

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

3.16.7 The area of the frame rails where the pump module shall be located. Shall be applied with a textured coating that matches the frame rail color.

3.16.8 The air conditioning condenser shall be painted to match the cab roof.

3.17 Decals & Lettering

3.17.1 Lettering and graphics shall be installed to match previous apparatus, see photos below.



(Front view of apparatus)



(Side view of apparatus)



(Rear view of apparatus)

- 3.17.2** 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.
- 3.17.3** 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.
- 3.17.4** Custom reflective lettering will be embroidered on rear vinyl – verbiage TBD at prebuild meeting.

3.18 Additional Items to be Included and/or Installed

3.18.1 Rescue Tools

The following Holmatro Pentheon rescue hydraulic tools will be provided, one (1) complete set per apparatus.

Qty	Part Number	Model
1	159.000.063	Pentheon PCU50 Cutter
1	159.000.064	Pentheon PSP40 Spreader
1	151.000.062	Pentheon PTR50 Tele Ram
6	151.000.583	Pentheon PBPA287 Battery
3	151.000.742	Pentheon PBCH2 Battery Charger
1	151.000.804	Pentheon TRE03 Ram Extension Pipe
3	151.000.503	Pentheon Daisy Chain Power Cord
3	151.000.499	Pentheon On-Tool Charging Cord

- 3.18.2** One (1) pint of touch-up paint for the apparatus body.
- 3.18.3** One (1) bag of stainless-steel nuts and bolts, as used in the construction of the apparatus.
- 3.18.4** Two (2) Ziamatic #SAC-44 folding wheel chocks with SQCH-44H holders shall be provided. The wheel chocks shall be in an area close to the rear axles easily accessible from the side of the apparatus.
- 3.18.5** A CD containing wiring diagrams of the apparatus shall be provided at the time of delivery.
- 3.18.6** Complete "Operation and Service" manuals shall be supplied with the completed apparatus, one (1) printed copy and one (1) USB flash drive. 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.

- 3.18.7** The top speed of the completed apparatus shall be set at approximately 68 MPH.
- 3.18.8** Each new apparatus will be delivered to department at location specified. Three consecutive days of truck orientation will be provided to the department.
- 3.18.9** Two (2) Akron Revolution Valves 6" x 5" Storz w/30° downturn will be provided.
- 3.18.10** A Bridgade 360 camera system will be provided and installed.
- 3.18.11** A Fort Lauderdale Fire Rescue supplied single head radio will be mounted in the cab, per department requirements. The antenna connection and test out will be the responsibility of Fort Lauderdale Fire Rescue.
- 3.18.12** The Fort Lauderdale supplied radio antenna shall be installed in the cab roof with the coax cable run to the radio mounting area. The radio location shall be determined at the pre-construction meeting.
- 3.18.13** Supply and install Motorola APX6500 7/800 MHz Radio.
- 3.18.14** Supply and install a Knox Med Vault 2.5.
- 3.18.14** Supply and install a Knox Med Key Secure 6.
- 3.18.15** A dry chem, water cannon and CO2 extinguisher will be provided and mounted on the apparatus, at a location to be determined.
- 3.18.16** A Firecom four position wireless intercom system will be provided and installed. It will interface with the Motorola radio.
- 3.18.17** Supply and install an Opticom Model GTT combination infra-red and GPS system.
- 3.18.18** An Elkhart Stinger 2.0 deck gun with dual inlet ground base and stacked tips with Stream Shaper will be provided and installed.
- 3.18.19** Supply and install a Honda EU3000I portable generator in a compartment to be determined by the Department.
- 3.18.20** Supply and install four (4) bank portable radio charger.
- 3.18.21** Supply and install a department supplied Bullard TIC charger.
- 3.18.22** Supply and install an lport wall charger and mount.

- 3.19** After the award of bid and pre-construction conference, a detailed layout drawing depicting the apparatus layout and appearance including any changes agreed upon shall be provided for the City's review and signature. The drawing(s) will become part of the contract documents. The drawing shall consist of left side, right side, frontal, and rear elevation views. Apparatus equipped with a fire pump, shall have a general layout view of the pump operators panel scaled the same as the elevation views.

- 3.20** 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 hour around the clock basis. The company shall **maintain parts and service for a minimum period of twenty (20) years** on each apparatus model manufactured.

END OF SECTION

**CITY OF FORT LAUDERDALE
GENERAL CONDITIONS**

These instructions and conditions are standard for all contracts for commodities or services issued through the City of Fort Lauderdale Procurement Services Division. The City may delete, supersede, or modify any of these standard instructions for a particular contract by indicating such change in the Invitation to Bid (ITB) Special Conditions, Technical Specifications, Instructions, Proposal Pages, Addenda, and Legal Advertisement. In this general conditions document, Invitation to Bid (ITB), Request for Qualifications (RFQ), and Request for Proposal (RFP) are interchangeable.

PART I BIDDER PROPOSAL PAGE(S) CONDITIONS:

- 1.01 BIDDER ADDRESS:** The City maintains automated vendor address lists that have been generated for each specific Commodity Class item through our bid issuing service, BidSync. Notices of Invitations to Bid (ITB'S) are sent by e-mail to the selection of bidders who have fully registered with BidSync or faxed (if applicable) to every vendor on those lists, who may then view the bid documents online. Bidders who have been informed of a bid's availability in any other manner are responsible for registering with BidSync in order to view the bid documents. There is no fee for doing so. If you wish bid notifications be provided to another e-mail address or fax, please contact BidSync. If you wish purchase orders sent to a different address, please so indicate in your bid response. If you wish payments sent to a different address, please so indicate on your invoice.
- 1.02 DELIVERY:** Time will be of the essence for any orders placed as a result of this ITB. The City reserves the right to cancel any orders, or part thereof, without obligation if delivery is not made in accordance with the schedule specified by the Bidder and accepted by the City.
- 1.03 PACKING SLIPS:** It will be the responsibility of the awarded Contractor, to attach all packing slips to the OUTSIDE of each shipment. Packing slips must provide a detailed description of what is to be received and reference the City of Fort Lauderdale purchase order number that is associated with the shipment. Failure to provide a detailed packing slip attached to the outside of shipment may result in refusal of shipment at Contractor's expense.
- 1.04 PAYMENT TERMS AND CASH DISCOUNTS:** Payment terms, unless otherwise stated in this ITB, will be considered to be net 45 days after the date of satisfactory delivery at the place of acceptance and receipt of correct invoice at the office specified, whichever occurs last. Bidder may offer cash discounts for prompt payment but they will not be considered in determination of award. If a Bidder offers a discount, it is understood that the discount time will be computed from the date of satisfactory delivery, at the place of acceptance, and receipt of correct invoice, at the office specified, whichever occurs last.
- 1.05 TOTAL BID DISCOUNT:** If Bidder offers a discount for award of all items listed in the bid, such discount shall be deducted from the total of the firm net unit prices bid and shall be considered in tabulation and award of bid.
- 1.06 BIDS FIRM FOR ACCEPTANCE:** Bidder warrants, by virtue of bidding, that the bid and the prices quoted in the bid will be firm for acceptance by the City for a period of one hundred twenty (120) days from the date of bid opening unless otherwise stated in the ITB.
- 1.07 VARIANCES:** For purposes of bid evaluation, Bidder's must indicate any variances, no matter how slight, from ITB General Conditions, Special Conditions, Specifications or Addenda in the space provided in the ITB. No variations or exceptions by a Bidder will be considered or deemed a part of the bid submitted unless such variances or exceptions are listed in the bid and referenced in the space provided on the bidder proposal pages. If variances are not stated, or referenced as required, it will be assumed that the product or service fully complies with the City's terms, conditions, and specifications.
- 1.08 NO BIDS:** If you do not intend to bid please indicate the reason, such as insufficient time to respond, do not offer product or service, unable to meet specifications, schedule would not permit, or any other reason, in the space provided in this ITB. Failure to bid or return no bid comments prior to the bid due and opening date and time, indicated in this ITB, may result in your firm being deleted from our Bidder's registration list for the Commodity Class Item requested in this ITB.
- 1.09 MINORITY AND WOMEN BUSINESS ENTERPRISE PARTICIPATION AND BUSINESS DEFINITIONS:** The City of Fort Lauderdale wants to increase the participation of Minority Business Enterprises (MBE), Women Business Enterprises (WBE), and Small Business Enterprises (SBE) in its procurement activities. If your firm qualifies in accordance with the below definitions please indicate in the space provided in this ITB.

Minority Business Enterprise (MBE) "A Minority Business" is a business enterprise that is owned or controlled by one or more socially or economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

The term "Minority Business Enterprise" means a business at least 51 percent of which is owned by minority group members or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by minority group members. For the purpose of the preceding sentence, minority group members are citizens of the United States who include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

Women Business Enterprise (WBE) a "Women Owned or Controlled Business" is a business enterprise at least 51 percent of which is owned by females or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by females.

Small Business Enterprise (SBE) "Small Business" means a corporation, partnership, sole proprietorship, or other legal entity formed for the purpose of making a profit, which is independently owned and operated, has either fewer than 100 employees or less than \$1,000,000 in annual gross receipts.

BLACK, which includes persons having origins in any of the Black racial groups of Africa.

WHITE, which includes persons whose origins are Anglo-Saxon and Europeans and persons of Indo-European decent including Pakistani and East Indian.

HISPANIC, which includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or other Spanish culture or origin, regardless of race.

NATIVE AMERICAN, which includes persons whose origins are American Indians, Eskimos, Aleuts, or Native Hawaiians.

ASIAN AMERICAN, which includes persons having origin in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

1.10 MINORITY-WOMEN BUSINESS ENTERPRISE PARTICIPATION

It is the desire of the City of Fort Lauderdale to increase the participation of minority (MBE) and women-owned (WBE) businesses in its contracting and

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procurement programs. While the City does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms. Proposers are requested to include in their proposals a narrative describing their past accomplishments and intended actions in this area. If proposers are considering minority or women owned enterprise participation in their proposal, those firms, and their specific duties have to be identified in the proposal. If a proposer is considered for award, he or she will be asked to meet with City staff so that the intended MBE/WBE participation can be formalized and included in the subsequent contract.

1.11 **SCRUTINIZED COMPANIES**

As a condition precedent to the effectiveness of this Agreement, subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2020), as may be amended or revised. As a condition precedent to any contract for goods or services of any amount and as a condition precedent to the renewal of any contract for goods or services of any amount, the Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2020), and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2020), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2020), as may be amended or revised, or is engaged in a boycott of Israel, or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2020), as may be amended or revised.

1.12 **DEBARRED OR SUSPENDED BIDDERS OR PROPOSERS**

The bidder or proposer certifies, by submission of a response to this solicitation, that neither it nor its principals and subcontractors are presently debarred or suspended by any Federal department or agency.

Part II DEFINITIONS/ORDER OF PRECEDENCE:

2.01 **BIDDING DEFINITIONS** The City will use the following definitions in its general conditions, special conditions, technical specifications, instructions to bidders, addenda and any other document used in the bidding process:

INVITATION TO BID (ITB) The solicitation document used for soliciting competitive sealed bids for goods or services.

INVITATION TO NEGOTIATE (ITN) All solicitation documents, regardless of medium, whether attached to or incorporated by reference in solicitations for responses from firms that invite proposals from interested and qualified firms so the city may enter into negotiations with the firm(s) determined most capable of providing the required goods or services.

REQUEST FOR PROPOSALS (RFP) A solicitation method used for soliciting competitive sealed proposals to determine the best value among proposals for goods or services for which price may not be the prevailing factor in award of the contract, or the scope of work, specifications or contract terms and conditions may be difficult to define. Such solicitation will consider the qualifications of the proposers along with evaluation of each proposal using identified and generally weighted evaluation criteria. RFPs may include price criteria whenever feasible, at the discretion of the city.

REQUEST FOR QUALIFICATIONS (RFQ) A solicitation method used for requesting statements of qualifications in order to determine the most qualified proposer for professional services.

BID – a price and terms quote received in response to an ITB.

PROPOSAL – a proposal received in response to an RFP.

BIDDER – Person or firm submitting a Bid.

PROPOSER – Person or firm submitting a Proposal.

RESPONSIVE BIDDER – A firm who has submitted a bid, offer, quote, or response which conforms in all material respects to the competitive solicitation document and all of its requirements.

RESPONSIBLE BIDDER – A firm who is fully capable of meeting all requirements of the solicitation and subsequent contract. The respondent must possess the full capability, including financial and technical, ability, business judgment, experience, qualifications, facilities, equipment, integrity, capability, and reliability, in all respects to perform fully the contract requirements and assure good faith performance as determined by the city.

FIRST RANKED PROPOSER – That Proposer, responding to a City RFP, whose Proposal is deemed by the City, the most advantageous to the City after applying the evaluation criteria contained in the RFP.

SELLER – Successful Bidder or Proposer who is awarded a Purchase Order or Contract to provide goods or services to the City.

CONTRACTOR – Any firm having a contract with the city. Also referred to as a "Vendor".

CONTRACT – All types of agreements, including purchase orders, for procurement of supplies, services, and construction, regardless of what these agreements may be called.

CONSULTANT – A firm providing professional services for the city.

2.02 **SPECIAL CONDITIONS:** Any and all Special Conditions contained in this ITB that may be in variance or conflict with these General Conditions shall have precedence over these General Conditions. If no changes or deletions to General Conditions are made in the Special Conditions, then the General Conditions shall prevail in their entirety,

PART III BIDDING AND AWARD PROCEDURES:

3.01 **SUBMISSION AND RECEIPT OF BIDS:** To receive consideration, bids must be received prior to the bid opening date and time. Unless otherwise specified, Bidders should use the proposal forms provided by the City. These forms may be duplicated, but failure to use the forms may cause the bid to be rejected. Any erasures or corrections on the bid must be made in ink and initialed by Bidder in ink. All information submitted by the Bidder shall be printed, typewritten or filled in with pen and ink. Bids shall be signed in ink. Separate bids must be submitted for each ITB issued by the City in separate sealed envelopes properly marked. When a particular ITB or RFP requires multiple copies of bids or proposals they may be included in a single envelope or package properly sealed and identified. Only send bids via facsimile transmission (FAX) if the ITB specifically states that bids sent via FAX will be considered. If such a statement is not included in the ITB, bids sent via FAX will be rejected. Bids will be publicly opened in the Procurement Office, or other designated area, in the presence of Bidders, the public, and City staff. Bidders and the public are invited and encouraged to attend bid openings. Bids will be tabulated and made available for review by Bidder's and the public in accordance with applicable regulations.

3.02 **MODEL NUMBER CORRECTIONS:** If the model number for the make specified in this ITB is incorrect, or no longer available and replaced with an updated model with new specifications, the Bidder shall enter the correct model number on the bidder proposal page. In the case of an updated model with new specifications, Bidder shall provide adequate information to allow the City to determine if the model bid meets the City's requirements.

- 3.03 PRICES QUOTED:** Deduct trade discounts, and quote firm net prices. Give both unit price and extended total. In the case of a discrepancy in computing the amount of the bid, the unit price quoted will govern. All prices quoted shall be F.O.B. destination, freight prepaid (Bidder pays and bears freight charges, Bidder owns goods in transit and files any claims), unless otherwise stated in Special Conditions. Each item must be bid separately. No attempt shall be made to tie any item or items contained in the ITB with any other business with the City.
- 3.04 TAXES:** The City of Fort Lauderdale is exempt from Federal Excise and Florida Sales taxes on direct purchase of tangible property. Exemption number for EIN is 59-6000319, and State Sales tax exemption number is 85-8013875578C-1.
- 3.05 WARRANTIES OF USAGE:** Any quantities listed in this ITB as estimated or projected are provided for tabulation and information purposes only. No warranty or guarantee of quantities is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.
- 3.06 APPROVED EQUAL:** When the technical specifications call for a brand name, manufacturer, make, model, or vendor catalog number with acceptance of APPROVED EQUAL, it shall be for the purpose of establishing a level of quality and features desired and acceptable to the City. In such cases, the City will be receptive to any unit that would be considered by qualified City personnel as an approved equal. In that the specified make and model represent a level of quality and features desired by the City, the Bidder must state clearly in the bid any variance from those specifications. It is the Bidder's responsibility to provide adequate information, in the bid, to enable the City to ensure that the bid meets the required criteria. If adequate information is not submitted with the bid, it may be rejected. The City will be the sole judge in determining if the item bid qualifies as an approved equal.
- 3.07 MINIMUM AND MANDATORY TECHNICAL SPECIFICATIONS:** The technical specifications may include items that are considered minimum, mandatory, or required. If any Bidder is unable to meet or exceed these items, and feels that the technical specifications are overly restrictive, the bidder must notify the Procurement Services Division immediately. Such notification must be received by the Procurement Services Division prior to the deadline contained in the ITB, for questions of a material nature, or prior to five (5) days before bid due and open date, whichever occurs first. If no such notification is received prior to that deadline, the City will consider the technical specifications to be acceptable to all bidders.
- 3.08 MISTAKES:** Bidders are cautioned to examine all terms, conditions, specifications, drawings, exhibits, addenda, delivery instructions and special conditions pertaining to the ITB. Failure of the Bidder to examine all pertinent documents shall not entitle the bidder to any relief from the conditions imposed in the contract.
- 3.09 SAMPLES AND DEMONSTRATIONS:** Samples or inspection of product may be requested to determine suitability. Unless otherwise specified in Special Conditions, samples shall be requested after the date of bid opening, and if requested should be received by the City within seven (7) working days of request. Samples, when requested, must be furnished free of expense to the City and if not used in testing or destroyed, will upon request of the Bidder, be returned within thirty (30) days of bid award at Bidder's expense. When required, the City may request full demonstrations of units prior to award. When such demonstrations are requested, the Bidder shall respond promptly and arrange a demonstration at a convenient location. Failure to provide samples or demonstrations as specified by the City may result in rejection of a bid.
- 3.10 LIFE CYCLE COSTING:** If so specified in the ITB, the City may elect to evaluate equipment proposed on the basis of total cost of ownership. In using Life Cycle Costing, factors such as the following may be considered: estimated useful life, maintenance costs, cost of supplies, labor intensity, energy usage, environmental impact, and residual value. The City reserves the right to use those or other applicable criteria, in its sole opinion that will most accurately estimate total cost of use and ownership.
- 3.11 BIDDING ITEMS WITH RECYCLED CONTENT:** In addressing environmental concerns, the City of Fort Lauderdale encourages Bidders to submit bids or alternate bids containing items with recycled content. When submitting bids containing items with recycled content, Bidder shall provide documentation adequate for the City to verify the recycled content. The City prefers packaging consisting of materials that are degradable or able to be recycled. When specifically stated in the ITB, the City may give preference to bids containing items manufactured with recycled material or packaging that is able to be recycled.
- 3.12 USE OF OTHER GOVERNMENTAL CONTRACTS:** The City reserves the right to reject any part or all of any bids received and utilize other available governmental contracts, if such action is in its best interest.
- 3.13 QUALIFICATIONS/INSPECTION:** Bids will only be considered from firms normally engaged in providing the types of commodities/services specified herein. The City reserves the right to inspect the Bidder's facilities, equipment, personnel, and organization at any time, or to take any other action necessary to determine Bidder's ability to perform. The Procurement Director reserves the right to reject bids where evidence or evaluation is determined to indicate inability to perform.
- 3.14 BID SURETY:** If Special Conditions require a bid security, it shall be submitted in the amount stated. A bid security can be in the form of a bid bond or cashier's check. Bid security will be returned to the unsuccessful bidders as soon as practicable after opening of bids. Bid security will be returned to the successful bidder after acceptance of the performance bond, if required; acceptance of insurance coverage, if required; and full execution of contract documents, if required; or conditions as stated in Special Conditions.
- 3.15 PUBLIC RECORDS/TRADE SECRETS/COPYRIGHT:** The Proposer's response to the RFP is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this RFP and the Contract to be executed for this RFP, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the RFP purporting to require confidentiality of any portion of the Proposer's response to the RFP, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the RFP constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records. In addition, the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as exempt from disclosure or confidential. Proposals bearing copyright symbols or otherwise purporting to be subject to copyright protection in full or in part may be rejected. The proposer authorizes the City to publish, copy, and reproduce any and all documents submitted to the City bearing copyright symbols or otherwise purporting to be subject to copyright protection.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE RFP AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE RFP OR ANY PART THEREOF AS COPYRIGHTED.

3.16 PROHIBITION OF INTEREST: No contract will be awarded to a bidding firm who has City elected officials, officers or employees affiliated with it, unless the bidding firm has fully complied with current Florida State Statutes and City Ordinances relating to this issue. Bidders must disclose any such affiliation. Failure to disclose any such affiliation will result in disqualification of the Bidder and removal of the Bidder from the City's bidder lists and prohibition from engaging in any business with the City.

3.17 RESERVATIONS FOR AWARD AND REJECTION OF BIDS: The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City. The City reserves the right to make an award to the responsive and responsible bidder whose product or service meets the terms, conditions, and specifications of the ITB and whose bid is considered to best serve the City's interest. In determining the responsiveness of the offer and the responsibility of the Bidder, the following shall be considered when applicable: the ability, capacity and skill of the Bidder to perform as required; whether the Bidder can perform promptly, or within the time specified, without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the Bidder; the quality of past performance by the Bidder; the previous and existing compliance by the Bidder with related laws and ordinances; the sufficiency of the Bidder's financial resources; the availability, quality and adaptability of the Bidder's supplies or services to the required use; the ability of the Bidder to provide future maintenance, service or parts; the number and scope of conditions attached to the bid.

If the ITB provides for a contract trial period, the City reserves the right, in the event the selected bidder does not perform satisfactorily, to award a trial period to the next ranked bidder or to award a contract to the next ranked bidder, if that bidder has successfully provided services to the City in the past. This procedure to continue until a bidder is selected or the contract is re-bid, at the sole option of the City.

3.18 LEGAL REQUIREMENTS: Applicable provisions of all federal, state, county laws, and local ordinances, rules and regulations, shall govern development, submittal and evaluation of all bids received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a bid response hereto and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any bidder shall not constitute a cognizable defense against the legal effect thereof.

3.19 BID PROTEST PROCEDURE: Any proposer or bidder who is not recommended for award of a contract and who alleges a failure by the city to follow the city's procurement ordinance or any applicable law may protest to the chief procurement officer, by delivering a letter of protest to the director of finance within five (5) days after a notice of intent to award is posted on the city's web site at the following url: <https://www.fortlauderdale.gov/departments/finance/procurement-services/notices-of-intent-to-award>

The complete protest ordinance may be found on the city's web site at the following url:
https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeid=coor_ch2ad_artvfi_div2pr_s2-182direpr

PART IV BONDS AND INSURANCE

4.01 PERFORMANCE BOND: If a performance bond is required in Special Conditions, the Contractor shall within fifteen (15) working days after notification of award, furnish to the City a Performance Bond, payable to the City of Fort Lauderdale, Florida, in the face amount specified in Special Conditions as surety for faithful performance under the terms and conditions of the contract. If the bond is on an annual coverage basis, renewal for each succeeding year shall be submitted to the City thirty (30) days prior to the termination date of the existing Performance Bond. The Performance Bond must be executed by a surety company of recognized standing, authorized to do business in the State of Florida and having a resident agent.

Acknowledgement and agreement is given by both parties that the amount herein set for the Performance Bond is not intended to be nor shall be deemed to be in the nature of liquidated damages nor is it intended to limit the liability of the Contractor to the City in the event of a material breach of this Agreement by the Contractor.

4.02 INSURANCE: The Contractor shall assume full responsibility and expense to obtain all necessary insurance as required by City or specified in Special Conditions.

The Contractor shall provide to the Procurement Services Division original certificates of coverage and receive notification of approval of those certificates by the City's Risk Manager prior to engaging in any activities under this contract. The Contractor's insurance is subject to the approval of the City's Risk Manager. The certificates must list the City as an ADDITIONAL INSURED for General Liability Insurance and shall have no less than thirty (30) days written notice of cancellation or material change. Further modification of the insurance requirements may be made at the sole discretion of the City's Risk Manager if circumstances change or adequate protection of the City is not presented. Bidder, by submitting the bid, agrees to abide by such modifications.

PART V PURCHASE ORDER AND CONTRACT TERMS:

5.01 COMPLIANCE WITH SPECIFICATIONS, LATE DELIVERIES/PENALTIES: Items offered may be tested for compliance with bid specifications. Items delivered which do not conform to bid specifications may be rejected and returned at Contractor's expense. Any violation resulting in contract termination for cause or delivery of items not conforming to specifications, or late delivery may also result in:

- Bidder's name being removed from the City's bidder's mailing list for a specified period and Bidder will not be recommended for any award during that period.
- All City Departments being advised to refrain from doing business with the Bidder.
- All other remedies in law or equity.

5.02 ACCEPTANCE, CONDITION, AND PACKAGING: The material delivered in response to ITB award shall remain the property of the Seller until a physical inspection is made and the material accepted to the satisfaction of the City. The material must comply fully with the terms of the ITB, be of the required quality, new, and the latest model. All containers shall be suitable for storage and shipment by common carrier, and all prices shall include standard commercial packaging. The City will not accept substitutes of any kind. Any substitutes or material not meeting specifications will be returned at the Bidder's expense. Payment will be made only after City receipt and acceptance of materials or services.

5.03 SAFETY STANDARDS: All manufactured items and fabricated assemblies shall comply with applicable requirements of the Occupation Safety and Health Act of 1970 as amended.

- 5.04 ASBESTOS STATEMENT:** All material supplied must be 100% asbestos free. Bidder, by virtue of bidding, certifies that if awarded any portion of the ITB the bidder will supply only material or equipment that is 100% asbestos free.
- 5.05 OTHER GOVERNMENTAL ENTITIES:** If the Bidder is awarded a contract as a result of this ITB, the bidder may, if the bidder has sufficient capacity or quantities available, provide to other governmental agencies, so requesting, the products or services awarded in accordance with the terms and conditions of the ITB and resulting contract. Prices shall be F.O.B. delivered to the requesting agency.
- 5.06 VERBAL INSTRUCTIONS PROCEDURE:** No negotiations, decisions, or actions shall be initiated or executed by the Contractor as a result of any discussions with any City employee. Only those communications which are in writing from an authorized City representative may be considered. Only written communications from Contractors, which are assigned by a person designated as authorized to bind the Contractor, will be recognized by the City as duly authorized expressions on behalf of Contractors.
- 5.07 INDEPENDENT CONTRACTOR:** The Contractor is an independent contractor under this Agreement. Personal services provided by the Proposer shall be by employees of the Contractor and subject to supervision by the Contractor, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security, health insurance, employee benefits, procurement policies unless otherwise stated in this ITB, and other similar administrative procedures applicable to services rendered under this contract shall be those of the Contractor.
- 5.08 INDEMNITY/HOLD HARMLESS AGREEMENT:** Contractor shall protect and defend at Contractor's expense, counsel being subject to the City's approval, and indemnify and hold harmless the City and the City's officers, employees, volunteers, and agents from and against any and all losses, penalties, fines, damages, settlements, judgments, claims, costs, charges, expenses, or liabilities, including any award of attorney fees and any award of costs, in connection with or arising directly or indirectly out of any act or omission by the Contractor or by any officer, employee, agent, invitee, subcontractor, or sublicensee of the Contractor. Without limiting the foregoing, any and all such claims, suits, or other actions relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged violations of any applicable statute, ordinance, administrative order, rule or regulation, or decree of any court shall be included in the indemnity hereunder.
- 5.09 TERMINATION FOR CAUSE:** If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor shall violate any of the provisions of this Agreement, the City may upon written notice to the Contractor terminate the right of the Contractor to proceed under this Agreement, or with such part or parts of the Agreement as to which there has been default, and may hold the Contractor liable for any damages caused to the City by reason of such default and termination. In the event of such termination, any completed services performed by the Contractor under this Agreement shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive equitable compensation for any work completed to the satisfaction of the City. The Contractor, however, shall not be relieved of liability to the City for damages sustained by the City by reason of any breach of the Agreement by the Contractor, and the City may withhold any payments to the Contractor for the purpose of setoff until such time as the amount of damages due to the City from the Contractor can be determined.
- 5.10 TERMINATION FOR CONVENIENCE:** The City reserves the right, in the City's best interest as determined by the City, to cancel any contract by giving written notice to the Contractor thirty (30) days prior to the effective date of such cancellation.
- 5.11 CANCELLATION FOR UNAPPROPRIATED FUNDS:** The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.
- 5.12 RECORDS/AUDIT:** The Contractor shall maintain during the term of the contract all books of account, reports and records in accordance with generally accepted accounting practices and standards for records directly related to this contract. The Contractor agrees to make available to the City Auditor or the City Auditor's designee, during normal business hours and in Broward, Miami-Dade or Palm Beach Counties, all books of account, reports, and records relating to this contract. The Contractor shall retain all books of account, reports, and records relating to this contract for the duration of the contract and for three years after the final payment under this Agreement, until all pending audits, investigations or litigation matters relating to the contract are closed, or until expiration of the records retention period prescribed by Florida law or the records retention schedules adopted by the Division of Library and Information Services of the Florida Department of State, whichever is later.
- 5.13 PERMITS, TAXES, LICENSES:** The successful Contractor shall, at his/her/its own expense, obtain all necessary permits, pay all licenses, fees and taxes, required to comply with all local ordinances, state and federal laws, rules and regulations applicable to business to be carried out under this contract.
- 5.14 LAWS/ORDINANCES:** The Contractor shall observe and comply with all Federal, state, local and municipal laws, ordinances rules and regulations that would apply to this contract.

NON-DISCRIMINATION: The Contractor shall not, in any of its activities, including employment, discriminate against any individual on the basis of race, color, national origin, age, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, marital status, or any other protected classification as defined by applicable law.

1. The Contractor certifies and represents that the Contractor will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, (2019), as may be amended or revised, ("Section 2-187"), during the entire term of this Agreement.
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

- 5.15 UNUSUAL CIRCUMSTANCES:** If during a contract term where costs to the City are to remain firm or adjustments are restricted by a percentage or CPI cap, unusual circumstances that could not have been foreseen by either party of the contract occur, and those circumstances significantly affect the Contractor's cost in providing the required prior items or services, then the Contractor may request adjustments to the costs to the City to reflect the changed circumstances. The circumstances must be beyond the control of the Contractor, and the requested adjustments must be fully documented. The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the City will reserve the following options:

1. The contract can be canceled by the City upon giving thirty (30) days written notice to the Contractor with no penalty to the City or Contractor. The Contractor shall fill all City requirements submitted to the Contractor until the termination date contained in the notice.
2. The City requires the Contractor to continue to provide the items and services at the firm fixed (non-adjusted) cost until the termination of the contract term then in effect.
3. If the City, in its interest and in its sole opinion, determines that the Contractor in a capricious manner attempted to use this section of the contract to relieve Contractor of a legitimate obligation under the contract, and no unusual circumstances had occurred, the City reserves the right to take any and all action under law or equity. Such action shall include, but not be limited to, declaring the Contractor in default and disqualifying Contractor from receiving any business from the City for a stated period of time.

If the City does agree to adjusted costs, these adjusted costs shall not be invoiced to the City until the Contractor receives notice in writing signed by a person authorized to bind the City in such matters.

- 5.16 ELIGIBILITY:** If applicable, the Contractor must first register with the Florida Department of State in accordance with Florida Statutes, prior to entering into a contract with the City.
- 5.17 PATENTS AND ROYALTIES:** The Contractor, without exception, shall defend, indemnify, and hold harmless the City and the City's employees, officers, employees, volunteers, and agents from and against liability of any nature and kind, including cost and expenses for or on account of any copyrighted, patented or un-patented invention, process, or article manufactured or used in the performance of the contract, including their use by the City. If the Contractor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include any and all royalties or costs arising from the use of such design, device, or materials in any way involved in the work.
- 5.18 ASSIGNMENT:** Contractor shall not transfer or assign the performance required by this ITB without the prior written consent of the City. Any award issued pursuant to this ITB, and the monies, which may become due hereunder, are not assignable except with the prior written approval of the City Commission or the City Manager or City Manager's designee, depending on original award approval.
- 5.19 GOVERNING LAW; VENUE:** The Contract shall be governed by and construed in accordance with the laws of the State of Florida. Venue for any lawsuit by either party against the other party or otherwise arising out of the Contract, and for any other legal proceeding, shall be in the courts in and for Broward County, Florida, or in the event of federal jurisdiction, in the Southern District of Florida.
- 5.20 PUBLIC RECORDS:**

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 PRRCONTRACT@FORTLAUDERDALE.GOV, 954-828-5002, CITY CLERK'S OFFICE, 100 N. ANDREWS AVENUE, FORT LAUDERDALE, FLORIDA 33301.

Contractor shall comply with public records laws, and Contractor shall:

1. Keep and maintain public records required by the City to perform the service.
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, Florida Statutes (2019), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically 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.

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME**RELATIONSHIPS**

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

Authorized Signature

Title

Name (Printed)

Date

**CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH
NON-DISCRIMINATION PROVISIONS OF THE CONTRACT**

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-187(c), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

The Contractor shall not, in any of his/her/its activities, including employment, discriminate against any individual on the basis of race, color, national origin, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, or marital status.

1. The Contractor certifies and represents that he/she/it will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, as amended by Ordinance C-18-33 (collectively, "Section 2-187").
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

Authorized Signature

Print Name and Title

Date

CONTRACT PAYMENT METHOD

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to credit card payments via MasterCard or Visa as part of this program.

This allows you as a vendor of the City of Fort Lauderdale to receive your payments fast and safely. No more waiting for checks to be printed and mailed.

In accordance with the contract, payments on this contract will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, bidders must presently have the ability to accept these credit cards or take whatever steps necessary to implement acceptance of a card before the start of the contract term, or contract award by the City.

All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

By signing below you agree with these terms.

Please indicate which credit card payment you prefer:

☐ MasterCard

☐ Visa

Company Name

Name (Printed)

Signature

Date

Title

LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

Section 2-186, Code of Ordinances of the City of Fort Lauderdale, (Ordinance No. C-17-26), provides for a local business preference.

In order to be considered for a local business preference, a bidder must include the Local Business Preference Certification Statement of this bid/proposal, as applicable to the local business preference class claimed **at the time of bid submittal**.

Upon formal request of the City, based on the application of a Local Business Preference, the Bidder shall, within ten (10) calendar days, submit the following documentation for the Local Business Preference Class claimed:

- a) Copy of City of Fort Lauderdale current year business tax receipt, **or** Broward County current year business tax receipt, **and**
- b) List of the names of all employees of the bidder and evidence of employees' residences within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of bid submittal shall result in the bidder being found ineligible for the local business preference.

THE COMPLETE LOCAL BUSINESS PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE

AT THE FOLLOWING LINK: [https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?](https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-186LOBUPR&showChanges=true)

[nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-186LOBUPR&showChanges=true](https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-186LOBUPR&showChanges=true)

Definitions: The term "Business" shall mean a person, firm, corporation or other business entity which is duly licensed and authorized to engage in a particular work in the State of Florida. Business shall be broken down into four (4) types of classes:

1. Class A Business – shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone and staffed with full-time employees within the limits of the City, **and** shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
2. Class B Business - shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the City, **or** shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
3. Class C Business - shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of Broward County.
4. Class D Business – shall mean any Business that does not qualify as either a Class A, Class B, or Class C business.

LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the local business preference classification as indicated herein, and further certifies and agrees that it will re-affirm its local preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this bid/proposal. Violation of the foregoing provision may result in contract termination.

- | | | |
|-----|--|--|
| (1) | <input style="width: 100%;" type="text"/>
(Business Name) | is a Class A Business as defined in City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186. A copy of the City of Fort Lauderdale current year Business Tax Receipt and a complete list of full-time employees and evidence of their addresses shall be provided within ten (10) calendar days of a formal request by the City. |
| (2) | <input style="width: 100%;" type="text"/>
(Business Name) | is a Class B Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186. A copy of the Business Tax Receipt or a complete list of full-time employees and evidence of their addresses shall be provided within ten (10) calendar days of a formal request by the City. |
| (3) | <input style="width: 100%;" type="text"/>
(Business Name) | is a Class C Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186. A copy of the Broward County Business Tax Receipt shall be provided within ten (10) calendar days of a formal request by the City. |
| (4) | <input style="width: 100%;" type="text"/>
(Business Name) | is a Class D Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec. 2-186, and does not qualify for Local Preference consideration. |
| (5) | <input style="width: 100%;" type="text"/>
(Business Name) | requests a Conditional Class A classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City. |
| (6) | <input style="width: 100%;" type="text"/>
(Business Name) | requests a Conditional Class B classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City. |

BIDDER'S COMPANY:

AUTHORIZED COMPANY PERSON:	<input style="width: 100%;" type="text"/> <div style="text-align: center;">PRINT NAME</div>	<input style="width: 100%;" type="text"/> <div style="text-align: center;">SIGNATURE</div>	<input style="width: 100%;" type="text"/> <div style="text-align: center;">DATE</div>
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Forms Non-ISO – Revised 7/2/2021



DISADVANTAGED BUSINESS ENTERPRISE (DBE) PREFERENCE

Section 2-185, Code of Ordinances of the City of Fort Lauderdale, provides for a disadvantaged business enterprise preference.

In order to be considered for a DBE Preference, a bidder must include a certification from a government agency, as applicable to the DBE Preference class claimed **at the time of bid submittal**.

Upon formal request of the City, based on the application of a DBE Preference the Bidder shall, within **ten (10)** calendar days, submit the following documentation to the DBE Class claimed:

- a) Copy of City of Fort Lauderdale current year business tax receipt, **or** Broward County current year business tax receipt, **or** State of Florida active registration **and/or**
- b) List of the names of all employees of the bidder and evidence of employees' residences within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of bid submittal shall result in the bidder being found ineligible for the disadvantaged business enterprise preference.

THE COMPLETE DBE PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE AT THE FOLLOWING LINK: https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2AD_ARTVFI_DIV2PR_S2-185EQOPDIBUEN&showChanges=true

Definitions

- a. The term "disadvantaged class 1 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the City, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- b. The term "disadvantaged class 2 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the City with full-time employees and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- c. The term "disadvantaged class 3 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- d. The term "disadvantaged class 4 enterprise" shall mean any disadvantaged business enterprise that does not qualify as a Class 1, Class 2, or Class 3 business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

DISADVANTAGED BUSINESS ENTERPRISE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the disadvantaged business enterprise preference classification as indicated herein, and further certifies and agrees that it will re-affirm its preference classification annually no later than **thirty (30)** calendar days prior to the anniversary of the date of a contract awarded pursuant to this solicitation. Violation of the foregoing provision may result in contract termination.

(1)

(Business Name)

is a disadvantaged **Class 1** enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the City, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

(2)

(Business Name)

is a disadvantaged **Class 2** enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the City with full-time employee(s) and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

(3)

(Business Name)

is a disadvantaged **Class 3** enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

(4)

(Business Name)

is a disadvantaged **Class 4** enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that does not qualify as a Class 1, Class 2, or Class 3 business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

(5)

(Business Name)

requests a **Conditional Class 1** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City.

(6)

(Business Name)

requests a **Conditional Class 2** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent to meet the requirements shall be provided to the City within three (3) months of entering into a contract with the City.

BIDDER'S COMPANY:

AUTHORIZED
COMPANY
PERSON:

PRINT NAME

SIGNATURE

DATE

Forms Non-Iso – revised 7/2/2021

E-VERIFY AFFIRMATION STATEMENTRFP/Bid /Contract No: Project Description:

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

- (a) all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,
- (b) all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name: Authorized Company Person's Signature: Authorized Company Person's Title: Date:

9/15/2020

BID/PROPOSAL CERTIFICATION

Please Note: It is the sole responsibility of the bidder to ensure that his bid is submitted electronically through www.BidSync.com prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the department of state, in accordance with Florida Statute §607.1501 (visit <http://www.dos.state.fl.us/>).

Company: (Legal Registration) EIN (Optional):

Address:

City: State: Zip:

Telephone No.: FAX No.: Email:

Delivery: Calendar days after receipt of Purchase Order (**section 1.02 of General Conditions**):

Total Bid Discount (**section 1.05 of General Conditions**):

Check box if your firm qualifies for MBE / SBE / WBE (**section 1.09 of General Conditions**): ☐

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in the proposal:

<u>Addendum No.</u>	<u>Date Issued</u>	<u>Addendum No.</u>	<u>Date Issued</u>	<u>Addendum No.</u>	<u>Date Issued</u>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

VARIANCES: If you take exception or have variances to any term, condition, specification, scope of service, or requirement in this competitive solicitation you must specify such exception or variance in the space provided below or reference in the space provided below all variances contained on other pages within your response. Additional pages may be attached if necessary. No exceptions or variances will be deemed to be part of the response submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A. **You must also click the "Take Exception" button.**

The below signatory hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid/proposal.

I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this bid/proposal. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a response, that in no event shall the City's liability for respondent's direct, indirect, incidental, consequential, special or exemplary damages, ~~examples~~

expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars (\$500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Name (printed)

Signature

Date

Title

Revised 4/28/2020



City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

ADDENDUM NO. 1

ITB No. 12658-822
TITLE: Fire Pumper Apparatus

ISSUED: April 20, 2022

This addendum is being issued to make the following change(s):

1. In response to Question 5, Section 3.7.15.1 added as follows:

3.7.15 A compartment shall be provided under the forward-facing crew seats on the back wall of the cab. The front of the compartment shall be open and enclosed with black nylon webbing. The webbing shall be secured with plastic buckles. Compartment dimensions are 91.5"L x 14"H x 19"W.

3.7.15.1 Storage cabinet behind front passenger seat (officer seat) Dimensions:
Length -22 inches, Depth - 24 inches and Height - 27.5 inches. With one adjustable shelf and a removable netting mesh to cover the opening.

All other terms, conditions, and specifications remain unchanged.

Laurie Platkin
Senior Procurement Specialist

Company Name: _____
(Please print)

Bidder's Signature: _____

Date: _____



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ADDENDUM NO. 2

ITB No. 12658-822
TITLE: Fire Pumper Apparatus

ISSUED: April 28, 2022

This addendum is being issued to make the following change(s):

1. Section II – Special Terms and Conditions Item 2.9 Payment Method, shall be changed as follows:

Payment on this Contract will be made by check.

All other references to being paid via the Procurement P-Card shall be disregarded as well.

All other terms, conditions, and specifications remain unchanged.

James Hemphill
Assistant Manager Procurement and Contracts

Company Name: _____
(Please print)

Bidder's Signature: _____

Date: _____

Question and Answers for Bid #12658-822 - Fire Pumper Apparatus

Overall Bid Questions

Question 1

How many units will the City be purchasing off of this ITB? (Submitted: Apr 13, 2022 11:03:38 AM EDT)

Answer

- As per the bid document, the City will be purchasing 3 units. (Answered: Apr 13, 2022 11:42:37 AM EDT)

Question 2

I am reviewing and putting together our quote for Fort Lauderdale's ITB on engines for the Fire Department. The issue of P Card payment is one our dealership has already taken exception to on previous purchases the dept has made with us. You can confer with Chief Kerr and Chief Salzano as they were both involved in the resolution. If this requirement is without exception on this bid, then we will have to add the associated fees to our quote. These fees amount to 4% of the total so for each engine ordered, it could be around \$25,000 to \$30,000 each. This seems like a lot of cost to incur when a paper check would not cost anything .

Please advise on how we should handle this matter. (Submitted: Apr 13, 2022 11:43:34 AM EDT)

Answer

- The City will be paying by Procurement Card (P-Card). All costs associated with the bidder's participation in this purchase should be considered when submitting their bid. (Answered: Apr 13, 2022 1:21:25 PM EDT)

Question 3

Will the city be prepaying any portion of the purchase? We do not require any payment until apparatus are delivered, only a contract or PO. If no early payment is going to be made, is there still a need for a performance bond? (Submitted: Apr 18, 2022 10:34:28 AM EDT)

Answer

- The City will not be offering a prepay option. A Performance Bond will be required as per the solicitation. (Answered: Apr 20, 2022 1:50:14 PM EDT)

Question 4

Within the bid documents, it states that all travel will be included. Does this mean to include department personnel's travel to and from the manufacturing facility for prebuild conference and then final inspection? If so, how many persons will the department be sending? (Submitted: Apr 18, 2022 10:36:53 AM EDT)

Answer

- ? Section 2.5 and 2.8 discusses travel expenses. The City is not expecting the bidder to pay for City's staff to travel to and from the manufacturers location.

Sections 2.5 and 2.8 are clarifying; it is the responsibility of the bidder to pay for all transportation costs for the delivery of the vehicle to the City. (Answered: Apr 20, 2022 1:50:14 PM EDT)

Question 5

Crew seat area 2, which is the rear facing seat behind the officer, has nothing designated in it. Does the department want a custom storage cabinet included in this area? If so, please provide the measurements.

(Submitted: Apr 18, 2022 10:39:14 AM EDT)

Answer

- See Addendum 1 (Answered: Apr 20, 2022 2:11:02 PM EDT)