

FORMAL COOPERATIVE PURCHASE AGREEMENT

THIS AGREEMENT (Agreement) is made and entered into, effective on _____, by and between CITY OF FRESNO, a California municipal corporation (City), and KALMIKOV ENTERPRISES, INC. dba FIRE APPARATUS SOLUTIONS, a California Corporation (Vendor).

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and of the covenants, conditions, and promises hereinafter contained to be kept and performed by the respective parties, it is mutually agreed as follows:

1. The Charter for the City allows for cooperative purchase agreements for materials, supplies, and equipment. The City may use another government agency's agreement, as an exception to the competitive bid process. The Parties agree that the Vendor has entered a contract with Sourcewell Master Agreement #082025-RVG (Original Government Contract). The solicitation for the Original Government Contract is attached as **Exhibit A**.
2. Vendor's Obligation. Vendor shall provide those services and carry out that work described in the Original Government Contract, which is attached hereto as **Exhibit B** and is incorporated herein by reference, subject to all the terms and conditions contained or incorporated herein.
3. City's Obligation. City shall make to the Vendor those payments described in **Exhibits A and B**, subject to all the terms and condition contained or incorporated herein
4. Notwithstanding the requirements that the Original Government Contract is fully binding on the Parties, the parties have agreed to modify certain non-material provisions of the Original Government Contract as applied to this Agreement between the Vendor and the City, as follows:
 - a) City's Insurance and Indemnity provisions attached as **Exhibit C**.
 - b) Address change for the City: Notwithstanding the address and contract information for the government entity as set out in **Exhibit B**, the Vendor agrees that notices and invoices will be sent to:

City of Fresno
Attention: Miguel Ramirez
2101 G Street, Bldg. F
Fresno, CA 93706
Phone: (559) 621-1126
FAX: N/A
E-mail: Miguel.Ramirez2@fresno.gov

- c) Notwithstanding anything in **Exhibits A and B** to the contrary, this Agreement shall be governed by, and construed and enforced in accordance with , the laws of the State of California, excluding however,

any conflict of laws rule which would apply the law of another jurisdiction. Venue for purposes of the filing of any action regarding the enforcement or interpretation of this Agreement and any rights and duties hereunder shall be Fresno County, California.

- d) All other provisions in the Original Government Contract are fully binding on the parties and will represent the agreement between the City and the Vendor.
5. The City Manager, or designee, is hereby authorized and directed to execute and implement this Agreement. The previous sentence is not intended to delegate any authority to the City Manager to administer the Agreement, any delegation of authority must be expressly included in the Agreement.

[Signatures follow on the next page.]

IN WITNESS WHEREOF, the parties have executed this Agreement at Fresno, California, the day and year first above written.

CITY OF FRESNO,
a California municipal corporation

KALMIKOV ENTERPRISES, INC. dba
FIRE APPARATUS SOLUTIONS, a
California Corporation

By: _____
Melissa Perales
Purchasing Manager
General Services Department

Signed by:
William KALMIKOV
By: _____ 6/5/2026
0D15E99FE8F048D...

Name: WILLIAM KALMIKOV

APPROVED AS TO FORM:
ANDREW JANZ
City Attorney

Title: President
(If corporation or LLC., Board Chair,
Pres. or Vice Pres.)

Signed by:
By: *Daniel E. Casas* 6/5/2026
86A2226C4A66409
Daniel E. Casas Date
Senior Deputy City Attorney

Signed by:
By: *William kalmikov* 6/5/2026
0D15E99FE8F048D...

Name: William kalmikov

ATTEST:
AMY K. ALLER,
Interim City Clerk

Title: CFO
(If corporation or LLC., CFO, Treasurer,
Secretary or Assistant Secretary)

By: _____
Deputy

VENDOR:
Kalmikov Enterprises, Inc. dba Fire
Apparatus Solutions
Attention: Scott Beck
1762 S Sycamore Ave
Phone: (402) 719-1243
E-mail: Scottasfire@gmail.com

- Attachments:
Exhibit A - Original Solicitation
Exhibit B - Original Government Contract
Exhibit C - City's Insurance and Indemnity
Exhibit D - Vendor Quote

EXHIBIT A

Original Solicitation



RFP #082025
REQUEST FOR PROPOSALS
for
Firefighting Apparatus and Fire Service Vehicles

Proposal Due Date: August 20, 2025, 4:30 p.m., Central Time

Sourcewell, a State of Minnesota local government unit and service cooperative, is requesting proposals for Firefighting Apparatus and Fire Service Vehicles to result in a procurement solution for use by its Participating Entities. Sourcewell Participating Entities include thousands of governmental, higher education, K-12 education, nonprofit, tribal government, and other public agencies located in the United States and Canada. A full copy of the Request for Proposals can be found on the Sourcewell Procurement Portal [<https://proportal.sourcewell-mn.gov>]. Only proposals submitted through the Sourcewell Procurement Portal will be considered. Proposals are due no later than August 20, 2025, at 4:30 p.m. Central Time, and late proposals will not be considered.

SOLICITATION SCHEDULE

Public Notice of RFP Published:	July 2, 2025
Pre-proposal Conference:	July 23, 2025, 10:00 a.m., Central Time
Question Submission Deadline:	August 12, 2025, 4:30 p.m., Central Time
Proposal Due Date:	August 20, 2025, 4:30 p.m., Central Time Late responses will not be considered.
Opening:	August 20, 2025, 4:30 p.m., Central Time See RFP Section V.G. "Opening"

I. ABOUT SOURCEWELL

A. SOURCEWELL

Sourcewell is a State of Minnesota local government unit and service cooperative created under the laws of the State of Minnesota (Minnesota Statutes Section 123A.21) that facilitates a competitive public solicitation and master agreement award process for the benefit of its 50,000+ participating entities across the United States and Canada. Sourcewell's solicitation process complies with State of Minnesota law and policies, conforms to Canadian trade agreements (including Canadian Free Trade Agreement, Ontario-Quebec Trade and Cooperation Agreement, and Canada-European Union Comprehensive Economic and Trade Agreement, as applicable), and results in cooperative purchasing solutions from which Sourcewell's Participating Entities procure equipment, products, and services.

Cooperative purchasing provides participating entities and suppliers increased administrative efficiencies and the power of combined purchasing volume that result in overall cost savings. At times, Sourcewell also partners with other purchasing cooperatives to combine the purchasing volume of their membership into a single solicitation and master agreement expanding the reach of awarded suppliers' potential pool of end users.

Sourcewell uses a website-based platform, the Sourcewell Procurement Portal, through which all proposals to this RFP must be submitted.

B. USE OF RESULTING MASTER AGREEMENTS

In the United States, Sourcewell's master agreements are available for use by:

- Federal and state government entities¹;
- Cities, towns, and counties/parishes;
- Education service cooperatives;
- K-12 and higher education entities;
- Tribal government entities;
- Some nonprofit entities; and
- Other public entities.

The following entities are listed in this solicitation to satisfy the procurement requirements of Oregon, Utah, and Virginia [[Political Subdivision List - Oregon, Utah, and Virginia](#)].

In Canada, Sourcewell's master agreements are available for use by current and future members including:

¹ Pursuant to HAR §3-128-2, the State of Hawaii, Department of Accounting and General Services, State Procurement Office, on behalf of the State of Hawaii and participating jurisdictions, has provided notice of its Intent to Participate in the solicitation as a participating entity.

- Federal, provincial, and territorial government departments, ministries, agencies, boards, councils, committees, commissions, and similar agencies;
- Indigenous self-governing bodies;
- Regional, local, district, and other forms of municipal government, municipal organizations, school boards, and publicly funded academic, health, and social service entities referred to as MASH sector (this should be construed to include but not be limited to the cities of Calgary, Edmonton, Toronto, Ottawa, and Winnipeg), as well as any corporation or entity owned or controlled by one or more of the preceding entities;
- Crown corporations, government enterprises, and other entities that are owned or controlled by these entities through ownership interest; and
- Canoe procurement group of Canada's current and future members. Canoe members include:
 - Federal, provincial and territorial government departments, ministries, agencies, boards, councils, committees, commissions, and similar agencies;
 - Crown corporations, government enterprises, and other entities that are owned or controlled by these entities through ownership interest;
 - Indigenous self-governing bodies;
 - Airport authorities;
 - Regional, local, district, and other forms of municipal government, municipal organizations, school boards, and publicly funded academic, health, and social service entities referred to as MASH sector (this should be construed to include but not be limited to the cities of Calgary, Edmonton, Toronto, Ottawa, and Winnipeg), as well as any corporation or entity owned or controlled by one or more of the preceding entities; and
 - Canoe procurement group of Canada's current and future partner associations, including Saskatchewan Association of Rural Municipalities, Association of Manitoba Municipalities, Local Authorities Services/Association of Municipalities Ontario, Nova Scotia Federation of Municipalities, Federation of Prince Edward Island Municipalities, Municipalities Newfoundland Labrador, Union of New Brunswick Municipalities, Northwest Territories Association of Communities, Association of Yukon Communities, CivicInfo BC, Association and their current and future members.

For a listing of current United States and Canadian Participating Entities visit Sourcewell's website (note: there is a tab for each country): <https://www.sourcewell-mn.gov/sourcewell-for-vendors/agency-locator>.

Participating Entities typically access master agreements for equipment, products, or services through a purchase order issued directly to the awarded supplier. A Participating Entity may request additional terms or conditions related to a purchase. Use of Sourcewell master agreements is voluntary and Participating Entities retain the right to obtain similar equipment, products, or services from other sources.

To meet Participating Entities' needs, Sourcewell broadly publishes public notice of all solicitation opportunities, including this RFP. In addition, where applicable, other purchasing cooperatives and procurement officials receive notice and are encouraged to re-post the solicitation opportunity.

Proof of publication will be available at the conclusion of the solicitation process.

C. INTERGOVERNMENTAL SUPPORT AGREEMENTS

Pursuant to 10 U.S.C. § 2679, United States Department of Defense authorized installations may access Sourcewell's awarded cooperative purchasing master agreements through an Intergovernmental Support Agreement with Sourcewell. All transactions completed through this Intergovernmental Support program are directly facilitated by Sourcewell and may be subject to additional terms and conditions.

II. SOLICITATION DETAILS

A. SOLUTIONS-BASED SOLICITATION

This RFP and contract award process is a solutions-based solicitation; meaning that Sourcewell is seeking equipment, products, or services that meet the general requirements of the scope of this RFP and are commonly desired or are required by law or industry standards.

B. REQUESTED EQUIPMENT, PRODUCTS, OR SERVICES

It is expected that proposers will offer a wide array of equipment, products, or services at lower prices and with better value than what they would ordinarily offer to a single government entity, school district, or regional cooperative.

1. Sourcewell is seeking proposals for new, remount, or refurbished Firefighting Apparatus and Fire Service Vehicles. This solicitation is seeking solutions that may include complete vehicles, chassis, firefighting specific vehicle components, accessories, and related services. Awards under this solicitation for Firefighting Apparatus and Fire Service Vehicles will be in three (3) categories. Proposers submitting a proposal in **Category 1** as defined herein will be submitting in the category that includes **Structural Apparatus and Comprehensive Solutions**, per 1. a. i – iii. below. Proposers seeking an award in **Category 2**, offer **Specialty Apparatus and Equipment**, per 1. b. i – iii. below. Proposers seeking an award in **Category 3**, offer **Brush and Wildland Urban Interface (WUI) Apparatus**, per 1. c. i – iii. below. Proposers must choose Category 1 **OR** Category 2 **OR** Category 3, **NOT** multiple Categories.

- a. **Category 1: Structural Apparatus and Comprehensive Solutions**, including, but not limited to:
 - i. Pumper trucks, aerial trucks, tanker/tender or water supply trucks, and quints;
 - ii. Equipment, options, accessories, components, and supplies complementary to the offering of the unit types described in i. above;
 - iii. Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in i. – ii. above; and,
 - iv. **Category 1** responders **MAY** include **complementary** Specialty Apparatus and Equipment and Brush and Wildland Urban Interface (WUI) Apparatus solutions in their response.

- b. **Category 2: Specialty Apparatus and Equipment**, including, but not limited to:
 - i. Specialty apparatus including but not limited to: aircraft rescue and firefighting (ARFF), command and communication units, mobile foam units, and custom rescue trailers;
 - ii. Equipment, options, accessories, components, and supplies **complementary** to the offering of the unit types described in i. above;
 - iii. Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in i. – ii. above; and,
 - iv. **Category 2** responders **MAY** include **complementary** Brush and Wildland Urban Interface (WUI) Apparatus solutions in their response.

- c. **Category 3: Brush and Wildland Urban Interface (WUI) Apparatus**, such as:
 - i. Wildland firefighting apparatus, such as brush trucks and wildland urban interface (WUI) units;
 - ii. Equipment, options, accessories, components, and supplies **complementary** to the offering of the unit types described in i. above;
 - iii. Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in i. – ii.; and,
 - iv. **Category 3** responders **MAY** include **complementary** Specialty Apparatus and Equipment solutions in their response.

2. The primary focus of this solicitation is Firefighting Apparatus and Fire Service Vehicles with Related Services. This solicitation should NOT be construed to include services/installation-only solutions.

3. This solicitation does not include equipment, products, or services covered under categories included in pending or planned Sourcwell solicitations, or in master agreements currently maintained by Sourcwell, identified below:

- a. Electrical Energy Power Generation with Related Parts, Supplies, and Services (RFP#092222);
- b. Trailers with Related Equipment, Accessories, and Services (RFP #092922), with the limited exception of the purpose-built firefighting or rescue trailers identified in Section 1. above;
- c. Ambulance and Emergency Medical Service Vehicles (RFP #122123);
- d. Firefighting Personal Protective Equipment, Apparel, and Accessories, with Related Cleaning and Maintenance Equipment (RFP #010424);
- e. Firefighting Equipment and Rescue Tools with Related Supplies and Accessories (RFP #020124), with the limited exception of the equipment, options, accessories, and supplies Section 1. above;
- f. Class 4-8 Chassis with Related Equipment, Accessories, and Services (RFP #032824), with the limited exception of the purpose-built chassis identified in 1. above;
- g. Public Safety Communications Technology and Hardware Solutions (RFP #020625); and,
- h. Automobiles, SUVs, Vans, and Light Trucks with Related Equipment and Accessories (RFP #081325).

Generally, the solutions for Participating Entities are turn-key solutions, providing a combination of equipment, products and services, delivery, and installation to a properly operating status. However, equipment-only or products-only solutions may be appropriate for situations where Participating Entities possess the ability, either in-house or through local third-party contractors, to properly install and bring to operation the equipment or products being proposed.

Sourcewell prefers suppliers that provide a sole source of responsibility for the equipment, products, and services provided under a resulting master agreement. If proposer is including the equipment, products, and services of its subsidiary entities, the proposer must also identify all included subsidiaries in its proposal. If proposer requires the use of distributors, dealers, resellers, or subcontractors to provide the equipment, products, or services, the proposal must address how the equipment, products or services will be provided to Participating Entities, and describe the network of distributors, dealers, resellers, and/or subcontractors that will be available to serve Participating Entities under a resulting master agreement.

Sourcewell encourages suppliers to offer the broadest possible selection of equipment, products, and services being proposed over the largest possible geographic area and to the largest possible cross-section of Sourcewell current and future Participating Entities.

C. REQUIREMENTS

It is expected that proposers have knowledge of all applicable industry standards, laws, and regulations and possess an ability to market and distribute the equipment, products, or services to Participating Entities.

1. Safety Requirements. All items proposed must comply with current applicable safety or regulatory standards or codes.
2. Deviation from Industry Standard. Deviations from industry standards must be identified with an explanation of how the equipment, products, and services will provide equivalent function, coverage, performance, and/or related services.
3. Delivered and operational. Unless clearly noted in the proposal, equipment and products must be delivered to the Participating Entity as operational.
4. Warranty. All equipment, products, supplies, and services must be covered by a warranty that is the industry standard or better.

D. PROSPECTIVE MASTER AGREEMENT TERM

The term of any resulting master agreement(s) awarded by Sourcewell under this solicitation will be four years. Sourcewell and supplier may agree to up to three additional one-year extensions based on the best interests of Sourcewell and its Participating Entities. Sourcewell retains the right to consider additional extensions beyond seven years as required under exceptional circumstances.

E. ESTIMATED MASTER AGREEMENT VALUE AND USAGE

Based on past volume of similar master agreements, the estimated annual value of all transactions from master agreements resulting from this RFP are anticipated to be USD 250M; therefore, proposers are expected to propose volume pricing. Sourcewell anticipates considerable activity under the master agreement(s) awarded from this RFP; however, sales and sales volume from any resulting master agreement are not guaranteed.

F. MARKETING PLAN

Proposer's sales force will be the primary source of communication with Participating Entities. The proposer's Marketing Plan should demonstrate proposer's ability to deploy a sales force or dealer network to Participating Entities, as well as proposer's sales and service capabilities. It is expected that proposer will promote and market any master agreement award.

G. ADDITIONAL CONSIDERATIONS

1. Master agreements will be awarded to proposers able to best meet the need of Participating Entities. Proposers should submit their complete line of equipment, products, or services that are applicable to the scope of this RFP.

2. A proposer may submit only one proposal. If related, affiliated, or subsidiary entities elect to submit separate proposals, rather than a single parent-entity proposal, each such proposal must be prepared independently and without cooperation, collaboration, or collusion.
3. If a proposer works with a consultant on its proposal, the consultant (an individual or company) may not assist any other entity with a proposal for this solicitation.
4. Proposers should include all relevant information in its proposal, since Sourcewell cannot consider information that is not included in the proposal. Sourcewell reserves the right to verify proposer's information and may request clarification from a proposer, including samples of the proposed equipment or products.
5. Depending upon the responses received in a given category, Sourcewell may need to organize responses into subcategories in order to provide the broadest coverage of the requested equipment, products, or services to Participating Entities. Awards may be based on a subcategory.
6. A proposer's documented negative past performance with Sourcewell or its Participating Entities occurring under a previously awarded Sourcewell master agreement may be considered in the evaluation of a proposal.

III. PRICING

A. REQUIREMENTS

All proposed pricing must be:

1. Either Line-Item Pricing or Percentage Discount from Catalog Pricing, or a combination of these:
 - a. **Line-item Pricing** is pricing based on each individual product or service. Each line must indicate the proposer's published "List Price," as well as the "Master Agreement Price."
 - b. **Percentage Discount from Catalog or Category** is based on a percentage discount from a catalog or list price, defined as a published Manufacturer's Suggested Retail Price (MSRP) for the products or services. Individualized percentage discounts can be applied to any number of defined product groupings. Proposers will be responsible for providing and maintaining current published MSRP with Sourcewell, and this pricing must be included in its proposal and provided throughout the term of any master agreement resulting from this RFP.
2. The proposer's not to exceed price. A not to exceed price is the highest price for which equipment, products, or services may be billed to a Participating Entity. However, it is permissible for suppliers to sell at a price that is lower than the agreed upon price.
3. Stated in U.S. and Canadian dollars (as applicable).
4. Clearly understandable, complete, and fully describe the total cost of acquisition (e.g., the cost of the proposed equipment, products, and services delivered and operational for its intended purpose in the Participating Entity's location).

Proposers should clearly identify any costs that are NOT included in the proposed product or service pricing. This may include items such as installation, set up, mandatory training, or initial inspection. Include identification of any parties that impose such costs and their relationship to the proposer. Additionally, proposers should clearly describe any unique distribution and/or delivery methods or options offered in the proposal.

B. ADMINISTRATIVE FEES

Proposers awarded a master agreement are expected to pay to Sourcewell an administrative fee in exchange for Sourcewell facilitating the resulting master agreements. The administrative fee is normally calculated as a percentage of the total sales to Participating Entities for all equipment, products, or services made during a calendar quarter, and is typically one percent (1%) to two percent (2%). In some categories, a flat fee may be an acceptable alternative.

IV. MASTER AGREEMENT

Proposers awarded a master agreement will be required to execute a master agreement with Sourcewell (see attached template). Only those modifications the proposer indicates in its proposal will be available for discussion. Much of the language in the Master Agreement reflects Minnesota legal requirements and cannot be altered. Numerous and/or onerous exceptions that contradict Minnesota law may result in the proposal being disqualified from further review and evaluation.

To identify any exception, or to request any modification, to Sourcewell's standard master agreement terms, conditions, or specifications, a proposer must submit the proposed exception(s) or requested modification(s) via redline in the Master Agreement Template provided in the "Documents" section of the "Bid Details" page on the Sourcewell Procurement Portal and uploaded as part of its response. Only those exceptions noted at the time of the proposal submission will be considered.

Exceptions must:

1. Clearly identify the affected article and section.
2. Clearly note the requested modification; and as applicable, provide requested alternative language.

Unclear requests will be automatically denied.

Only those exceptions that have been accepted by Sourcewell will be included in the master agreement document provided to the awarded supplier for signature.

If a proposer receives a master agreement award resulting from this solicitation it will have up to 30 days to sign and return the master agreement. After that time, at Sourcewell's sole discretion, the master agreement award may be revoked.

V. RFP PROCESS

A. PRE-PROPOSAL CONFERENCE

Sourcewell will hold an optional, non-mandatory pre-proposal conference via webcast on the date and time noted in the Solicitation Schedule for this RFP and on the Sourcewell Procurement Portal. The purpose of this conference is to allow potential proposers to ask questions regarding this RFP and Sourcewell's competitive procurement process. Information about the webcast will be sent to all entities that have registered for this solicitation opportunity through their Sourcewell Procurement Portal Vendor Account. Pre-proposal conference attendance is optional.

B. QUESTIONS REGARDING THIS RFP AND ORAL COMMUNICATION

All questions regarding this RFP must be submitted through the Sourcewell Procurement Portal. The deadline for submission of questions is found in the Solicitation Schedule and on the Sourcewell Procurement Portal. Answers to questions will be issued through an addendum to this RFP. Repetitive questions will be summarized into a single answer and identifying information will be removed from the submitted questions.

All questions, whether specific to a proposer or generally related to the RFP, must be submitted using this process. Do not contact individual Sourcewell staff to ask questions or request information as this may disqualify the proposer from responding to this RFP. Sourcewell will not respond to questions submitted after the deadline.

C. ADDENDA

Sourcewell may modify this RFP at any time prior to the proposal due date by issuing an addendum. Addenda issued by Sourcewell become a part of the RFP and will be delivered to potential proposers through the Sourcewell Procurement Portal. Sourcewell accepts no liability in connection with the delivery of any addenda.

Before a proposal will be accepted through the Sourcewell Procurement Portal, all addenda, if any, must be acknowledged by the proposer by checking the box for each addendum. It is the responsibility of the proposer to check for any addenda that may have been issued up to the solicitation due date and time.

If an addendum is issued after a proposer submitted its proposal, the Sourcewell Procurement Portal will WITHDRAW the submission and change the proposer's proposal status to INCOMPLETE. The proposer can view this status change in the "MY BIDS" section of the Sourcewell Procurement Portal Vendor Account. The proposer is solely responsible to check the "MY BIDS" section of the Sourcewell Procurement Portal Vendor Account periodically after submitting its proposal (and up to the Proposal Due Date). If the proposer's proposal status has changed to INCOMPLETE, the proposer is solely responsible to:

1. Make any required adjustments to its proposal;
2. Acknowledge the addenda; and
3. Ensure the re-submitted proposal is received through the Sourcewell Procurement Portal no later than the Proposal Due Date and time shown in the Solicitation Schedule above.

D. PROPOSAL SUBMISSION

Proposer's complete proposal must be submitted through the Sourcewell Procurement Portal no later than the date and time specified in the Solicitation Schedule. Any other form of proposal submission, whether electronic, paper, or otherwise, will not be considered by Sourcewell. **Late proposals will not be considered.** It is the proposer's sole responsibility to ensure that the proposal is received on time.

It is recommended that proposers allow sufficient time to upload the proposal and to resolve any issues that may arise. The time and date that a proposal is received by Sourcewell is solely determined by the Sourcewell Procurement Portal web clock.

In the event of problems with the Sourcewell Procurement Portal, follow the instructions for technical support posted in the portal. It may take up to 24 hours to respond to certain issues.

Upon successful submission of a proposal, the Sourcewell Procurement Portal will automatically generate a confirmation email to the proposer. If the proposer does not receive a confirmation email, contact Sourcewell's support provider at support@bidsandtenders.ca.

To ensure receipt of the latest information and updates via email regarding this solicitation, or if the proposer has obtained this solicitation document from a third party, the onus is on the proposer to create a Sourcewell Procurement Portal Vendor Account and register for this solicitation opportunity.

Within the Sourcewell Procurement Portal, all proposals must be digitally acknowledged by an authorized representative of the proposer attesting that the information contained in the proposal is true and accurate. By submitting a proposal, proposer warrants that the information provided is true, correct, and reliable for purposes of evaluation for potential master agreement award. The submission of inaccurate, misleading, or false information is grounds for disqualification from a master agreement award and may subject the proposer to remedies available by law.

E. GENERAL PROPOSAL REQUIREMENTS

Proposals must be:

1. In substantial compliance with the requirements of this RFP or it will be considered nonresponsive and be rejected.
2. Complete. A proposal will be rejected if it is conditional or incomplete.
3. Submitted in English.

4. Valid and irrevocable for 150 days following the Proposal Due Date.

Any and all costs incurred in responding to this RFP will be borne by the proposer.

F. PROPOSAL WITHDRAWAL

Prior to the proposal deadline, a proposer may withdraw its proposal.

G. OPENING

The Opening of proposals will be conducted in the Sourcewell Procurement Portal immediately following the proposal due date and time. To view the list of proposers resulting from the opening, verify that the Sourcewell Procurement Portal opportunities list search is set to “All” or “Closed.”

Members of the public may attend the Opening at Sourcewell’s office located at 202 12th Street NE, Staples, MN to hear the results.

VI. EVALUATION AND AWARD

A. EVALUATION

It is the intent of Sourcewell to award one or more master agreements to responsive and responsible proposers offering the best overall quality, selection of equipment, products, and services, and price that meet the commonly requested specifications of Sourcewell and its Participating Entities. The award(s) will be limited to the number of proposers that Sourcewell determines is necessary to meet the needs of its Participating Entities.

Factors to be considered in determining the number of master agreements to be awarded in any category may include the following:

1. Total evaluation scores (giving consideration to natural breaks in the scoring of responsive proposals);
2. The number and geographic location of highest-scoring proposers that offer:
 - a. A comprehensive selection of the requested equipment, products, or services;
 - b. A sales and service network ensuring availability and coverage for Participating Entities’ use; and
 - c. Other attributes of the proposer or contents of its proposal that assist Participating Entities in achieving environmental and social requirements, and goals.

Information submitted as part of a proposal should be as specific as possible when responding to the RFP. Do not assume Sourcewell has any knowledge about a specific supplier or product.

B. AWARD(S)

Award(s) will be made to the highest-scoring proposer(s) whose proposal conforms to all conditions and requirements of the RFP, and consistent with the award criteria defined in this RFP.

Sourcwell may request written clarification of a proposal at any time during the evaluation process.

Proposal evaluation will be based on the following scoring criteria and the Sourcwell Evaluator Scoring Guide (a copy is available in the Sourcwell Procurement Portal):

Conformance to RFP Requirements	Pass/Fail
Financial Viability and Marketplace Success	50
Ability to Sell and Deliver Solutions	150
Marketing Plan	100
Value Added Attributes	100
Depth and Breadth of Offered Solutions	200
Pricing	400
TOTAL POINTS	1000

C. PROTESTS OF AWARDS

Any protest made under this RFP by a proposer must be in writing, addressed to Sourcwell’s Executive Director, and delivered to the Sourcwell office located at 202 12th Street NE, P.O. Box 219, Staples, MN 56479. All documents that comprise the complete protest package must be received, and time stamped at the Sourcwell office by 4:30 p.m., Central Time, no later than 10 calendar days following Sourcwell’s notice of master agreement award(s) or non-award. A protest must allege a procedural, technical, or legal defect, with supporting documentation. A protest that merely requests a re-evaluation of a proposal’s content will not be entertained.

A protest must include the following items:

- The name, address, and telephone number of the protester;
- Identification of the solicitation by RFP number;
- A precise statement of the relevant facts;
- Identification of the alleged procedural, technical, or legal defect;
- Analysis of the basis for the protest;
- Any additional supporting documentation;
- The original signature of the protester or its representative; and
- Protest bond in the amount of \$20,000 (except where prohibited by law or treaty).

Protests that do not address these elements will not be reviewed.

D. RIGHTS RESERVED

This RFP does not commit Sourcewell to award any master agreement, and a proposal may be rejected if it is nonresponsive, conditional, incomplete, conflicting, or misleading. Proposals that contain false statements or do not support an attribute or condition stated by the proposer may be rejected.

Sourcewell reserves the right to:

- Modify or cancel this RFP at any time;
- Reject any and all proposals received;
- Reject proposals that do not comply with the provisions of this RFP;
- Select, for master agreements or for discussion, a proposal other than that with the lowest cost;
- Independently verify any information provided in a proposal;
- Disqualify any proposer that does not meet the requirements of this RFP, is debarred or suspended by the United States or Canada, State of Minnesota, Participating Entity's state or province; has an officer, or other key personnel, who have been charged with a serious crime; or is bankrupt, insolvent, or where bankruptcy or insolvency are a reasonable prospect;
- Waive or modify any informalities, irregularities, or inconsistencies in the proposals received;
- Clarify any part of a proposal and discuss any aspect of the proposal with any proposer; and negotiate with more than one proposer;
- Award a master agreement if only one responsive proposal is received if it is in the best interest of Participating Entities; and
- Award a master agreement to one or more proposers if it is in the best interest of Participating Entities.

E. DISPOSITION OF PROPOSALS

All materials submitted in response to this RFP will become property of Sourcewell and will become public record in accordance with Minnesota Statutes Chapter 13, after negotiations are complete, including pricing and financial data. Sourcewell considers negotiations complete upon execution of a resulting master agreement.

Proposers are explicitly cautioned not to submit any data that they consider to be confidential, proprietary, or trade secret, as such data will not be treated as confidential and will be subject to public disclosure in accordance with Minnesota law.



7/02/2025

Addendum No. 1

Solicitation Number: RFP 082025

Solicitation Name: Firefighting Apparatus and Fire Service Vehicles

Consider the following Question(s) and Answer(s) to be part of the above-titled solicitation documents. The remainder of the documents remain unchanged.

Question 1:

Do we have to start submission in order to see the documents that need to be completed or is there a different way?

Answer 1:

On the Sourcewell Procurement Portal login page, under the heading "Resource Materials", follow the link "Submit Response Guide".

End of Addendum

Acknowledgement of this Addendum to RFP 082025 posted to the Sourcewell Procurement Portal on 7/02/2025, is required at the time of proposal submittal.



7/03/2025

Addendum No. 2

Solicitation Number: RFP 082025

Solicitation Name: Firefighting Apparatus and Fire Service Vehicles

Consider the following Question(s) and Answer(s) to be part of the above-titled solicitation documents. The remainder of the documents remain unchanged.

Question 1:

Is this RFP a continuation or renewal of RFP 113021, which is set to expire in February 2026? If so, are there any significant differences between the two RFPs?

Answer 1:

Each solicitation is unique and stands alone. The published RFP articulates the requested equipment, products and services. The previous RFP is available at [Search Sourcewell Awarded Contracts & Vendors | Sourcewell](#).

End of Addendum

Acknowledgement of this Addendum to RFP 082025 posted to the Sourcewell Procurement Portal on 7/03/2025, is required at the time of proposal submittal.



7/23/2025

Addendum No. 3

Solicitation Number: RFP 082025

Solicitation Name: Firefighting Apparatus and Fire Service Vehicles

Consider the following Question(s) and Answer(s) to be part of the above-titled solicitation documents. The remainder of the documents remain unchanged.

Question 1:

Can you confirm that any financial documents and disclosures provided are 100% confidential and the data will be adequately protected?

Answer 1:

Refer to the RFP document Section I. E. DISPOSITION OF PROPOSALS for additional instruction. All materials submitted in response to this RFP will become property of Sourcewell and will become public record in accordance with Minnesota Statutes Chapter 13, after negotiations are complete, including pricing and financial data.

Question 2:

Our company offers helicopter firefighting with extensive night flight, tanking and bucketing experience. We are interested in offering our services to this RFP. We would like to confirm that these services would fit into Category #2 - Specialty Apparatus and Equipment, as our solutions would include pilots, aircraft mechanics and fuelers with the 'apparatus'.

Answer 2:

The Sourcewell RFP is an open and competitive solicitation process, and each RFP is an opportunity independent of any other prior, current, or future RFP. Each proposer, in its discretion, will propose the equipment, products, and services that it deems to fall within Sourcewell's requested equipment, products, and services as described in the RFP. Only those products within the scope of the RFP will be included in any contract awarded by Sourcewell as a result of the solicitation and each Proposal will be evaluated based on the criteria stated in the RFP.

Question 3:

Could you please provide any available estimates or historical data on the expected quantity or volume for each of the three categories?

Answer 3:

The estimated value of all resultant contracts provided in Section II. E. of the RFP is based on past volumes of similar Sourcwell contracts. It is an estimate only, and no sales or sales volume are guaranteed. There is no separate estimate of Canadian volume or estimates by vertical or category.

Question 4:

Are you considering the FRI conference the week of August 12th, with the deadline for submission?

Answer 4:

The Sourcwell Procurement Portal is available 24/7 and allows multiple personnel to work on the same proposal, at the same time, just not the same table.

Question 5:

When does the 150 day irrevocable period start?

Answer 5:

The 150-day irrevocable period begins at the close of the open solicitation.

Question 6:

Prices in this current climate are heavily affected by government trade policies and geopolitics and are generally reviewed and adjusted quarterly. We will be submitting current list base prices on August 20th. Should we be awarded a Contract after 120 days of evaluation, effective Feb 1st of 2026, will we be able to submit the appropriate paperwork to bring our prices up to current list base price at that time?

Answer 6:

Yes. Refer to the Master Agreement, Article 2, 2) Product and Price Changes Requirements.

Question 7:

Under the Addenda, Terms and Conditions section, there is a Yes / No radio button line. Is the yes / no related to the sentence above saying yes or no that there is a conflict of interest OR is it for the section below asking if the Bidder agrees to the listed addendums?

Answer 7:

The yes / no radio buttons refer to the statement “The Proposer declares that there is an actual or potential Conflict of Interest relating to the preparation of its submission, and/or the Proposer foresees an actual or potential Conflict of Interest in performing the obligations contemplated in the solicitation proposal.”

End of Addendum

Acknowledgement of this Addendum to RFP 082025 posted to the Sourcewell Procurement Portal on 7/23/2025, is required at the time of proposal submittal.



7/25/2025

Addendum No. 4

Solicitation Number: RFP 082025

Solicitation Name: Firefighting Apparatus and Fire Service Vehicles

Consider the following Question(s) and Answer(s) to be part of the above-titled solicitation documents. The remainder of the documents remain unchanged.

Question 1:

Table 1, Line item 3 -- please clarify when asking for all subsidiaries, authorized affiliates responsible for offering and delivering solutions in this proposal. The question asks for entities that offer the Solutions but then later states will execute a master agreement. If there are divisions within the company and authorized dealers that offer and deliver Solutions in proposal, we can list, however, there will not be a separate master agreement with those divisions. Please clarify no separate master agreement is needed.

Answer 1:

Refer to "Master Agreement, Article 2: Sourcewell and Supplier Obligations" for clarification. No separate master agreements are needed.

Question 2:

Table 1, Line Item 6 - question on proposer's physical addresses. What are these addresses used for? Do we need to note addresses for company divisions? Are these noted on Sourcewell landing page for customer reference?

Answer 2:

These addresses are not noted on the Sourcwell awarded vendor landing page. It is for Sourcwell internal information during the contracting phase. Table 1 information is not scored.

Question 3:

Table 1, Line Item 10 - Proposer's other contacts. Are these to be used for contacts on the Sourcwell landing page, for potential customer quote requests? If so, will we need to list contacts for company divisions (example for other Categories like ARFF trucks)?

Answer 3:

Other contacts are generally used on the Sourcwell awarded vendor landing page or for questions during the signing of the contract with Sourcwell. One or two additional names are all that are necessary.

End of Addendum

Acknowledgement of this Addendum to RFP 082025 posted to the Sourcwell Procurement Portal on 7/25/2025, is required at the time of proposal submittal.



7/31/2025

Addendum No. 5

Solicitation Number: RFP 082025

Solicitation Name: Firefighting Apparatus and Fire Service Vehicles

Consider the following Question(s) and Answer(s) to be part of the above-titled solicitation documents. The remainder of the documents remain unchanged.

Question 1:

What is the renewal cycle for this RFP?

Answer 1:

Refer to the Master Agreement Article 1: General Terms, 5) Term for the answer.

Question 2:

Can you give us clarity on the marketing Plan Section? What documents should we provide?

Answer 2:

In the competitive process, Sourcewell will not advise a proposer on the content of the proposal. So, it is left to the discretion of each proposer to determine the information necessary to best demonstrate their ability to serve Sourcewell clients and that they are willing to include. The solicitation is a competitive process, and proposals are evaluated on the content submitted.

End of Addendum

Acknowledgement of this Addendum to RFP 082025 posted to the Sourcewell Procurement Portal on 7/31/2025, is required at the time of proposal submittal.



8/04/2025

Addendum No. 6

Solicitation Number: RFP 082025

Solicitation Name: Firefighting Apparatus and Fire Service Vehicles

Consider the following Question(s) and Answer(s) to be part of the above-titled solicitation documents. The remainder of the documents remain unchanged.

Question 1:

What is the preferred format for the specification submission? Is it a standard bid layout (proposal) in a word document type format? Spreadsheet with line items? I want to make sure that the submission is in the proper format. Thank you,

Answer 1:

All proposals must be submitted through the Sourcewell Procurement Portal. Guidance on preparing a response in the Portal can be found in the:

1. "Submit Response Guide" on the "Bids Homepage" in the Resource Materials section.
2. RFP document section D. PROPOSAL SUBMISSION and section E. GENERAL PROPOSAL REQUIREMENTS
3. Pre-Proposal Conference pdf of the PowerPoint or link to the video recording.

End of Addendum

Acknowledgement of this Addendum to RFP 082025 posted to the Sourcewell Procurement Portal on 8/04/2025, is required at the time of proposal submittal.



8/06/2025

Addendum No. 7

Solicitation Number: RFP 082025

Solicitation Name: Firefighting Apparatus and Fire Service Vehicles

Consider the following Question(s) and Answer(s) to be part of the above-titled solicitation documents. The remainder of the documents remain unchanged.

Question 1:

Line Item 73 - The Pricing Offered in this Proposal drop down questions are cut off, and hard to read. Can you please provide the drop down list of options to provide more clarity in what the responses are to choose from?

Answer 1:

The Line Item 73 drop down list choices are:

The pricing offered is as good as or better than pricing typically offered through existing cooperative contracts, state contracts, or agencies.

The pricing offered is consistent with standard market pricing typically offered to individual municipalities, universities, or school districts.

The pricing offered does not fit the categories above. Please specify the basis for the pricing offered, including any unique circumstances or justifications that apply.

Question 2:

Clarification required for Section 7B - Line item 81. Line 81 references the offering of unit type in line 77 above, however line 77 references detail warranties. Should it reference line 74 where you provide a detailed description of all the solutions offered?

Answer 2:

In the Portal, Table 7B:

Line item 81, should read "Equipment, options, accessories, components, and supplies complementary to the offering of the unit types described in 80 above"

Line Item 82 should read "Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in 80 – 81 above"

In the Portal, Table 7C:

Line item 85, should read "Equipment, options, accessories, components, and supplies complementary to the offering of the unit types described in 84 above"

Line Item 86 should read "Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in 84 - 85 above"

In the Portal, Table 7D:

Line item 89, should read "Equipment, options, accessories, components, and supplies complementary to the offering of the unit types described in 88 above"

Line Item 90 should read "Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in 88 - 89 above"

End of Addendum

Acknowledgement of this Addendum to RFP 082025 posted to the Sourcwell Procurement Portal on 8/06/2025, is required at the time of proposal submittal.

EXHIBIT B

Original Government Contract



MASTER AGREEMENT # 082025
CATEGORY: Firefighting Apparatus and Fire Service Vehicles
SUPPLIER: REV Group, Inc.

This Master Agreement (Agreement) is between Sourcewell, a Minnesota service cooperative located at 202 12th Street Northeast, P.O. Box 219, Staples, MN 56479 (Sourcewell) and REV Group, Inc., 245 S. Executive Drive, Suite 100, Brookfield, WI 53005 (Supplier).

Sourcewell is a local government and service cooperative created under the laws of the State of Minnesota (Minnesota Statutes Section 123A.21) offering a Cooperative Purchasing Program to eligible participating government entities.

Under this Master Agreement entered with Sourcewell, Supplier will provide Included Solutions to Participating Entities through Sourcewell's Cooperative Purchasing Program.

Article 1:
General Terms

The General Terms in this Article 1 control the operation of this Master Agreement between Sourcewell and Supplier and apply to all transactions entered by Supplier and Participating Entities. Subsequent Articles to this Master Agreement control the rights and obligations directly between Sourcewell and Supplier (Article 2), and between Supplier and Participating Entity (Article 3), respectively. These Article 1 General Terms control over any conflicting terms. Where this Master Agreement is silent on any subject, Participating Entity and Supplier retain the ability to negotiate mutually acceptable terms.

- 1) **Purpose.** Pursuant to Minnesota law, the Sourcewell Board of Directors has authorized a Cooperative Purchasing Program designed to provide Participating Entities with access to competitively awarded cooperative purchasing agreements. To facilitate the Program, Sourcewell has awarded Supplier this cooperative purchasing Master Agreement following a competitive procurement process intended to meet compliance standards in accordance with Minnesota law and the requirements contained herein.
- 2) **Intent.** The intent of this Master Agreement is to define the roles of Sourcewell, Supplier, and Participating Entity as it relates to Sourcewell's Cooperative Purchasing Program.
- 3) **Participating Entity Access.** Sourcewell's Cooperative Purchasing Program Master Agreements are available to eligible public agencies (Participating Entities). A Participating Entity's authority to access Sourcewell's Cooperative Purchasing Program is determined through the laws of its respective jurisdiction.
- 4) **Supplier Access.** The Included Solutions offered under this Agreement may be made available to any Participating Entity. Supplier understands that a Participating Entity's use of this Agreement is at the Participating Entity's sole convenience. Supplier will educate its sales and service forces about Sourcewell eligibility requirements and required documentation. Supplier will be responsible for ensuring sales are with Participating Entities.

- 5) **Term.** This Agreement is effective upon the date of the final signature below. The term of this Agreement is four (4) years from the effective date. The Agreement expires at 11:59 P.M. Central Time on December 8, 2029, unless it is cancelled or extended as defined in this Agreement.
- a) **Extensions.** Sourcewell and Supplier may agree to up to three (3) additional one-year extensions beyond the original four-year term. The total possible length of this Agreement will be seven (7) years from the effective date.
- b) **Exceptional Circumstances.** Sourcewell retains the right to consider additional extensions as required under exceptional circumstances.
- 6) **Survival of Terms.** Notwithstanding the termination of this Agreement, the obligations of this Agreement will continue through the performance period of any transaction entered between Supplier and any Participating Entity before the termination date.
- 7) **Scope.** Supplier is awarded a Master Agreement to provide the solutions identified in (RFP #082025), Category 1: Structural Apparatus and Comprehensive Solutions, to Participating Entities. In Scope solutions include:
- a. **Category 1: Structural Apparatus and Comprehensive Solutions**, including, but not limited to:
- i. Pumper trucks, aerial trucks, tanker/tender or water supply trucks, and quints;
 - ii. Equipment, options, accessories, components, and supplies complementary to the offering of the unit types described in i. above;
 - iii. Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in i. – ii. above; and,
 - iv. **Category 1** responders **MAY** include **complementary** Specialty Apparatus and Equipment and Brush and Wildland Urban Interface (WUI) Apparatus solutions in their response.
- 8) **Included Solutions.** Supplier's Proposal to the above referenced RFP is incorporated into this Master Agreement. Only those Solutions included within Supplier's Proposal and within Scope (Included Solutions) are included within the Agreement and may be offered to Participating Entities.
- 9) **Indefinite Quantity.** This Master Agreement defines an indefinite quantity of sales to eligible Participating Entities.
- 10) **Pricing.** Pricing information (including Pricing and Delivery and Pricing Offered tables) for all Included Solutions within Supplier's Proposal is incorporated into this Master Agreement.
- 11) **Not to Exceed Pricing.** Suppliers may not exceed the prices listed in the current Pricing List on file with Sourcewell when offering Included Solutions to Participating Entities. Participating Entities may request adjustments to pricing directly from Supplier during the negotiation and execution of any transaction.
- 12) **Open Market.** Supplier's open market pricing process is included within its Proposal.

13) Supplier Representations:

- i) **Compliance.** Supplier represents and warrants it will provide all Included Solutions under this Agreement in full compliance with applicable federal, state, and local laws and regulations.
- ii) **Licenses.** As applicable, Supplier will maintain a valid status on all required federal, state, and local licenses, bonds, and permits required for the operation of Supplier's business with Participating Entities. Participating Entities may request all relevant documentation directly from Supplier.
- iii) **Supplier Warrants.** Supplier warrants that all Included Solutions furnished under this Agreement are free from liens and encumbrances, and are free from defects in design, materials, and workmanship. In addition, Supplier warrants the Solutions are suitable for and will perform in accordance with the ordinary use for which they are intended.

14) **Bankruptcy Notices.** Supplier certifies and warrants it is not currently in a bankruptcy proceeding. Supplier has disclosed all current and completed bankruptcy proceedings within the past seven years within its Proposal. Supplier must provide notice in writing to Sourcwell if it enters a bankruptcy proceeding at any time during the term of this Agreement.

15) **Debarment and Suspension.** Supplier certifies and warrants that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from programs operated by the State of Minnesota, the United States federal government, or any Participating Entity. Supplier certifies and warrants that neither it nor its principals have been convicted of a criminal offense related to the subject matter of this Agreement. Supplier further warrants that it will provide immediate written notice to Sourcwell if this certification changes at any time during the term of this Agreement.

16) **Provisions for non-United States federal entity procurements under United States federal awards or other awards (Appendix II to 2 C.F.R § 200).** Participating Entities that use United States federal grant or other federal funding to purchase solutions from this Agreement may be subject to additional requirements including the procurement standards of the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards, 2 C.F.R. § 200. Participating Entities may have additional requirements based on specific funding source terms or conditions. Within this Section, all references to "federal" should be interpreted to mean the United States federal government. The following list applies when a Participating Entity accesses Supplier's Included Solutions with United States federal funds.

- i) **EQUAL EMPLOYMENT OPPORTUNITY.** Except as otherwise provided under 41 C.F.R. § 60, all agreements that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. § 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 C.F.R. §, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 C.F.R. § 60, "Office of Federal Contract Compliance Programs, Equal

Employment Opportunity, Department of Labor.” The equal opportunity clause is incorporated herein by reference.

ii) **DAVIS-BACON ACT, AS AMENDED (40 U.S.C. § 3141-3148).** When required by federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. § 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 C.F.R. § 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-federal entity must report all suspected or reported violations to the federal awarding agency. The contracts must also include a provision for compliance with the Copeland “Anti-Kickback” Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations (29 C.F.R. § 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-federal entity must report all suspected or reported violations to the federal awarding agency. Supplier must comply with all applicable Davis-Bacon Act provisions.

iii) **CONTRACT WORK HOURS AND SAFETY STANDARDS ACT (40 U.S.C. § 3701-3708).** Where applicable, all contracts awarded by the non-federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations (29 C.F.R. § 5). Under 40 U.S.C. § 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. § 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies, materials, or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence. This provision is hereby incorporated by reference into this Agreement. Supplier certifies that during the term of an award for all Agreements by Sourcewell resulting from this procurement process, Supplier must comply with applicable requirements as referenced above.

iv) **RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT.** If the federal award meets the definition of “funding agreement” under 37 C.F.R. § 401.2(a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 C.F.R. § 401, “Rights to Inventions Made by Nonprofit

Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency. Supplier certifies that during the term of an award for all Agreements by Sourcewell resulting from this procurement process, Supplier must comply with applicable requirements as referenced above.

v) **CLEAN AIR ACT (42 U.S.C. § 7401-7671Q.) AND THE FEDERAL WATER POLLUTION CONTROL ACT (33 U.S.C. § 1251-1387).** Contracts and subgrants of amounts in excess of \$150,000 require the non-federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. § 7401- 7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251- 1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Supplier certifies that during the term of this Agreement it will comply with applicable requirements as referenced above.

vi) **DEBARMENT AND SUSPENSION (EXECUTIVE ORDERS 12549 AND 12689).** A contract award (see 2 C.F.R. § 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. § 180 that implement Executive Orders 12549 (3 C.F.R. § 1986 Comp., p. 189) and 12689 (3 C.F.R. § 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. Supplier certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation by any federal department or agency.

vii) **BYRD ANTI-LOBBYING AMENDMENT, AS AMENDED (31 U.S.C. § 1352).** Suppliers must file any required certifications. Suppliers must not have used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Suppliers must disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier up to the non-federal award. Suppliers must file all certifications and disclosures required by, and otherwise comply with, the Byrd Anti-Lobbying Amendment (31 U.S.C. § 1352).

viii) **RECORD RETENTION REQUIREMENTS.** To the extent applicable, Supplier must comply with the record retention requirements detailed in 2 C.F.R. § 200.333. The Supplier further certifies that it will retain all records as required by 2 C.F.R. § 200.333 for a period of 3 years after grantees or subgrantees submit final expenditure reports or quarterly or annual financial reports, as applicable, and all other pending matters are closed.

ix) **ENERGY POLICY AND CONSERVATION ACT COMPLIANCE.** To the extent applicable, Supplier must comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

x) **BUY AMERICAN PROVISIONS COMPLIANCE.** To the extent applicable, Supplier must comply with all applicable provisions of the Buy American Act. Purchases made in accordance

with the Buy American Act must follow the applicable procurement rules calling for free and open competition.

- xi) **ACCESS TO RECORDS (2 C.F.R. § 200.336).** Supplier agrees that duly authorized representatives of a federal agency must have access to any books, documents, papers and records of Supplier that are directly pertinent to Supplier's discharge of its obligations under this Agreement for the purpose of making audits, examinations, excerpts, and transcriptions. The right also includes timely and reasonable access to Supplier's personnel for the purpose of interview and discussion relating to such documents.
- xii) **PROCUREMENT OF RECOVERED MATERIALS (2 C.F.R. § 200.322).** A non-federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 C.F.R. § 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.
- xiii) **FEDERAL SEAL(S), LOGOS, AND FLAGS.** The Supplier cannot use the seal(s), logos, crests, or reproductions of flags or likenesses of Federal agency officials without specific pre-approval.
- xiv) **NO OBLIGATION BY FEDERAL GOVERNMENT.** The U.S. federal government is not a party to this Agreement or any purchase by a Participating Entity and is not subject to any obligations or liabilities to the Participating Entity, Supplier, or any other party pertaining to any matter resulting from the Agreement or any purchase by an authorized user.
- xv) **PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS.** The Contractor acknowledges that 31 U.S.C. § 38 (Administrative Remedies for False Claims and Statements) applies to the Supplier's actions pertaining to this Agreement or any purchase by a Participating Entity.
- xvi) **FEDERAL DEBT.** The Supplier certifies that it is non-delinquent in its repayment of any federal debt. Examples of relevant debt include delinquent payroll and other taxes, audit disallowance, and benefit overpayments.
- xvii) **CONFLICTS OF INTEREST.** The Supplier must notify the U.S. Office of General Services, Sourcewell, and Participating Entity as soon as possible if this Agreement or any aspect related to the anticipated work under this Agreement raises an actual or potential conflict of interest (as described in 2 C.F.R. Part 200). The Supplier must explain the actual or potential conflict in writing in sufficient detail so that the U.S. Office of General Services, Sourcewell, and Participating Entity are able to assess the actual or potential conflict; and provide any additional information as necessary or requested.

xviii) **U.S. EXECUTIVE ORDER 13224.** The Supplier, and its subcontractors, must comply with U.S. Executive Order 13224 and U.S. Laws that prohibit transactions with and provision of resources and support to individuals and organizations associated with terrorism.

xix) **PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT.** To the extent applicable, Supplier certifies that during the term of this Agreement it will comply with applicable requirements of 2 C.F.R. § 200.216.

xx) **DOMESTIC PREFERENCES FOR PROCUREMENTS.** To the extent applicable, Supplier certifies that during the term of this Agreement, Supplier will comply with applicable requirements of 2 C.F.R. § 200.322.

Article 2: Sourcewell and Supplier Obligations

The Terms in this Article 2 relate specifically to Sourcewell and its administration of this Master Agreement with Supplier and Supplier's obligations thereunder.

- 1) **Authorized Sellers.** Supplier must provide Sourcewell a current means to validate or authenticate Supplier's authorized dealers, distributors, or resellers which may complete transactions of Included Solutions offered under this Agreement. Sourcewell may request updated information in its discretion, and Supplier agrees to provide requested information within a reasonable time.
- 2) **Product and Price Changes Requirements.** Supplier may request Included Solutions changes, additions, or deletions at any time. All requests must be made in writing by submitting a Sourcewell Price and Product Change Request Form to Sourcewell. At a minimum, the request must:
 - Identify the applicable Sourcewell Agreement number;
 - Clearly specify the requested change;
 - Provide sufficient detail to justify the requested change;
 - Individually list all Included Solutions affected by the requested change, along with the requested change (e.g., addition, deletion, price change); and
 - Include a complete restatement of Pricing List with the effective date of the modified pricing, or product addition or deletion. The new pricing restatement must include all Included Solutions offered, even for those items where pricing remains unchanged.

A fully executed Sourcewell Price and Product Change Request Form will become an amendment to this Agreement and will be incorporated by reference.

- 3) **Authorized Representative.** Supplier will assign an Authorized Representative to Sourcewell for this Agreement and must provide prompt notice to Sourcewell if that person is changed. The Authorized Representative will be responsible for:
 - Maintenance and management of this Agreement;
 - Timely response to all Sourcewell and Participating Entity inquiries; and
 - Participation in reviews with Sourcewell.

Sourcewell's Authorized Representative is its Chief Procurement Officer.

- 4) **Performance Reviews.** Supplier will perform a minimum of one review with Sourcewell per agreement year. The review will cover transactions to Participating Entities, pricing and terms, administrative fees, sales data reports, performance issues, supply chain issues, customer issues, and any other necessary information.
- 5) **Sales Reporting Required.** Supplier is required as a material element to this Master Agreement to report all completed transactions with Participating Entities utilizing this Agreement. Failure to provide complete and accurate reports as defined herein will be a material breach of the Agreement and Sourcewell reserves the right to pursue all remedies available at law including cancellation of this Agreement.
- 6) **Reporting Requirements.** Supplier must provide Sourcewell an activity report of all transactions completed utilizing this Agreement. Reports are due at least once each calendar quarter (Reporting Period). Reports must be received no later than 45 calendar days after the end of each calendar quarter. Supplier may report on a more frequent basis in its discretion. Reports must be provided regardless of the amount of completed transactions during that quarter (i.e., if there are no sales, Supplier must submit a report indicating no sales were made).

The Report must contain the following fields:

- Participating Entity Name (e.g., City of Staples Highway Department);
- Participating Entity Physical Street Address;
- Participating Entity City;
- Participating Entity State/Province;
- Participating Entity Zip/Postal Code;
- Sourcewell Participating Entity Account Number;
- Transaction Description;
- Transaction Purchased Price;
- Sourcewell Administrative Fee Applied; and
- Date Transaction was invoiced/sale was recognized as revenue by Supplier.

If collected by Supplier, the Report may include the following fields as available:

- Participating Entity Contact Name;
- Participating Entity Contact Email Address;
- Participating Entity Contact Telephone Number;

- 7) **Administrative Fee.** In consideration for the support and services provided by Sourcewell, Supplier will pay an Administrative Fee to Sourcewell on all completed transactions to Participating Entities utilizing this Agreement. Supplier will include its Administrative Fee within its proposed pricing. Supplier may not directly charge Participating Entities to offset the Administrative Fee.
- 8) **Fee Calculation.** Supplier's Administrative Fee payable to Sourcewell will be calculated as a stated percentage (listed in Supplier's Proposal) of all completed transactions utilizing this Master Agreement within the preceding Reporting Period. For certain categories, a flat fee may be proposed. The Administrative Fee will be stated in Supplier's Proposal.

- 9) **Fee Remittance.** Supplier will remit fee to Sourcewell no later than 45 calendar days after the close of the preceding calendar quarter in conjunction with Supplier's Reporting Period obligations defined herein. Payments should note the Supplier's name and Sourcewell-assigned Agreement number in the memo; and must be either mailed to Sourcewell above "Attn: Accounts Receivable" or remitted electronically to Sourcewell's banking institution per Sourcewell's Finance department instructions.
- 10) **Noncompliance.** Sourcewell reserves the right to seek all remedies available at law for unpaid or underpaid Administrative Fees due under this Agreement. Failure to remit payment, delinquent payments, underpayments, or other deviations from the requirements of this Agreement may be deemed a material breach and may result in cancellation of this Agreement and disbarment from future Agreements.
- 11) **Audit Requirements.** Pursuant to Minn. Stat. § 16C.05, subdivision 5, the books, records, documents, and accounting procedures and practices relevant to this Agreement are subject to examination by Sourcewell and the Minnesota State Auditor for a minimum of six years from the end of this Agreement. Supplier agrees to fully cooperate with Sourcewell in auditing transactions under this Agreement to ensure compliance with pricing terms, correct calculation and remittance of Administrative Fees, and verification of transactions as may be requested by a Participating Entity or Sourcewell.
- 12) **Assignment, Transfer, and Administrative Changes.** Supplier may not assign or otherwise transfer its rights or obligations under this Agreement without the prior written consent of Sourcewell. Such consent will not be unreasonably withheld. Sourcewell reserves the right to unilaterally assign all or portions of this Agreement within its sole discretion to address corporate restructurings, mergers, acquisitions, or other changes to the Responsible Party and named in the Agreement. Any prohibited assignment is invalid. Upon request Sourcewell may make administrative changes to agreement documentation such as name changes, address changes, and other non-material updates as determined within its sole discretion.
- 13) **Amendments.** Any material change to this Agreement must be executed in writing through an amendment and will not be effective until it has been duly executed by the parties.
- 14) **Waiver.** Failure by Sourcewell to enforce any right under this Agreement will not be deemed a waiver of such right in the event of the continuation or repetition of the circumstances giving rise to such right.
- 15) **Complete Agreement.** This Agreement represents the complete agreement between the parties for the scope as defined herein. Supplier and Sourcewell may enter into separate written agreements relating specifically to transactions outside of the scope of this Agreement.
- 16) **Relationship of Sourcewell and Supplier.** This Agreement does not create a partnership, joint venture, or any other relationship such as employee, independent contractor, master-servant, or principal-agent.
- 17) **Indemnification.** Supplier must indemnify, defend, save, and hold Sourcewell, including their agents and employees, harmless from any claims or causes of action, including attorneys' fees incurred by

Sourcewell, arising out of any act or omission in the performance of this Agreement by the Supplier or its agents or employees; this indemnification includes injury or death to person(s) or property alleged to have been caused by some defect in design, condition, or performance of Included Solutions under this Agreement. Sourcewell's responsibility will be governed by the State of Minnesota's Tort Liability Act (Minnesota Statutes Chapter 466) and other applicable law.

18) **Data Practices.** Supplier and Sourcewell acknowledge Sourcewell is subject to the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13. As it applies to all data created and maintained in performance of this Agreement, Supplier may be subject to the requirements of this chapter.

19) **Grant of License.**

a) **During the term of this Agreement:**

i) **Supplier Promotion.** Sourcewell grants to Supplier a royalty-free, worldwide, non-exclusive right and license to use the trademark(s) provided to Supplier by Sourcewell in advertising, promotional materials, and informational sites for the purpose of marketing Sourcewell's Agreement with Supplier.

ii) **Sourcewell Promotion.** Supplier grants to Sourcewell a royalty-free, worldwide, non-exclusive right and license to use Supplier's trademarks in advertising, promotional materials, and informational sites for the purpose of marketing Supplier's Agreement with Sourcewell.

b) **Limited Right of Sublicense.** The right and license granted herein includes a limited right of each party to grant sublicenses to their respective subsidiaries, distributors, dealers, resellers, marketing representatives, partners, or agents (collectively "Permitted Sublicensees") in advertising, promotional, or informational materials for the purpose of marketing the Parties' relationship. Any sublicense granted will be subject to the terms and conditions of this Article. Each party will be responsible for any breach of this section by any of their respective sublicensees.

c) **Use; Quality Control.**

i) Neither party may alter the other party's trademarks from the form provided and must comply with removal requests as to specific uses of its trademarks or logos.

ii) Each party agrees to use, and to cause its Permitted Sublicensees to use, the other party's trademarks only in good faith and in a dignified manner consistent with such party's use of the trademarks. Each party may make written notice to the other regarding misuse under this section. The offending party will have 30 days of the date of the written notice to cure the issue or the license/sublicense will be terminated.

d) **Termination.** Upon the termination of this Agreement for any reason, each party, including Permitted Sublicensees, will have 30 days to remove all Trademarks from signage, websites, and the like bearing the other party's name or logo (excepting Sourcewell's pre-printed catalog of suppliers which may be used until the next printing). Supplier must return all marketing and

promotional materials, including signage, provided by Sourcewell, or dispose of it according to Sourcewell's written directions.

- 20) **Venue and Governing law between Sourcewell and Supplier Only.** The substantive and procedural laws of the State of Minnesota will govern this Agreement between Sourcewell and Supplier. Venue for all legal proceedings arising out of this Agreement between Sourcewell and Supplier will be in court of competent jurisdiction within the State of Minnesota. This section does not apply to any dispute between Supplier and Participating Entity. This Agreement reserves the right for Supplier and Participating Entity to negotiate this term to within any transaction documents.
- 21) **Severability.** If any provision of this Agreement is found by a court of competent jurisdiction to be illegal, unenforceable, or void then both parties will be relieved from all obligations arising from that provision. If the remainder of this Agreement is capable of being performed, it will not be affected by such determination or finding and must be fully performed.
- 22) **Insurance Coverage.** At its own expense, Supplier must maintain valid insurance policy(ies) during the performance of this Agreement with insurance company(ies) licensed or authorized to do business in the State of Minnesota having an "AM BEST" rating of A- or better, with coverage and limits of insurance not less than the following:
- a) **Commercial General Liability Insurance.** Supplier will maintain insurance covering its operations, with coverage on an occurrence basis, and must be subject to terms no less broad than the Insurance Services Office ("ISO") Commercial General Liability Form CG0001 (2001 or newer edition), or equivalent. At a minimum, coverage must include liability arising from premises, operations, bodily injury and property damage, independent contractors, products-completed operations including construction defect, contractual liability, blanket contractual liability, and personal injury and advertising injury. All required limits, terms and conditions of coverage must be maintained during the term of this Agreement.
 - \$1,500,000 each occurrence Bodily Injury and Property Damage
 - \$1,500,000 Personal and Advertising Injury
 - \$2,000,000 aggregate for products liability-completed operations
 - \$2,000,000 general aggregate
 - b) **Certificates of Insurance.** Prior to execution of this Agreement, Supplier must furnish to Sourcewell a certificate of insurance, as evidence of the insurance required under this Agreement. Prior to expiration of the policy(ies), renewal certificates must be mailed to Sourcewell, 202 12th Street Northeast, P.O. Box 219, Staples, MN 56479 or provided to in an alternative manner as directed by Sourcewell. The certificates must be signed by a person authorized by the insurer(s) to bind coverage on their behalf. Failure of Supplier to maintain the required insurance and documentation may constitute a material breach.
 - c) **Additional Insured Endorsement and Primary and Non-contributory Insurance Clause.** Supplier agrees to list Sourcewell, including its officers, agents, and employees, as an additional insured under the Supplier's commercial general liability insurance policy with respect to liability arising out of activities, "operations," or "work" performed by or on behalf of Supplier, and products and completed operations of Supplier. The policy provision(s) or endorsement(s) must further provide that coverage is primary and not excess over or contributory with any other valid, applicable, and collectible insurance or self-insurance in force for the additional insureds.

- d) **Waiver of Subrogation.** Supplier waives and must require (by endorsement or otherwise) all its insurers to waive subrogation rights against Sourcewell and other additional insureds for losses paid under the insurance policies required by this Agreement or other insurance applicable to the Supplier or its subcontractors. The waiver must apply to all deductibles and/or self-insured retentions applicable to the required or any other insurance maintained by the Supplier or its subcontractors. Where permitted by law, Supplier must require similar written express waivers of subrogation and insurance clauses from each of its subcontractors.
- e) **Umbrella/Excess Liability/SELF-INSURED RETENTION.** The limits required by this Agreement can be met by either providing a primary policy or in combination with umbrella/excess liability policy(ies), or self-insured retention.
- 23) **Termination for Convenience.** Sourcewell or Supplier may terminate this Agreement upon 60 calendar days' written notice to the other Party. Termination pursuant to this section will not relieve the Supplier's obligations under this Agreement for any transactions entered with Participating Entities through the date of termination, including reporting and payment of applicable Administrative Fees.
- 24) **Termination for Cause.** Sourcewell may terminate this Agreement upon providing written notice of material breach to Supplier. Notice must describe the breach in reasonable detail and state the intent to terminate the Agreement. Upon receipt of Notice, the Supplier will have 30 calendar days in which it must cure the breach. Termination pursuant to this section will not relieve the Supplier's obligations under this Agreement for any transactions entered with Participating Entities through the date of termination, including reporting and payment of applicable Administrative Fees.

**Article 3:
Supplier Obligations to Participating Entities**

The Terms in this Article 3 relate specifically to Supplier and a Participating Entity when entering transactions utilizing the General Terms established in this Master Agreement. Article 1 General Terms control over any conflict with this Article 3. Where this Master Agreement is silent on any subject, Participating Entity and Supplier retain the ability to negotiate mutually acceptable terms.

- 1) **Quotes to Participating Entities.** Suppliers are encouraged to provide all pricing information regarding the total cost of acquisition when quoting to a Participating Entity. Suppliers and Participating Entities are encouraged to include all cost specifically associated with or included within the Suppliers proposal and Included Solutions within transaction documents.
- 2) **Shipping, Delivery, Acceptance, Rejection, and Warranty.** Supplier's proposal may include proposed terms relating to shipping, delivery, inspection, and acceptance/rejection and other relevant terms of tendered Solutions. Supplier and Participating Entity may negotiate final terms appropriate for the specific transaction relating to non-appropriation, shipping, delivery, inspection, acceptance/rejection of tendered Solutions, and warranty coverage for Included Solutions. Such terms may include, but are not limited to, costs, risk of loss, proper packaging, inspection rights and timelines, acceptance or rejection procedures, and remedies as mutually agreed include notice requirements, replacement, return or exchange procedures, and associated costs.


- 3) **Applicable Taxes.** Participating Entity is responsible for notifying supplier of its tax-exempt status and for providing Supplier with any valid tax-exemption certification(s) or related documentation.
- 4) **Ordering Process and Payment.** Supplier’s ordering process and acceptable forms of payment are included within its Proposal. Participating Entities will be solely responsible for payment to Supplier and Sourcewell will have no liability for any unpaid invoice of any Participating Entity.
- 5) **Transaction Documents.** Participating Entity may require the use of its own forms to complete transactions directly with Supplier utilizing the terms established in this Agreement. Supplier’s standard form agreements may be offered as part of its Proposal. Supplier and Participating Entity may complete and document transactions utilizing any type of transaction documents as mutually agreed. In any transaction document entered utilizing this Agreement, Supplier and Participating Entity must include specific reference to this Master Agreement by number and to Participating Entity’s unique Sourcewell account number.
- 6) **Additional Terms and Conditions Permitted.** Participating Entity and Supplier may negotiate and include additional terms and conditions within transaction documentation as mutually agreed. Such terms may supplant or supersede this Master Agreement when necessary and as solely determined by Participating Entity. Sourcewell has expressly reserved the right for Supplier and Participating Entity to address any necessary provisions within transaction documents not expressly included within this Master Agreement, including but not limited to transaction cancellation, dispute resolution, governing law and venue, non-appropriation, insurance, defense and indemnity, force majeure, and other material terms as mutually agreed.
- 7) **Subsequent Agreements and Survival.** Supplier and Participating Entity may enter into a separate agreement to facilitate long-term performance obligations utilizing the terms of this Master Agreement as mutually agreed. Such agreements may provide for a performance period extending beyond the full term of this Master Agreement as determined in the discretion of Participating Entity.
- 8) **Participating Addendums.** Supplier and Participating Entity may enter a Participating Addendum or similar document extending and supplementing the terms of this Master Agreement to facilitate adoption as may be required by a Participating Entity.

Sourcewell

REV Group, Inc.

Signed by:

 C0FD2A139D06489...
 By: _____
 Jeremy Schwartz
 Title: Chief Procurement Officer
 Date: 12/5/2025 | 2:35 PM CST

Signed by:

 C614955512FD49B...
 By: _____
 Philip Gerace
 Title: Director of Dealer Development
 Date: 12/5/2025 | 2:13 PM CST

RFP 082025 - Firefighting Apparatus and Fire Service Vehicles

Vendor Details

Company Name: REV Group, Inc.

Does your company conduct business under any other name? If yes, please state: Our brands in our Portfolio include E-ONE, Ferrara Fire Apparatus, Kovatch Mobile Equipment Corp (KME), Spartan ER (Spartan, Smeal, LT)

Address: 245 South Executive Drive, Suite 100
Brookfield, WI 53005

Contact: Philip Gerace

Email: philip.gerace@revgroup.com

Phone: 352-427-9579

HST#: 26-3013415

Submission Details

Created On: Tuesday July 08, 2025 07:02:24

Submitted On: Monday August 18, 2025 15:17:37

Submitted By: Philip Gerace

Email: philip.gerace@revgroup.com

Transaction #: 715680b1-5b10-40d2-9773-054af86fcd50

Submitter's IP Address: 147.243.204.145

Specifications

Table 1: Proposer Identity & Authorized Representatives (Not Scored)

General Instructions (applies to all Tables) Sourcewell prefers a brief but thorough response to each question. Do not merely attach additional documents to your response without also providing a substantive response. Do not leave answers blank; respond “N/A” if the question does not apply to you (preferably with an explanation).

Table 1 Specific Instructions. Sourcewell requires identification of all parties responsible for providing Solutions under a resulting master agreement(s) (Responsible Supplier). Proposers are strongly encouraged to include all potential Responsible Suppliers including any corporate affiliates, subsidiaries, D.B.A., and any other authorized entities within a singular proposal. All information required under this RFP must be included for each Responsible Supplier as instructed. Proposers with multiple Responsible Supplier options may choose to respond individually as distinct entities, however each response will be evaluated individually and only those proposals recommended for award may result in a master agreement award. Unawarded entities will not be permitted to later be added to an existing master agreement through operation of Proposer’s corporate organization affiliation.

Line Item	Question	Response *
1	Provide the legal name of the Proposer authorized to submit this Proposal.	REV Group, Inc.
2	In the event of award, is this entity the Responsible Supplier that will execute the master agreement with Sourcewell? Y or N.	Yes
3	Identify all subsidiaries, D.B.A., authorized affiliates, and any other entity that will be responsible for offering and performing delivery of Solutions within this Proposal (i.e. Responsible Supplier(s) that will execute a master agreement with Sourcewell).	<ul style="list-style-type: none"> • REV Group, Inc.: 245 S. Executive Drive, Suite 100, Brookfield, WI 53005 o E-ONE, Inc: 1601 SW 37th Ave, Ocala, FL 34474 o Kovatch Mobile Equipment Corp: One Industrial Complex, Nesquehoning, PA 18240 o Ferrara Fire Apparatus: 27855 James Chapel Rd., Holden, LA 70744 o Spartan Fire LLC: 907 7th Ave N., Brandon, SD 57005 o Spartan Chassis: 1541 Reynolds Road, Charlotte, MI 48813 o Smeal Holding LLC, Smeal SFA LLC: 610 W 4th St, Snyder, NE 68664 o Smeal LTC LLC: 68 Cocalico Creek Rd, Ephrata, PA 17522
4	Provide your CAGE code or Unique Entity Identifier (SAM):	<ul style="list-style-type: none"> • E-ONE: 8P082 • KME - Nesquehoning PA: 0H4A9 • KME - Ocala, FL: 9A3S7 • FERRARA: 0ZYT8
5	Provide your NAICS code applicable to Solutions proposed.	336120
6	Proposer Physical Address:	REV Group, Inc.: 245 S. Executive Drive, Suite 100, Brookfield, WI 53005
7	Proposer website address (or addresses):	<ul style="list-style-type: none"> • REV Group: https://revgroup.com/ • E-ONE Inc: https://e-one.com/ • Kovatch Mobile Equipment Corp: https://kmefire.com/ • Ferrara Fire Apparatus: https://ferrarafire.com/ • Spartan ER (Spartan, Smeal): https://spartaner.com/ • Spartan Chassis: https://spartanfirechassis.com/
8	Proposer’s Authorized Representative (name, title, address, email address & phone) (The representative must have authority to sign the “Proposer’s Assurance of Compliance” on behalf of the Proposer):	Philip Gerace, Director of Dealer Development 1601 SW 37th Ave, Ocala, FL 34474 philip.gerace@revgroup.com 352-427-9579
9	Proposer’s primary contact for this proposal (name, title, address, email address & phone):	Philip Gerace, Director of Dealer Development 1601 SW 37th Ave, Ocala, FL 34474 philip.gerace@revgroup.com 352-427-9579
10	Proposer’s other contacts for this proposal, if any (name, title, address, email address & phone):	<ul style="list-style-type: none"> • E-ONE Inc: Mike Purvis, Director of Sales, 1601 SW 37th Ave, Ocala, FL 34474, mpurvis@e-one.com, 757-607-6066 • Kovatch Mobile Equipment Corp: Zach Zschunke, Inside Sales Manager, One Industrial Complex, Nesquehoning, PA 18240, zzschanke@revgroup.com, 570-657-5391 • Ferrara Fire Apparatus, Paul Deli, Inside Sales Manager, 27855 James Chapel Rd., Holden, LA 70744, pdeli@revgroup.com, 225-567-7100 • Spartan ER: Nick Hummel, Director of Sales, 1541 Reynolds Road, Charlotte, MI 48813, nickolas.hummel@spartanmotors.com, 404-245-4665

Table 2A: Financial Viability and Marketplace Success (50 Points, applies to Table 2A and 2B)

Line Item	Question	Response *
11	Provide a brief history of your company, including your company's core values, business philosophy, and industry longevity related to the requested Solutions.	<p>REV Group companies are leading designers and manufacturers of specialty vehicles and related aftermarket parts and services, which serve a diversified customer base, primarily in North America, through two segments: Specialty Vehicles and Recreational Vehicles. The Specialty Vehicles Segment provides customized vehicle solutions for applications, including essential needs for public services (ambulances and fire apparatus) and commercial infrastructure (terminal trucks and industrial sweepers). REV Group's Recreational Vehicles Segment manufactures a variety of RVs from Class B vans to Class A motorhomes. REV Group's portfolio is made up of well-established principal vehicle brands, including many of the most recognizable names within their industry. Several of REV Group's brands pioneered their specialty vehicle product categories and date back more than 50 years. REV Group trades on the NYSE under the symbol REVG.</p> <p>REV Group brands have over 210,000 vehicles in service today—which we believe is a testament to our customers' loyalty and the trust they place in our products. Our vision is to improve the quality of life for our customers and their communities. Our mission is to provide our customers with vehicles they can count on when it matters most. Our company values include:</p> <p>Do What's Right We act with integrity and transparency, always. We keep our commitments and earn trust through our actions.</p> <p>Safety is Life The safety of our people and those who travel in our vehicles is our top priority. It's more than the way we work, it's a way of life.</p> <p>Win As One We value diversity in our teams, respect alternative perspectives and are accountable to each other to fulfill our goals.</p> <p>Build Lasting Trust Customers depend on our vehicles and support through the entire lifecycle of their purchase. We will build that trust through transparency and respect and by providing quality vehicles and attentive service.</p> <p>Think Like An Owner Each of us plays a vital role in our success. We innovate, execute and use our resources wisely to create value for our stakeholders.</p> <p>REV's Specialty Vehicle Segment includes brands with a rich legacy of serving the fire and emergency services. E-ONE has been in business since 1974 and built the first extruded aluminum fire truck cab and body. For over 50 years, E-ONE has been a recognized leader in fire truck manufacturing. Kovatch Mobile Equipment has been building fire trucks since 1980 and in the vehicle business since 1946. KME's can-do culture, elevated engineering prowess and bold, no-limits attitude, allow it to deliver comprehensive solutions in multiple materials to meet the unique demands of each fire department. Ferrara Fire Apparatus has been in business since 1987 and its extra-heavy-duty construction protects crews and delivers maximum response capabilities so they can carry out their vital mission of serving communities. Spartan ER has been serving since 1975 and its network represents the Spartan, Smeal and Ladder Tower brands. Known for breakthrough innovations in safety, ergonomics and serviceability, Spartan ER engineering, manufacturing and sales teams have developed an agile, highly collaborative culture to serve their customers and industry from multiple manufacturing sites across the U.S.</p>
12	What are your company's expectations in the event of an award?	<p>Based upon the success with the current Sourcewell contract, our fire brands are excited about the opportunity to serve our markets with a new contract. Upon a successful award, our dealers will be retrained regarding the new contract via Teams meetings and in person at the annual sales meeting. They will lead with this opportunity to assist fire departments in saving money and time when procuring apparatus. The contract will be promoted on all websites and social media channels. POC's for each brand will report to Sourcewell on a timely basis and follow up on inquiries from various Sourcewell and Canoe members. Based upon past history, we expect volume to exceed \$400M over the initial term.</p>

13	<p>Demonstrate your financial strength and stability with meaningful data. This could include such items as financial statements, SEC filings, credit and bond ratings, letters of credit, and detailed reference letters. Upload supporting documents (as applicable) in the document upload section of your response. DO NOT PROVIDE ANY TAX INFORMATION OR PERSONALLY IDENTIFIABLE INFORMATION.</p>	<p>REV Group, Inc. (NYSE: REVG) is a strong collection of brands with a long history of delivering excellent products to the fire services and specialty vehicle market. Annual sales exceed \$2.5 billion. An SEC Form 10-Q can be found in the documents section of the bid.</p> <p>On June 4, 2025 REV announced its second quarter results. A copy of the full announcement is attached to this submission in Documents. Excluding the bus manufacturing business which was sold, the Specialty Vehicle Segment's 2nd quarter net sales increased \$49.4 million, or 12.2% compared to the prior year quarter. Adjusted 2nd quarter EBITDA increased \$24.0 million, or 74.3% compared to the prior year quarter.</p> <p>REV remains a financially strong corporation with the ability to manufacture its full backlog and warrant and service their apparatus for years to come.</p> <p>In 2024, E-ONE celebrated its 50th Anniversary. Now in 2025 Spartan is celebrating its 50th anniversary and Ferrara Fire turns 37. In 2026 KME will celebrate its 75th anniversary. These brands are icons within the US fire market.</p>
14	<p>What is your US market share for the Solutions that you are proposing?</p>	<p>About 100 fire truck manufacturers who are members of the Fire Apparatus Manufacturer's Association report their truck bookings and deliveries, but only blind, totalized data is published. Therefore, there is no official market share reporting for fire truck manufacturing. In addition, there are 15 fire truck manufacturers that do not belong to FAMA and don't report sales and deliveries. However, at this time, REV estimates its US market share to be greater than 25% of FAMA reported new orders as a 12-month rolling average.</p>
15	<p>What is your Canadian market share for the Solutions that you are proposing?</p>	<p>Less Canadian fire truck manufacturers report to FAMA orders and deliveries than in the US, so market share is even more difficult to calculate. However, REV's Canadian share is similar to its US rolling average.</p>
16	<p>Disclose all current and completed bankruptcy proceedings for Proposer and any included possible Responsible Party within the past seven years. Proposer must provide notice in writing to Sourcewell if it enters a bankruptcy proceeding at any time during the pendency of this RFP evaluation.</p>	<p>There are no past, current or planned bankruptcy proceedings.</p>
17	<p>How is your organization best described: is it a manufacturer, a distributor/dealer/reseller, or a service provider? Answer the question that best applies to your organization, either a) or b).</p> <p>a) If your company is best described as a distributor/dealer/reseller (or similar entity), provide your written authorization to act as a distributor/dealer/reseller for the manufacturer of the products proposed in this RFP. If applicable, is your dealer network independent or company owned?</p> <p>b) If your company is best described as a manufacturer or service provider, describe your relationship with your sales and service force and with your dealer network in delivering the products and services proposed in this RFP. Are these individuals your employees, or the employees of a third party?</p>	<p>REV and its fire brands are OEM manufacturers that go to market with individual, independent dealer networks. E-ONE, KME, Ferrara, and Spartan ER each have their own dealer networks that are comprised of privately owned businesses that sell apparatus, offer service and parts, and often sell loose equipment. The dealers employ experienced sales representatives (REV brands assist with training) as well as warranty, service and parts teams that provide timely and support to fire departments in the regions that the trucks are operating. Fire Departments wishing to purchase apparatus do so directly with the dealer, who in turn issue a purchase order to their REV brand for the apparatus. The dealer, along with a REV assigned contract administrator, assist the customer during the entire purchase, design, build and delivery process as a team supporting them every step of the way.</p> <p>Below is a list of brand dealers. Each dealer has an area of responsibility that ranges anywhere from part of single state to multiple states. Many dealers have multiple sales and service locations to support customers within that area.</p> <ul style="list-style-type: none"> • E-ONE currently has 31 dealers in North America. • KME currently has 27 dealers in North America • Ferrara Fire currently has 16 dealers in North America • Spartan currently has 26 dealers in North America <p>Note: Select Airport Rescue Fire Fighting (ARFF) customers purchase directly from E-ONE</p>

18	<p>If applicable, provide a detailed explanation outlining the licenses and certifications that are both required to be held, and actually held, by your organization (including third parties and subcontractors that you use) in pursuit of the business contemplated by this RFP.</p>	<p>As manufacturing entities, each REV business unit fully complies with all Federal, State and local regulations and certifications required. Specifically for fire apparatus, REV businesses comply with all DOT, FMVSS, and NFPA 1900 standards for the design and testing of trucks. In addition, all four REV fire brands are members of the Fire Apparatus Manufacturer's Association (FAMA), a not-for-profit trade association committed to enhancing the quality of the fire apparatus industry and emergency services community.</p> <p>E-ONE is also an ISO 9001:2015 manufacturing facility. ISO 9001 is an international management system standard that specifies requirements for a quality management system (QMS). Organizations use the standard to demonstrate their ability to consistently provide products and services that meet customer and regulatory requirements, as well as the organization's own requirements. E-ONE also holds UL authorizations at both their Hamburg, NY and Ocala, FL facilities for UL's Vehicle Inspection Program (VIP) to assure compliance of trucks to NFPA 1901 and CAN/ULC S515 (certificates attached to bid).</p> <p>KME is also an ISO 9001: 2015 facility and listed on the same certificate.</p> <p>In addition, dealers for all brands employ service technicians, many with certifications from engine, transmission and pump manufacturers as well as Emergency Vehicle Technician (EVT) certifications. The Emergency Vehicle Technician Certification Commission, Inc. (EVTCC) administers EVT certifications, which are designed to improve the quality of service and repair for emergency vehicles across the United States and Canada. The certification program began as a response to the need for standardized training and recognition for technicians who work on emergency vehicles, such as fire trucks and ambulances.</p>	*
19	<p>Disclose all current and past debarments or suspensions for Proposer and any included possible Responsible Party within the past seven years. Proposer must provide notice in writing to Sourcwell if it enters a debarment or suspension status any time during the pendency of this RFP evaluation.</p>	<p>There are no past or current debarments or suspensions.</p>	*
20	<p>Describe any relevant industry awards or recognition that your company has received in the past five years.</p>	<p>REV Awards:</p> <ul style="list-style-type: none"> • 2025 USA Today America's Climate Leaders • 2025 Newsweek World's Greenest Companies 2025 by Newsweek • 2025 Newsweek America's Greatest Workplaces for Diversity 2025 • 2024 Newsweek America's Greatest Workplaces for Diversity 2024 • 2024 Newsweek America's Greatest Workplaces 2024 • 2024: Military Friendly - Our commitment to enhancing workforce diversity is exemplified by our successful recruitment of 128 veterans, earning us recognition as a Military Friendly® Employer with a Bronze designation from militaryfriendly.com. Furthermore, we are proud to hold a Military Friendly Spouse Employer designation, reflecting our ongoing support for military families. • 2025: Military Friendly - Military Friendly® Employer with a Bronze designation from militaryfriendly.com. Furthermore, we are proud to hold a Military Friendly Spouse Employer designation, reflecting our ongoing support for military families. 	*
21	<p>What percentage of your sales are to the governmental sector in the past three years?</p>	<p>For REV Fire Group, nearly 100% of all sales go to a city, municipality, county, province, VFD, or airport. In addition, E-ONE and KME hold contracts with the Defense Logistics Agency which acquires fire trucks for all branches of the US military.</p>	*
22	<p>What percentage of your sales are to the education sector in the past three years?</p>	<p>REV brands do supply apparatus to fire academies, community colleges and universities with fire protection and fire science programs, but this accounts for a small portion (less than 3%) of the total business.</p>	*
23	<p>List all state, cooperative purchasing agreements that you hold. What is the annual sales volume for each of these agreement over the past three years?</p>	<p>Sourcwell \$101M/yr avg over last 3 years HGAC \$33M/yr avg over last 3 years NASPO Value Point \$30M/yr avg over last 3 years NPPGov \$0 Ohio STS \$2M/yr avg over last 3 years Pennsylvania COSTARS \$5M/yr avg over last 3 years</p>	*
24	<p>List any GSA contracts or Standing Offers and Supply Arrangements (SOSA) that you hold. What is the annual sales volume for each of these contracts over the past three years?</p>	<p>Defense Logistics Agency (DLA): Supply fire apparatus to US military 2022-2024 Combined Volume: E-ONE \$20.2M, KME \$7.6M</p>	*

Table 2B: References/Testimonials

Line Item 25. Supply reference information from three customers who are eligible to be Sourcewell participating entities.

Entity Name *	Contact Name *	Phone Number *	
Snohomish Regional Fire & Rescue, Snohomish, WA	Deputy Chief Logistics Ron Rasmussen	360-926-4053	*
Pasco County Fire & Rescue, FL	Rick Giangrande, Fleet Acquisition Specialist	727-243-4726	*
Hazleton PA Fire Department	Chief Donald Leshko	570-956-7389	*

Table 3: Ability to Sell and Deliver Solutions (150 Points)

Describe your company’s capability to meet the needs of Sourcewell participating entities across the US and Canada, as applicable. Your response should address in detail at least the following areas: locations of your network of sales and service providers, the number of workers (full-time equivalents) involved in each sector, whether these workers are your direct employees (or employees of a third party), and any overlap between the sales and service functions.

Line Item	Question	Response *	
26	Sales force.	<p>REV brands work in partnership with their independent dealers. Each REV Fire brand has REV brand employed Regional Sales Managers who are assigned as the primary POC for a North American region. These Regionals support both dealers and end-users in their region. E-ONE has a Director of Sales plus 3 Regional Sales Managers. KME and Ferrara have a Senior Sales Manager and 2 Regional Sales Managers. Spartan ER has a Director of Sales plus 3 Regional Sale Managers. REV also employs a federal government and ARFF specialist.</p> <p>This team is also supported at each brand with an inside sales department that oversees the quote design, contract administration, production, and final inspection/delivery processes. The inside sales teams have approximately 12-18 people at each brand.</p> <p>Of course each dealer also employs a full-time sales team. At last registration, the combined dealership sales force (inside and outbound) exceeds 400 individuals.</p>	*
27	Describe the network of Authorized Sellers who will deliver Solutions, including dealers, distributors, resellers, and other distribution methods.	<p>REV Brands operate independent dealer networks. Each dealer has an area of responsibility for a specific brand (E-ONE, KME, Ferrara or Spartan ER) that ranges anywhere from part of a single state to multiple states. Some dealers carry more than one REV Fire brand. Many dealers have multiple sales and service locations to support customers within that area.</p> <p>* E-ONE currently has 31 dealers in North America. * KME currently has 27 dealers in North America * Ferrara Fire currently has 16 dealers in North America * Spartan currently has 26 dealers in North America</p> <p>Based upon registrations by dealers, the REV network has over 400 dealer employees that support the sales (inside and outbound) process. This does not include service or parts technicians.</p>	*
28	Service force.	<p>REV brand customer service departments also work in partnership with their independent dealers' service centers. REV employs an extensive team supporting our brands and dealers that includes a field service team (6 techs) to complement the dealer technicians.</p> <p>In addition, each dealer has their own service and parts team. At last registration, our combined networks had over 500 technicians operating mobile and dealership warranty and service, as well as testing and maintenance.</p>	*

29	Describe the ordering process. If orders will be handled by distributors, dealers or others, explain the respective roles of the Proposer and others.	<p>REV dealers utilize their brand's configuration tool that generates specifications, pricing and drawings for the customer. The specifications are reviewed by the brand's engineering team prior to release to ensure it is buildable and no conflicts exist. This is required because North American fire departments typically order highly customized trucks for their unique needs.</p> <p>If the customer wishes to use a cooperative purchasing contract, the dealer ensures that the customer is a member and the unit's specs and price fully comply with the contract. Upon purchase, the end user issues a purchase order to the dealer, who in turn issues their own purchase order to the REV brand. Upon receipt and acceptance of the order by the REV brand, a contract administrator is assigned as a primary POC for the dealer and customer for the truck(s) ordered.</p> <p>Shortly after purchase (usually within 2-6 months currently), the customer, dealer and REV contract administrator hold a pre-construction meeting to review the specifications, garner any additional clarifications, and make any customer requested changes since order. Once complete, the unit enters into the production cycle.</p>	*
30	Describe in detail the process and procedure of your customer service program, if applicable. Include your response-time capabilities and commitments, as well as any incentives that help your providers meet your stated service goals or promises.	<p>REV brand customer service departments work in partnership with their independent dealers' service centers. REV understands the importance of service and support to our customers and staffs the following support areas:</p> <ul style="list-style-type: none"> • Technical Support Team with 5 full-time technicians • An on-call "truck down" phone for 24/7 support • Field training team for pumper and aerial operations • Field service team (6 techs) to complement the dealer technicians and assist with high-tech repairs • Warranty Team at each brand to administer all warranty support • REV Parts team <p>REV does an outstanding job of supporting customers with parts. Rev Fire Group operates a separate Parts and Accessory Business designed to help dealers keep trucks in service by selling both custom fabricated fire truck parts and other standard trucks parts.</p> <ul style="list-style-type: none"> • 35,000 sqft parts warehouse in Ocala FL servicing both dealers and OE chassis customers • 8,000 different parts are in stock (\$5M of inventory value), all in an effort to reduce customer lead times for parts • 74% of shipments are shipped out within 4 days after order receipt • REV Fire shipped out \$55.7M of parts to dealers and customers in 2024 <p>In addition to a parts staff of 35 people in Ocala, there are additional parts research staff at the brand locations. These parts research personnel are experts for their brand and identify requested part numbers from bills of material and drawings, and find sources of components. This is especially important due to the long in-service life of apparatus with some parts demands for trucks exceeding 30 years.</p> <p>REV also operates an annual Fire Truck Training Conference (FTTC). Details can be found in the answer to #41.</p>	*
31	Describe your ability and willingness to provide your products and services to Sourcewell participating entities.	REV Group and its independent dealers are eager to supply our full product line of apparatus, parts, and services to Sourcewell members. Dealer personnel are trained on the resources and processes of the Sourcewell contract.	*
32	Describe your ability and willingness to provide your products and services to Sourcewell participating entities in Canada.	REV Group and its 6 independent Canadian dealers are eager to supply our full product line of apparatus, parts, and services to Sourcewell/Canoe members in Canada. Dealer personnel are trained on the resources and processes of the Sourcewell/Canoe contract.	*
33	Identify any geographic areas of the United States or Canada that you will NOT be fully serving through the proposed agreement.	All geographic areas in the US and Canada will be served.	*
34	Identify any account type of Participating Entity which will not have full access to your Solutions if awarded an agreement, and the reasoning for this.	All entity types in the US and Canada will be served with our full offering.	*
35	Define any specific requirements or restrictions that would apply to our participating entities in Hawaii and Alaska and in US Territories.	These areas may purchase under the contract without exception.	*
36	Will Proposer extend terms of any awarded master agreement to nonprofit entities?	Yes, terms of the agreement would extend to non-profit, members i.e. Volunteer Fire Departments, Fire Districts, Hospitals, and Schools.	*

Table 4: Marketing Plan (100 Points)

Line Item	Question	Response *
37	Describe your marketing strategy for promoting this opportunity. Upload representative samples of your marketing materials (if applicable) in the document upload section of your response.	<p>As an existing Sourcewell contract holder, REV will continue its current marketing strategies as well as implement new tactics:</p> <p>Training—REV personnel have attended Sourcewell Academies to understand all available resources. In 2023, REV invited its dealer network to a webinar on Sourcewell processes and resources for dealer promotion of the contract. In addition, in June 2025, REV Fire brands held their annual sales meeting with all dealer sales personnel. Sourcewell personnel were in attendance to not only promote the contract during the tradeshow hours, but also taught nine, one-hour breakout sessions on Cooperative Purchasing Strategies.</p> <p>Advertising: The Sourcewell contract and associated links are on each REV brand's website. In addition, the contract would be promoted on the brands social media pages including Facebook and LinkedIn. A copy of a recent post can be found in the attachments section of the bid.</p> <p>Tradeshows: REV brands display the Sourcewell flags at several tradeshows, including the annual FDIC show held in Indianapolis each year.</p>
38	Describe your use of technology and digital data (e.g., social media, metadata usage) to enhance marketing effectiveness.	<p>Any lead for a Sourcewell purchase that comes from Sourcewell/Canoe, the REV website, or other sources is tracked and electronically sent to both the dealer and the REV brand's Regional Sales Manager. As mentioned in 37, REV has websites, Facebook pages, Instagram accounts, and Linked In pages to promote the brands and the benefits of cooperative purchasing.</p> <p>REV also shares Sourcewell data with its dealers when pursuing new accounts to support the use of cooperative contracts.</p>
39	In your view, what is Sourcewell's role in promoting agreements arising out of this RFP? How will you integrate a Sourcewell-awarded agreement into your sales process?	<p>In our view, REV and Sourcewell are partners in helping customers understand and utilize the contract. Sourcewell should continue to promote themselves and their contracts to customers at tradeshow and events for both end users (Fire Department personnel) and Procurement teams.</p> <p>REV spent substantial time at its annual dealer meeting not just on resources, but actually trained personnel on how to integrate cooperative purchasing contracts into their sales process. The class was titled, "Pro Tips for Leveraging Cooperative Contracts" and was taught by Crosby Grindle and Shawn Stokes from Sourcewell . It is described as perspectives from an industry expert and cooperative contract fire officer on how to leverage cooperative contracts for increased sales success, overcome objections to cooperative contracts, and how to find resources and reporting requirements.</p>
40	Are your Solutions available through an e-procurement ordering process? If so, describe your e-procurement system and how governmental and educational customers have used it.	<p>REV brands do not offer e-procurement ordering as orders by members are placed with a local dealer and not directly with the fire brand.</p>

Table 5A: Value-Added Attributes (100 Points, applies to Table 5A and 5B)

Line Item	Question	Response *
41	Describe any product, equipment, maintenance, or operator training programs that you offer to Sourcewell participating entities. Include details, such as whether training is standard or optional, who provides training, and any costs that apply.	<p>Per NFPA, when apparatus are delivered to customers, included in the standard contract is fire department truck orientation. Trainers from dealers typically present at the customer location with their apparatus. Aerial training is usually offered by REV brand trainers or 3rd party expert training teams. Training is usually 3 days to accommodate all shifts.</p> <p>In addition, REV operates an annual Fire Truck Training Conference (FTTC). Founded in 1994, the Fire Truck Training Conference is the industry's leading Emergency Vehicle Technician training and testing event. REV's core aim is to enhance fire service technicians' expertise and knowledge, empowering them to ensure that fire trucks and ambulances remain reliable and responsive, safeguarding their communities.</p> <p>During the 4 days of this training event, over 50 unique classes are held with comprehensive, hands-on education by industry experts. There are two opportunities for EVT testing and the ability connect with suppliers one-on-one during the exhibitor's reception. This event is open to any technician from a fire department or dealership (even if it's a dealer that represents a competitive brand to REV). More information at: https://revgroup.com/wp-content/uploads/2025/05/2025_FTTC_Booklet_050625.pdf</p>

42	Describe any technological advances that your proposed Solutions offer.	<p>Within each of the fire brands websites is an entire section on Innovations. Some highlights include:</p> <p>* E-ONE: VECTOR ALL ELECTRIC FIRE TRUCK One of the most exciting developments in the firefighting industry is here. Vector™ answers the call as the first North American-style fully electric fire truck that's innovatively engineered so firefighters can drive and pump on electric power only. Energized with proven global technology and customizable to meet your department's needs. Zero tailpipe emissions. Zero tailpipe greenhouse gas. Reduced noise pollution and quieter on scene. Vector is taking firefighting to an all-new level.</p> <p>* Ferrara: MAXX-Strength™ Construction Designed to face the most demanding conditions, Ferrara fire trucks are built with extra-heavy-duty MAXX-Strength Construction. FFA engineers strength into its chassis and bodies using specifically molded I-beams, thicker aluminum extrusions and robust Domex® steel frame rails. Continuous, V-channel welds and extruded 2"x 4" gussets at each 90° joint add another level of toughness. With MAXX-Strength Construction, every Ferrara fire truck is built to be as resilient as those who operate them.</p> <p>* KME: FLEX-FORM™ BODY Engineered with the customer's choice of formed metal (aluminum, galvanized steel or stainless steel), blended with a matching extruded subframe, the Flex-Form body construction delivers more compartment space in the same overall length to store all the essential gear for the job. The single-formed wall construction allows compartments to be 6" to 8" larger than the door openings, providing additional storage space over the entire body.</p> <p>* Spartan ER: SPARTAN AWD Industry-first all-wheel drive mates the Hendrickson STEERTEK with the EZ Trac front drive system to provide a better ride and outstanding traction characteristics. Spartan's AWD system provides superior crank angles for improved turning radiuses. It also provides a low center of gravity and maintains the traditional ride height of a 2WD fire apparatus.</p>
43	Describe any "green" initiatives that relate to your company or to your Solutions, and include a list of the certifying agency for each.	<p>Environmental metrics, including energy use, water consumption, air emissions, and hazardous waste generation, are tracked monthly to understand the organization's current environmental footprint and identify opportunities for reduction. Our Sustainability Document (attached) goes into extensive detail in our initiatives (pages 16-27).</p>
44	Identify any third-party issued eco-labels, ratings or certifications that your company has received for the Solutions included in your Proposal related to energy efficiency or conservation, life-cycle design (cradle-to-cradle), or other green/sustainability factors.	<p>REV "Green" awards include:</p> <ul style="list-style-type: none"> * 2025 USA Today America's Climate Leaders * 2025 Newsweek World's Greenest Companies 2025 <p>In addition, REV manufactures an "all electric" firetruck, the Vector. The pumper uses batteries for all pumping and driving operations.</p>
45	What unique attributes does your company, your products, or your services offer to Sourcewell participating entities? What makes your proposed solutions unique in your industry as it applies to Sourcewell participating entities?	<p>REV Fire Group uniquely combines the power of 7 brands operating independently with the support of a corporate parent that helps them deliver outstanding technologies and unmatched customer support. Few OEMs can deliver the breadth of REV solutions that include ARFF, custom chassis, commercial chassis, wildland, pumper, rescue, tanker, aerial, industrial models. In addition, REV brands have implemented quick delivery apparatus programs for pumpers and aerials (80% of all apparatus purchased in the fire service) that offer pre-engineered solutions with deliveries currently around one year. These include the E-ONE Select Series and VM8 program, the Spartan S-180 program, and the KME and Ferrara K-180 and F-180 program. Documents with details can be found attached to this bid.</p>
46	Describe how your solutions meet United States fire related standards, such as NFPA, for the equipment and products offered in your proposal, including applicable federal and state requirements.	<p>REV vehicles are constructed with full compliance to all FMVSS, DOT, and NFPA 1900 standards. Each vehicle is 3rd party tested at all brand locations, per NFPA to ensure compliance to the specification and that it meets all construction, pumping, and electrical standards. UL's VIP program is also utilized at many of the facilities.</p>
47	Describe how your solutions meet Canadian fire related standards such as NFPA, and CAN/ULC S515 for the equipment and products offered in your proposal, including applicable federal and provincial requirements.	<p>REV vehicles are constructed with full compliance to all CMVSS, DOT, and NFPA 1900 standards. Each vehicle is 3rd party tested at all brand locations, per NFPA to ensure compliance to the specification and that it meets all construction, pumping, and electrical standards. UL's VIP program is also utilized at many of the facilities for both NFPA and the CAN/ULC S515.</p>
48	Describe available service and repair options for the equipment and products offered in your proposal and how the process works with those servicing the equipment.	<p>REV fire brand dealers offer a full range of in-house and mobile service. Should a fire customer require warranty repair, service, maintenance or parts, they're first contact is to their local dealer. REV dealers also offer additional services that includes engine and transmission repair and pump testing. REV dealers are trained to support our vehicle, but should they require additional support, our warranty administration, tech support, and factory technician teams are available.</p>

Table 5B: Value-Added Attributes

Line Item	Question	Certification	Offered	Comment
49	Select any Women or Minority Business Entity (WMBE), Small Business Entity (SBE), or veteran owned business certifications that your company or hub partners have obtained. Upload documentation and a listing of dealerships, HUB partners or resellers if available. Select all that apply.		<input type="radio"/> Yes <input checked="" type="radio"/> No	N/A
50		Minority Business Enterprise (MBE)	<input type="radio"/> Yes <input checked="" type="radio"/> No	N/A
51		Women Business Enterprise (WBE)	<input type="radio"/> Yes <input checked="" type="radio"/> No	N/A
52		Disabled-Owned Business Enterprise (DOBE)	<input type="radio"/> Yes <input checked="" type="radio"/> No	N/A
53		Veteran-Owned Business Enterprise (VBE)	<input type="radio"/> Yes <input checked="" type="radio"/> No	N/A
54		Service-Disabled Veteran-Owned Business (SDVOB)	<input type="radio"/> Yes <input checked="" type="radio"/> No	N/A
55		Small Business Enterprise (SBE)	<input checked="" type="radio"/> Yes <input type="radio"/> No	Absolute Fire Protection, E-ONE dealer in N. NJ.
56		Small Disadvantaged Business (SDB)	<input type="radio"/> Yes <input checked="" type="radio"/> No	N/A
57		Women-Owned Small Business (WOSB)	<input type="radio"/> Yes <input checked="" type="radio"/> No	N/A

Table 6A: Pricing (400 Points, applies to Table 6A and 6B)

Provide detailed pricing information in the questions that follow below.

Line Item	Question	Response *
58	Describe your payment terms and accepted payment methods.	Payment for apparatus is made by the Sourcewell member to the dealership. Terms are generally COD unless otherwise negotiated (i.e.Net 30). Refurbishment and remount services generally require some level of down payment. Should a member wish to pre-pay for their apparatus, REV offers a simple interest discount (currently at 5%) to the member (new trucks only, excludes remount and refurbishment). Payment is via check, ACH or wire transfer.
59	Describe any leasing or financing options available for use by educational or governmental entities.	REV customers have the options of leasing and financing from REV Financial, multiple 3rd party leasing companies, or their local bank. REV's financial services division offers a full product portfolio including Full Payout Loans, Leasing, Trac Leasing, Fair Market Value Leases, and Municipal Leases. There are flexible payment schedules and the application process is quick and easy.

60	Describe any standard transaction documents that you propose to use in connection with an awarded agreement (order forms, terms and conditions, service level agreements, etc.). Upload all template agreements or transaction documents which may be proposed to Participating Entities.	<p>Typically there are four documents associated with each purchase:</p> <ol style="list-style-type: none"> 1) PO or contract from Member to Dealer (varies based upon Member procurement process) 2) PO from dealer to REV for the apparatus (varies based upon Dealer) 3) Specification satisfying the Member's requirements (varies per brand and customer). An example can be found in the Documents section. 4) A drawing to give a visual representation of the proposed apparatus. An example can be found in the Documents section. 	*
61	Do you accept the P-card procurement and payment process? If so, is there any additional cost to Sourcwell participating entities for using this process?	No	*
62	Describe your pricing model (e.g., line-item discounts or product-category discounts). Provide detailed pricing data (including standard or list pricing and the Sourcwell discounted price) on all of the items that you want Sourcwell to consider as part of your RFP response. If applicable, provide a SKU for each item in your proposal. Upload your pricing materials (if applicable) in the document upload section of your response.	<p>REV brands are offering product-category discounts. A price list and related documents can be found in the Documents section of the submission.</p> <p>Each REV brand has an online configuration tool utilized by its authorized dealers to generate the unique specifications and pricing for each customer's request. The tool contains thousands of options for fire departments to select from and generates a detailed specification and a list/market price. That price is then discounted per the matrix for Sourcwell members. Any additional items like extended warranties, maintenance contracts, or taxes are added for a final purchase price. An example of the related documents is attached to this submission.</p>	*
63	Quantify the pricing discount represented by the pricing proposal in this response. For example, if the pricing in your response represents a percentage discount from MSRP or list, state the percentage or percentage range.	<p>REV brands are offering product-category discounts.</p> <p>Trucks are competitively priced within the dealer quotation tool. REV offers additional discounts to Sourcwell members that range from 3-5% off a list/market price.</p>	*
64	Describe any quantity or volume discounts or rebate programs that you offer.	REV's Sourcwell pricing takes into consideration the overall expected volume of the contract. However, when members make multiple unit purchases in a single order, REV may extend additional discounts based upon the quantity and model of apparatus.	*
65	Propose a method of facilitating "sourced" products or related services, which may be referred to as "open market" items or "non-contracted items". For example, you may supply such items "at cost" or "at cost plus a percentage," or you may supply a quote for each such request.	Any open market sourced item or service will be quoted as a separate quote or line item within the proposal so the member clearly understands the purchase price for those items.	*
66	Identify any element of the total cost of acquisition that is NOT included in the pricing submitted with your response. This includes all additional charges associated with a purchase that are not directly identified as freight or shipping charges. For example, list costs for items like pre-delivery inspection, installation, set up, mandatory training, or initial inspection. Identify any parties that impose such costs and their relationship to the Proposer.	Each proposed final price to a member includes all items requested including delivery, training, equipment mounting, and inspections trips, etc. Such items are proposed by the REV dealer in the total purchase price and can be broken out as detailed line items whenever requested.	*
67	If freight, delivery, or shipping is an additional cost to the Sourcwell participating entity, describe in detail the complete freight, shipping, and delivery program.	Each apparatus quotation from the dealer to the member is uniquely created and presented with all associated costs. Almost without exception, the final quote and pricing includes delivery to the end user's location.	*
68	Specifically describe freight, shipping, and delivery terms or programs available for Alaska, Hawaii, Canada, or any offshore delivery.	As reviewed in Question 67, each quote includes all charges including delivery. Any costs associated with driveaway, transport by rail, or ocean freight would be detailed and included in the final purchase price.	*
69	Describe any unique distribution and/or delivery methods or options offered in your proposal.	Trucks leave REV factories via a driveaway service with bonded and insured professional drivers. On many occasions they are first delivered to the dealership for vehicle cleanup, prep, and installation of equipment and then delivered to the member.	*
70	Specifically describe any self-audit process or program that you plan to employ to verify compliance with your proposed agreement with Sourcwell. This process includes ensuring that Sourcwell participating entities obtain the proper pricing.	Upon order entry at the REV brand, if a cooperative contract was utilized, it is noted and tracked within the order entry system. The administrative fees associated with the contract are held in an account awaiting payment at the time of quarterly reporting. Regional Sales Managers utilize shipment data provided by the REV brand and dealer to assist with quarterly sales reporting to the contract (i.e. Sourcwell).	*

71	If you are awarded an agreement, provide a few examples of internal metrics that will be tracked to measure whether you are having success with the agreement.	Sales Directors/Managers at each REV brand have past sales performance under the existing Sourcewell contract in place now. The are responsible for reporting deliveries to Sourcewell. Managers will track historical performance by quarter over a 5-year period to see if we are having success in growing Sourcewell usage.	*
72	Provide a proposed Administration Fee payable to Sourcewell. The Fee is in consideration for the support and services provided by Sourcewell. The propose an Administrative Fee will be payable to Sourcewell on all completed transactions to Participating Entities utilizing this Agreement. The Administrative Fee will be calculated as a stated percentage, or flat fee as may be applicable, of all completed transactions utilizing this Master Agreement within the preceding Reporting Period defined in the agreement.	REV Group is proposing a flat fee structure for contract usage. \$1500 for any vehicle with a commercial chassis (i.e. Ford, International, Freightliner, Kenworth), \$1750 for any custom chassis pumper, tanker, rescue, industrial, ARFF or WUI and \$2000 for any aerial truck. For service, remount, and refurbishment the fee would be .75%, not to exceed \$1500.	*

Table 6B: Pricing Offered

Line Item	The Pricing Offered in this Proposal is: *	Comments
73	The pricing offered is as good as or better than pricing typically offered through existing cooperative contracts, state contracts, or agencies.	This pricing is consistently best in class for REV cooperative contracts across the board.

Table 7A: Depth and Breadth of Offered Solutions (200 Points, applies to Table 7A, 7B, 7C and 7D)

Line Item	Question	Response *
74	Provide a detailed description of all the Solutions offered, including used Solutions if applicable, offered in the proposal.	REV brands are offering a full line of both structural apparatus and specialty vehicles. This includes Aerials (ladders, platforms, SQRT, and tractor drawn), Pumpers (structural, industrial, off road), Rescues (light and heavy duty—walk-in, walk-around and combination), Wildland (mini-pumper, urban interface), Tanker, and ARFF vehicles. Including finance, refurb, and service options. Complementary products and services are also offered including equipment and mounting, service, maintenance contracts, and refurbishments.
75	Within this RFP category there may be subcategories of solutions. List subcategory titles that best describe your products and services.	Structural Apparatus and Comprehensive Solutions including aerials, pumpers, rescues, wildland, tanker, and ARFF. As well as complementary products and services.
76	Describe available remount or refurbishing services included within your proposal, the pricing method for such services, and any related order processes.	REV Dealerships offer a full range of services including remount and refurbishing services. This includes frame rail replacement, aerial repairs, body and paint work, electrical system upgrades, and new chassis for existing bodies.
77	Describe in detail warranties offered and how they will be administered, including if they cover all products, parts, labor, technician travel, and geographic regions covered.	Apparatus base warranty is one year (two years on Spartan chassis). Several components have manufacturers' warranties that range from 2 years to lifetime. Administration of warranties for end-users is at their local, authorized dealer who works in conjunction with their REV brand warranty team and in certain cases, a major component supplier. Items under REV warranty are repaired or replaced at no cost to the end-user for parts, labor or travel. Major components used in Company apparatuses are not covered by the limited warranty issued by Company. Instead the Original Equipment Manufacturers ("OEM") of these Major Components issue warranties and have separate warranty procedures which must be followed by the Dealer, Service Center, and Customer. The dealer is responsible for both sales and warranty coverage for all areas of their Area of Responsibility (AOR).
78	Will you cover warranty service for items made by other manufacturers that are part of your proposal, or are these warranty issues typically passed on to the original equipment manufacturer?	<p>The base vehicle warranty is covered and administered by REV and its dealer. Select Major Components have separate warranty procedures which must be followed by the Dealer, Service Center, and Customer. Major Components include, but are not limited to:</p> <ul style="list-style-type: none"> • Commercial chassis • Engines • Transmissions • Axles • Tires • Batteries • Fire Pumps • Line Voltage Generators • Breathing Air Systems <p>Most often the dealer is either an authorized service center to administer the warranty or works in conjunction with a local authorized warranty repair center to assist the fire department with all warranty and service.</p>
79	Describe any service contract options or extended warranties being offered with your proposal.	REV brand dealers offer service, maintenance, and testing contracts to their customers as part of an overall apparatus solution. In addition, REV dealers offer 3rd party warranty coverage which has two levels of coverage: basic powertrain and full exclusionary, which includes coverage for all of the vehicle's factory-equipped mechanical and electrical parts—except those that are excluded by the terms and conditions. Excluded items include, but are not limited to, tires, windshield glass, upholstery, or structure. All coverage has unlimited mileage, zero-dollar deductible, and is transferable and renewable. Additional coverage is available for pump/pump panel, aerials, electric vehicle batteries, and more. All new vehicle coverage can start as the OEM coverage expires, and coverage can also be used for any vehicles presently in service to help reduce the annual repair budget and total cost of ownership.

Table 7B: Category 1: Structural Apparatus and Comprehensive Solutions - Proposers may submit in Category 1 OR Category 2 OR Category 3, NOT MULTIPLE

Indicate below if the listed types or classes of Solutions are offered within your proposal. Provide additional comments in the text box provided, as necessary.

We will not be submitting for Table 7B: Category 1: Structural Apparatus and Comprehensive Solutions - Proposers may submit in Category 1 OR Category 2 OR Category 3, NOT MULTIPLE

Line Item	Category or Type	Offered *	Comments	
80	Pumper trucks, aerial trucks, tanker/tender or water supply trucks, and quints	<input checked="" type="radio"/> Yes <input type="radio"/> No	A full line of commercial and custom pumpers and tankers, as well as a wide range of aerials and quints.	*
81	Equipment, options, accessories, components, and supplies complementary to the offering of the unit types described in 77 above	<input checked="" type="radio"/> Yes <input type="radio"/> No	Equipment as ordered with the apparatus for which there is not a Sourcewell offering.	*
82	Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in 77 - 78 above	<input checked="" type="radio"/> Yes <input type="radio"/> No	A full range of service, refurbishment, remount, maintenance and training as delivered by REV dealers.	*
83	Category 1 responders MAY include COMPLEMENTARY Specialty Apparatus and Equipment and Brush and Wildland Urban Interface (WUI) Apparatus solutions in their response	<input checked="" type="radio"/> Yes <input type="radio"/> No	Specialty vehicles including rescue, wildland and interface apparatus.	*

Table 7C: Category 2: Specialty Apparatus and Equipment - Proposers may submit in Category 1 OR Category 2 OR Category 3, NOT MULTIPLE

Indicate below if the listed types or classes of Solutions are offered within your proposal. Provide additional comments in the text box provided, as necessary.

We will not be submitting for Table 7C: Category 2: Specialty Apparatus and Equipment - Proposers may submit in Category 1 OR Category 2 OR Category 3, NOT MULTIPLE

Line Item	Category or Type	Offered *	Comments	
84	Specialty apparatus including but not limited to: aircraft rescue and firefighting (ARFF), command and communication units, mobile foam units, and custom rescue trailers	<input type="radio"/> Yes <input type="radio"/> No		*
85	Equipment, options, accessories, components, and supplies complementary to the offering of the unit types described in 81 above	<input type="radio"/> Yes <input type="radio"/> No		*
86	Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in 81 - 82 above	<input type="radio"/> Yes <input type="radio"/> No		*
87	Category 2 responders MAY include COMPLEMENTARY Brush and Wildland Urban Interface (WUI) Apparatus solutions in their response	<input type="radio"/> Yes <input type="radio"/> No		*

Table 7D: Category 3: Brush and Wildland Urban Interface (WUI) Apparatus - Proposers may submit in Category 1 OR Category 2 OR Category 3, NOT MULTIPLE

Indicate below if the listed types or classes of Solutions are offered within your proposal. Provide additional comments in the text box provided, as necessary.

We will not be submitting for Table 7D: Category 3: Brush and Wildland Urban Interface (WUI) Apparatus - Proposers may submit in Category 1 OR Category 2 OR Category 3, NOT MULTIPLE

Line Item	Category or Type	Offered *	Comments
88	Wildland firefighting apparatus, such as brush trucks and wildland urban interface (WUI) units	<input type="radio"/> Yes <input type="radio"/> No	*
89	Equipment, options, accessories, components, and supplies complementary to the offering of the unit types described in 85 above	<input type="radio"/> Yes <input type="radio"/> No	*
90	Related services including installation, customization, remounting, refurbishment, inspection, maintenance, repair, training, and support, directly related to the offering in 85 - 86	<input type="radio"/> Yes <input type="radio"/> No	*
91	Category 3 responders MAY include COMPLEMENTARY Specialty Apparatus and Equipment solutions in their response	<input type="radio"/> Yes <input type="radio"/> No	*

Table 8: Exceptions to Terms, Conditions, or Specifications Form

Line Item 92. NOTICE: To identify any exception, or to request any modification, to Sourcewell standard Master Agreement terms, conditions, or specifications, a Proposer must submit the proposed exception(s) or requested modification(s) via redline in the Master Agreement Template provided in the "Bid Documents" section. Proposer must upload the redline in the "Requested Exceptions" upload field. All exceptions and/or proposed modifications are subject to review and approval by Sourcewell and will not automatically be included in the Master Agreement.

Do you have exceptions or modifications to propose?	Acknowledgement *
	<input type="radio"/> Yes <input checked="" type="radio"/> No

Documents

Ensure your submission document(s) conforms to the following:

1. Documents in PDF format are preferred. Documents in Word, Excel, or compatible formats may also be provided.
2. Documents should NOT have a security password, as Sourcewell may not be able to open the file. It is your sole responsibility to ensure that the uploaded document(s) are not either defective, corrupted or blank and that the documents can be opened and viewed by Sourcewell.
3. Sourcewell may reject any response where any document(s) cannot be opened and viewed by Sourcewell.
4. If you need to upload more than one (1) document for a single item, you should combine the documents into one zipped file. If the zipped file contains more than one (1) document, ensure each document is named, in relation to the submission format item responding to. For example, if responding to the Marketing Plan category save the document as "Marketing Plan."

- [Pricing](#) - REV Price List.pdf - Monday August 11, 2025 09:34:41
- [Financial Strength and Stability](#) - Q13-Financial Strength-Q2 Results and SEC 10-Q.pdf - Thursday July 24, 2025 07:29:58
- [Marketing Plan/Samples](#) - REV Marketing Summary.pdf - Thursday July 24, 2025 08:03:26
- [WMBE/MBE/SBE or Related Certificates](#) - Dealer List and SBE Cert for Absolute.pdf - Thursday July 24, 2025 07:55:19
- [Standard Transaction Document Samples](#) - Sourcewell Verification and Standard Transaction Documents.pdf - Thursday July 24, 2025 08:16:27
- [Upload Additional Document](#) - REVC0071_2024-SustainabilityReport_FINAL.pdf - Thursday July 24, 2025 07:33:41
- Requested Exceptions (optional)

Addenda, Terms and Conditions

PROPOSER AFFIDAVIT OF COMPLIANCE

I certify that I am an authorized representative of Proposer and have authority to submit the foregoing Proposal:

1. The Proposer is submitting this Proposal under its full and complete legal name, and the Proposer legally exists in good standing in the jurisdiction of its residence.
2. The Proposer warrants that the information provided in this Proposal is true, correct, and reliable for purposes of evaluation for award.
3. The Proposer certifies that:
 - (1) The prices in this Proposal have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other Proposer or competitor relating to-
 - (i) Those prices;
 - (ii) The intention to submit an offer; or
 - (iii) The methods or factors used to calculate the prices offered.
 - (2) The prices in this Proposal have not been and will not be knowingly disclosed by the Proposer, directly or indirectly, to any other Proposer or competitor before award unless otherwise required by law; and
 - (3) No attempt has been made or will be made by Proposer to induce any other concern to submit or not to submit a Proposal for the purpose of restricting competition.
4. To the best of its knowledge and belief, and except as otherwise disclosed in the Proposal, there are no relevant facts or circumstances which could give rise to an organizational conflict of interest. An organizational conflict of interest is created when a current or prospective supplier is unable to render impartial service to Sourcewell due to the supplier's: a. creation of evaluation criteria during performance of a prior agreement which potentially influences future competitive opportunities to its favor; b. access to nonpublic and material information that may provide for a competitive advantage in a later procurement competition; c. impaired objectivity in providing advice to Sourcewell.
5. Proposer will provide to Sourcewell Participating Entities Solutions in accordance with the terms, conditions, and scope of a resulting master agreement.
6. The Proposer possesses, or will possess all applicable licenses or certifications necessary to deliver Solutions under any resulting master agreement.
7. The Proposer will comply with all applicable provisions of federal, state, and local laws, regulations, rules, and orders.
8. Proposer its employees, agents, and subcontractors are not:
 1. Included on the "Specially Designated Nationals and Blocked Persons" list maintained by the Office of Foreign Assets Control of the United States Department of the Treasury found at: <https://www.treasury.gov/ofac/downloads/sdnlist.pdf>;
 2. Included on the government-wide exclusions lists in the United States System for Award Management found at: <https://sam.gov/SAM/>; or
 3. Presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from programs operated by the State of Minnesota; the United States federal government, as applicable; or any Participating Entity. Vendor certifies and warrants that neither it nor its principals have been convicted of a criminal offense related to the subject matter of this solicitation.

By checking this box I acknowledge that I am bound by the terms of the Proposer's Affidavit, have the legal authority to submit this Proposal on behalf of the Proposer, and that this electronic acknowledgment has the same legal effect, validity, and enforceability as if I had hand signed the Proposal. This signature will not be denied such legal effect, validity, or enforceability solely because an electronic signature or electronic record was used in its formation. - Philip Gerace, Director of Dealer Development, REV Group, Inc.

The Proposer declares that there is an actual or potential Conflict of Interest relating to the preparation of its submission, and/or the Proposer foresees an actual or potential Conflict of Interest in performing the obligations contemplated in the solicitation proposal.

Yes No

The Bidder acknowledges and agrees that the addendum/addenda below form part of the Bid Document.

Check the box in the column "I have reviewed this addendum" below to acknowledge each of the addenda.

File Name	I have reviewed the below addendum and attachments (if applicable)	Pages
Addendum_7_Firefighting_Apparatus_RFP_082025 Wed August 6 2025 04:28 PM	<input checked="" type="checkbox"/>	2
Addendum_6_Firefighting_Apparatus_RFP_082025 Mon August 4 2025 05:42 PM	<input checked="" type="checkbox"/>	1
Addendum_5_Firefighting_Apparatus_RFP_082025 Thu July 31 2025 04:55 PM	<input checked="" type="checkbox"/>	1
Addendum_4_Firefighting_Apparatus_RFP_082025 Fri July 25 2025 04:25 PM	<input checked="" type="checkbox"/>	2
Addendum_3_Firefighting_Apparatus_RFP_082025 Wed July 23 2025 04:42 PM	<input checked="" type="checkbox"/>	3
Addendum_2_Firefighting_Apparatus_RFP_082025 Thu July 3 2025 03:37 PM	<input checked="" type="checkbox"/>	1
Addendum_1_Firefighting_Apparatus_RFP_082025 Wed July 2 2025 03:49 PM	<input checked="" type="checkbox"/>	1

EXHIBIT C

City's Insurance and Indemnity

Exhibit C

Insurance and Indemnity

INDEMNIFICATION

To the furthest extent allowed by law, VENDOR shall indemnify, hold harmless and defend CITY and each of its officers, officials, employees, agents and volunteers from any and all loss, liability, fines, penalties, forfeitures, costs and damages (whether in contract, tort or strict liability, including but not limited to personal injury, death at any time and property damage) incurred by CITY, VENDOR or any other person, and from any and all claims, demands and actions in law or equity (including reasonable attorney's fees, litigation expenses and cost to enforce this agreement), arising or alleged to have arisen directly or indirectly out of performance of this Contract. VENDOR'S obligations under the preceding sentence shall apply regardless of whether CITY or any of its officers, officials, employees, agents or volunteers are passively negligent, but shall not apply to any loss, liability, fines, penalties, forfeitures, costs or damages caused by the active or sole negligence, or the willful misconduct, of CITY or any of its officers, officials, employees, agents or volunteers.

If VENDOR should subcontract all or any portion of the work to be performed under this Contract, VENDOR shall require each subcontractor to indemnify, hold harmless and defend CITY and each of its officers, officials, employees, agents and volunteers in accordance with the terms of the preceding paragraph.

This section shall survive termination or expiration of this Contract.

INSURANCE REQUIREMENTS

(a) Throughout the life of this Agreement, VENDOR shall pay for and maintain in full force and effect all insurance as required herein with an insurance company(ies) either (i) admitted by the California Insurance Commissioner to do business in the State of California and rated no less than "A-VII" in the Best's Insurance Rating Guide, or (ii) as may be authorized in writing by CITY'S Risk Manager or his/her designee at any time and in his/her sole discretion. The required policies of insurance as stated herein shall maintain limits of liability of not less than those amounts stated therein. However, the insurance limits available to CITY, its officers, officials, employees, agents and volunteers as additional insureds, shall be the greater of the minimum limits specified therein or the full limit of any insurance proceeds to the named insured.

(b) If at any time during the life of the Agreement or any extension, VENDOR or any of its subcontractors fail to maintain any required insurance in full force and effect, all services and work under this Agreement shall be discontinued immediately, and all payments due or that become due to VENDOR shall be withheld until notice is received by CITY that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to CITY. Any failure to maintain the required insurance shall be sufficient cause for CITY to terminate this

Agreement. No action taken by CITY pursuant to this section shall in any way relieve VENDOR of its responsibilities under this Agreement. The phrase “fail to maintain any required insurance” shall include, without limitation, notification received by CITY that an insurer has commenced proceedings, or has had proceedings commenced against it, indicating that the insurer is insolvent.

(c) The fact that insurance is obtained by VENDOR shall not be deemed to release or diminish the liability of VENDOR, including, without limitation, liability under the indemnity provisions of this Agreement. The duty to indemnify CITY shall apply to all claims and liability regardless of whether any insurance policies are applicable. The policy limits do not act as a limitation upon the amount of indemnification to be provided by VENDOR. Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of VENDOR, vendors, suppliers, invitees, contractors, sub-contractors, subcontractors, or anyone employed directly or indirectly by any of them.

1. PRODUCTS LIABILITY INSURANCE: VENDOR shall maintain, and provide the City with verification of, manufacturer's products liability insurance policy in excess of \$1,000,000 by providing a certificate of insurance on said Bid Item(s) equipment. Certificates shall be issued by an insurance company meeting the requirements to conduct business in the state of California. City is required to be an additional insured with primary and non- contributory coverage in favor of the City on this General Liability Policy.

If the scope of work includes delivery or install, the requirements below apply in addition to the above requirements.

Coverage shall be at least as broad as:

1. The most current version of Insurance Services Office (ISO) Commercial General Liability Coverage Form CG 00 01, providing liability coverage arising out of your business operations. The Commercial General Liability policy shall be written on an occurrence form and shall provide coverage for “bodily injury,” “property damage” and “personal and advertising injury” with coverage for premises and operations (including the use of owned and non-owned equipment), products and completed operations, and contractual liability (including, without limitation, indemnity obligations under the Agreement) with limits of liability not less than those set forth under “Minimum Limits of Insurance.”
2. The most current version of ISO *Commercial Auto Coverage Form CA 00 01, providing liability coverage arising out of the ownership, maintenance or use of

automobiles in the course of your business operations. The Automobile Policy shall be written on an occurrence form and shall provide coverage for all owned, hired, and non-owned automobiles or other licensed vehicles (Code 1- Any Auto).

3. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.

MINIMUM LIMITS OF INSURANCE

VENDOR shall procure and maintain for the duration of the contract, and for 5 years thereafter, insurance with limits of liability not less than those set forth below. However, insurance limits available to CITY, its officers, officials, employees, agents and volunteers as additional insureds, shall be the greater of the minimum limits specified herein or the full limit of any insurance proceeds available to the named insured:

1. COMMERCIAL GENERAL LIABILITY

- (i) \$1,000,000 per occurrence for bodily injury and property damage;
- (ii) \$1,000,000 per occurrence for personal and advertising injury;
- (iii) \$2,000,000 aggregate for products and completed operations; and,
- (iv) \$2,000,000 general aggregate applying separately to the work performed under the Agreement.

2. COMMERCIAL AUTOMOBILE LIABILITY

\$1,000,000 per accident for bodily injury and property damage.

3. Workers' Compensation Insurance as required by the State of California with statutory limits and EMPLOYER'S LIABILITY with limits of liability not less than:

- (i) \$1,000,000 each accident for bodily injury;
- (ii) \$1,000,000 disease each employee; and,
- (iii) \$1,000,000 disease policy limit.

UMBRELLA OR EXCESS INSURANCE

In the event VENDOR purchases an Umbrella or Excess insurance policy(ies) to meet the "Minimum Limits of Insurance," this insurance policy(ies) shall "follow form" and

afford no less coverage than the primary insurance policy(ies). In addition, such Umbrella or Excess insurance policy(ies) shall also apply on a primary and non-contributory basis for the benefit of the CITY, its officers, officials, employees, agents and volunteers.

DEDUCTIBLES AND SELF-INSURED RETENTIONS

VENDOR shall be responsible for payment of any deductibles contained in any insurance policy(ies) required herein and VENDOR shall also be responsible for payment of any self-insured retentions.

OTHER INSURANCE PROVISIONS/ENDORSEMENTS

(i) All policies of insurance required herein shall be endorsed to provide that the coverage shall not be cancelled, non-renewed, reduced in coverage or in limits except after thirty (30) calendar days written notice has been given to CITY, except ten (10) days for nonpayment of premium. VENDOR is also responsible for providing written notice to the CITY under the same terms and conditions. Upon issuance by the insurer, broker, or agent of a notice of cancellation, non-renewal, or reduction in coverage or in limits, VENDOR shall furnish CITY with a new certificate and applicable endorsements for such policy(ies). In the event any policy is due to expire during the work to be performed for CITY, VENDOR shall provide a new certificate, and applicable endorsements, evidencing renewal of such policy not less than fifteen (15) calendar days prior to the expiration date of the expiring policy.

(ii) The Commercial General and Automobile Liability insurance policies shall be written on an occurrence form.

(iii) The Commercial General and Automobile Liability insurance policies shall be endorsed to name City, its officers, officials, agents, employees and volunteers as an additional insured all ongoing and completed operations. Additional Insured endorsements under the General Liability policy must be as broad as that contained in ISO Forms: GC 20 10 11 85 or both CG 20 10 & CG 20 37.

(iv) The Commercial General and Automobile Liability insurance shall contain, or be endorsed to contain, that VENDOR insurance shall be primary to and require no contribution from the City. Primary and Non Contributory language under the General Liability policy must be as broad as that contained in ISO Form CG 20 01 04 13. These coverages shall contain no special limitations on the scope of protection afforded to City, its officers, officials, employees, agents and volunteers.

(v) Should any of these policies provide that the defense costs are paid within the Limits of Liability, thereby reducing the available limits by defense costs, then the

requirement for the Limits of Liability of these policies will be twice the above stated limits.

(vi) All insurance policies required herein shall contain, or be endorsed to contain, a waiver of subrogation as to CITY, its officers, officials, agents, employees and volunteers.

PROVIDING OF DOCUMENTS

VENDOR shall furnish CITY with all certificate(s) and applicable endorsements effecting coverage required herein. All certificates and applicable endorsements are to be received and approved by the CITY'S Risk Manager or his/her designee prior to CITY'S execution of the Agreement and before work commences. All non-ISO endorsements amending policy coverage shall be executed by a licensed and authorized agent or broker. Upon request of CITY, VENDOR shall immediately furnish CITY with a complete copy of any insurance policy required under this Agreement, including all endorsements, with said copy certified by the underwriter to be a true and correct copy of the original policy. This requirement shall survive expiration or termination of this Agreement. All subcontractors working under the direction of VENDOR shall also be required to provide all documents noted herein.

SUBCONTRACTORS

If VENDOR subcontracts any or all of the services to be performed under this Agreement, VENDOR shall be solely responsible for ensuring that it's subcontractors maintain insurance coverage at levels no less than those required by applicable law and is customary in the relevant industry.

EXHIBIT D

Vendor Quote



Fresno Fire Department

(1) Smeal 107 Rear Mount Aerial

Sales Rep: Scott Beck



1762 South Sycamore Ave, Rialto, CA 92376
(402) 719-1242 scottfasfire@gmail.com

PROPOSAL

(1) Smeal 107 Rear Mount Aerial Equipment	\$1,729,899.00 x 1	\$1,729,899.00
	\$225,000.00 x 1	\$225,000.00
Multiple Unit Discount		(\$20,000.00)
Pretax Total	\$1,934,899.00 x 1	\$1,934,899.00
Sales Tax @ 8.350%	\$161,564.07 x 1	\$161,564.07
Total Purchase	\$2,096,463.07 x 1	\$2,096,463.07

Signing this agreement constitutes the purchase of (1) Smeal 107 Rear Mount Aerial for the total cost of:

\$2,096,463.07

This purchase will be made via the Sourcewell Contract#082025-RVG.
The expected build completion time is 550 days.

Tax rates are subject to change and the tax will be determined at the time of registration. Any changes to the price will be documented on a Change Order which may increase or decrease the price during the build process. California Tire Fee is included. FAS will register the Vehicle. Pricing is good for 120 days. Fire Apparatus Agreement and or a Purchase Order needs to be submitted to Fire Apparatus Solutions. Signature below represents agreement to the Pricing and Terms listed above.

Fresno Fire Department

Fire Apparatus Solutions

Signature

Date

Signature

Date

Scott Beck

5/4/2026

Scott Beck

5/4/2026

Print

Date

Print

Date



APPARATUS SERVICE



**DIAMONDBACK
FIRE & RESCUE**

EQUIPMENT SALES



1762 S SYCAMORE AVE, RIALTO, CA 92376 (909)-879-7354

24/7 EMERGENCY SERVICE: (714) 357-9706

fasservice.org

FIRE APPARATUS SOLUTIONS



For All Your Apparatus Needs

Our Mission at FAS is to maintain your fleet. We offer a variety of services designed around your needs, from complete fleet maintenance to special projects. Our experienced EVT and CFMA certified mechanics are qualified for all repairs and support of your vehicles. Our shop is fully equipped to get you back in service, so you can get back to what you do best.



A FULL LINE OF SERVICE



Air & ABS Brake System Specialists

AC & Heating Service/Repair

Aluminum/Steel Welding & Fabrication

Battery & Lighting Systems

Body, Cab, & Frame Repair

Communication & Intercom Systems

Drivetrain Components

Electrical Diagnostics

Electronic System Diagnostic

Engine Repair

Generator Service & Repair

Hydraulic Cylinder & System Repair

Paint Booth For All Your Painting Needs

PTO Replacement, Installation

Pump, Valve & Plumbing Repair

Compliance Inspections (NFPA, DOT)

CONTACT US

SALES & SERVICE

William Kalmikov - General Manager
 P: (714) 357-9706
 E: FASFire@gmail.com

ACCOUNTING / BILLING & EQUIPMENT

Jennifer Rodriguez - Office Manager
 P: (909) 879-7354
 C: (909) 301-3983
 E: JennFASfire@gmail.com

APPARATUS SALES

Scott Beck - Sales Manager
 C: (402) 719-1242
 E: ScottFASfire@gmail.com

PARTS SALES

Ryan Bradberry - Parts Sales Rep.
 C: (951) 264-4166
 E: RyanFASfire@gmail.com

WARRANTY

Cuah Beltran - Service Manager
 C: (626) 419-6550
 E: CuahFASfire@gmail.com

MOBILE SERVICE



PICK UP / DELIVERY

Because we know how important it is to get you back into service, our FAS team is available *24 hours a day, 7 days a week, 365 days a year* to meet your emergency needs. Call us at **714-357-9706** anytime for an immediate response. We even provide Pick-Up and Delivery options!



- Annual / Quarterly Inspection
- Emergency Roadside Assistance
- Preventative Maintenance L.O.F.
- Minor Engine & Chassis Diagnose / Repair
- Lap Top Diagnostics
ABS, Engine, Transmission, V-Mux



SHOP SERVICE

Our shop is fully equipped to handle whatever your needs may be. We also keep a large inventory of parts in stock to get your apparatus back in service.



- Major Aerial Repairs
- Pump Testing
- Scheduled UL Testing & Repair
- Tank Removal & Repair
- Frame Rail Repair
- Aluminum Welding & Modifications
- Siren, Lighting, & Decal Package
- Plumbing Modifications
- Custom SS Tig Welding



FIRE APPARATUS SOLUTIONS

LADDER TESTING / MAINTENANCE

Make sure your ladders are UL and NFPA compliant. At FAS we tailor our services to your needs. We offer regular maintenance, ladder repair, and 3rd party ladder testing to help keep your team safe and your truck in service.



COMPLETE REFURBISHED PRODUCTS

From aerial ladder trucks to pumpers, we refurbish them all. All of our refurbished ladders are fully inspected and have 10 year structural warranty.

- Side Blocks
- Rebuilt Hydraulic Cylinders
- Cables
- Waterways

REFURBISHED WATER TENDER



REFURBISHED PUMPER



REFURBISHED LTI AERIAL



COLLISION REPAIR

MAJOR BODY REPAIR



FRAME & CHASSIS REPAIR



CRITICAL REPAIRS



CUSTOM PROJECTS

When you need to customize a compartment, extra storage, or need a wireless hydraulic actuating arm. You can trust us to customize to your specifications.

CUSTOM TRAY



CUSTOM STORAGE



WIRELESS HYDRAULIC ACTUATING ARM



FIRE APPARATUS SOLUTIONS

AUTHORIZED FIRE TRUCK SALES

FAS is an authorized dealer for Smeal Fire Apparatus, US Tanker Co. (UST), Ladder Tower Co. (LTC), and Danko Emergency Vehicles. From pumpers and tankers to platforms and aerials, and now Quints! We are dedicated to the quality craftsmanship in every apparatus we produce. Contact us to start building your custom fire truck. We Build Respect!



IT'S BACK! LTI is Now LTC

Snorkel® Squirt® Squirt^{TELE}®

LTC™ aerials, formerly known as LTI, have over four decades of durability and performance in the toughest operational environments. More than 5,000 of these aerials have been built since they were first introduced in the late 1960s. In fact, Ladder Tower Co. and Smeal Fire Apparatus Co., our parent company, have more combined experience engineering, building, testing and supporting aerials than anyone else in the industry. For more information visit: www.laddertower.com



Smeal Fire Apparatus Co.

Smeal offers a full line of custom and commercial pumpers, rescue pumpers, mini and rescue pumpers, stainless steel tanker / tenders, aerial ladders, platforms, TDA's, wildland, and urban interface vehicles. For more information visit: www.smeal.com



ERGONOMIC HOSE LOAD (EHL)

It's always been the best way we know to deploy or pack hose. Smeal's EHL hydraulically extends the hosebed down and out behind your aerial to provide a low working height that lets you stand on the ground while reloading or unloading hose. The EHL puts a minimum of 1000' of 5" LDH within easy reach.



ELECTRIC POSITIONAL WATERWAY

Fingertip control gives aerial operators maximum flexibility. Smeal's patented, electric positional waterway allows the aerial operator to reposition the waterway with the flip of a switch at the turntable control station. This Smeal exclusive design lets you change the placement of the monitor from rescue to water tower positions with flows up to 1,500 GPM.



FIRE APPARATUS SOLUTIONS

DIAMONDBACK FIRE & RESCUE

EQUIPMENT SALES

STARTING IN 1997 THIS FAMILY OWNED COMPANY BUILT ITS BUSINESS AROUND THE BEST HYDRAULIC EXTRICATION TOOL ON THE MARKET - AMKUS RESCUE SYSTEMS. STRIVING TO PROVIDE THE BEST "SERVICE AFTER THE SALE", DIAMONDBACK FIRE ALSO OFFERS EXTRICATION TRAINING AND MOBILE HYDRAULIC RESCUE TOOL SERVICE.

AMKUS®

RESCUE SYSTEMS

BEING A FULL LINE FIRE EQUIPMENT DEALER, WE WORK HARD TO PROVIDE THE BEST FROM ALL OF OUR SUPPLIERS:



➤ RES-Q-JACK FOR VEHICLE STABILIZATION



➤ VETTER FOR AIR BAGS AND HAZ MAT EQUIPMENT



➤ DRAEGER FOR GAS DETECTION EQUIPMENT, SCBA EQUIPMENT AND THERMAL IMAGING



➤ TASK FORCE TIPS FOR NOZZLES, VALVES, MONITOR MANIFOLDS, ADAPTERS AND FITTINGS



➤ SVI FOR BLOWERS AND SAWS



➤ CMC FOR ROPE AND RESCUE EQUIPMENT

FULL SERVICE, SALES, & PARTS DEALER



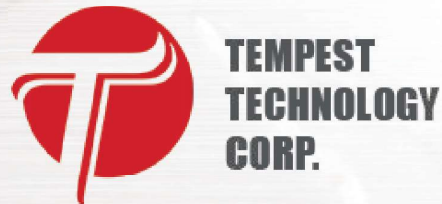
AUTHORIZED SERVICE & WARRANTY



AUTHORIZED PARTS DISTRIBUTOR



ADDITIONAL EQUIPMENT SALES SUPPLIERS



Gladiator

Fire Apparatus Solutions
1762 S. Sycamore AVE
Rialto, CA 92376

Prepared By : SCOTT BECK

scottfasfire@gmail.com

Prepared For : Fresno City Fire Department

Quotation

		Description	
VEHICLE			
S	0100-012	MODEL	Gladiator
O	8012-002	CUSTOMERS / OEMS	Smeal (02070)[1002812]
S	8011-027	MODEL YEAR	Model Year - 2027
S	8001-001	COUNTRY OF SERVICE	Country of Service United States Of America
S	8017-009	CAB AND CHASSIS LABELING LANGUAGE	Cab and Chassis Labeling Language English w/Innovative Controls Labels
O	8006-010	APPARATUS TYPE	Apparatus Type Rear Mount Aerial
O	8066-018	REAR MOUNT AERIAL DEVICE	Rear Mount Aerial Device Smeal S34RL-107/107' Rear Mnt Ladder
S	8008-001	VEHICLE TYPE	Vehicle Type Straight Truck
S	8008A-000	VEHICLE ANGLE OF APPROACH PACKAGE	Vehicle Angle of Approach NFPA Minimum 8.00 Degrees
O	0104-003	AXLE CONFIGURATION	Axle Configuration 6x4 (Rear Tandem Axle Drive Only)
O	0101-016	GROSS AXLE WEIGHT RATINGS FRONT	GAWR Front 23000#
O	0102-009	GROSS AXLE WEIGHT RATINGS REAR	GAWR Rear 48000#
S	8003-197	WARRANTY	Warranty Cab and Chassis (2) Year RFW0102
CAB			
O	1000-003	CAB STYLE	Cab Style MFD Flat Roof
O	8101-001	OCCUPANT PROTECTION	REMOVE Occupant Protection
S	1501-002	CAB FRONT FASCIA	Cab Frt Fascia Classic
S	1518-025	FRONT GRILLE	Cab Frt Grille Hinged Classic Styled
S	1551-002	CAB UNDERCOAT	Cab Undercoat
S	1552-002	CAB SIDE DRIP RAIL	Cab Side Drip Rail
O	1521-002	CAB PAINT EXTERIOR	Cab Paint Exterior Two Tone
S	1533-001	CAB PAINT PROCESS/MANUFACTURER	Cab Paint Process/Manufacturer PPG
O	1522-075	CAB PAINT PRIMARY/LOWER COLOR	Cab Paint Primary/Lower Color PPG Red FBCH 71096 ALT
O	1523-244	CAB PAINT SECONDARY/UPPER COLOR	Cab Paint Sec/Upper Color PPG White FBCH 2185
O	1524-002	CAB PAINT EXTERIOR BREAKLINE	Cab Paint Exterior Breakline Classic
O	1515-004	CAB PAINT PINSTRIPE	Cab Paint Pinstripe 1/2" Gold Leaf
S	8013-156	CAB PAINT WARRANTY	Cab Paint Warranty PPG (10) Year RFW0710
O	1334-039	CAB PAINT INTERIOR	Cab Paint Int Multi-tone Onyx Blk
S	1005-001	CAB ENTRY DOORS	Cab Entry Doors (4)
O	1101-102	CAB ENTRY DOOR TYPE	Cab Entry Door Type Barrier Free w/Pollak Switches
S	1322-007	CAB INSULATION	Cab Insulation Nonwoven Polyester Fiber
S	8004-033	CAB STRUCTURAL WARRANTY	Cab Structural Warranty (10) Year RFW0602
S	9001-006	CAB TEST INFORMATION	Cab Test Information Crash Test ECE-R29/SAE J2420/SAE J2422
ELECTRICAL POWER DISTRIBUTION			
S	5000-018	ELECTRICAL SYSTEM	Elec System 12V DC Multiplex

S	5005-251	VEHICLE DISPLAY	Vehicle Display Control-Maxx 10" Touchscreen LH Sw Pnl
S	5004-002	LOAD MANAGEMENT SYSTEM	Load Management System Multiplex
S	5622-032	DATA RECORDING SYSTEM	Data Recording Sys Vehicle Data Control-Maxx w/USB Data Link
O	5031-102	ACCESSORY POWER	Accessory Pwr Batt & Ign Stud w/(2)Fuse Batt/(3)Fuse Mstr Bus Bar w/Aerial Mstr
S	5011-001	EXTERIOR ELECTRICAL TERMINAL COATING	Exterior Electrical Terminal Coating Spray On Plasti Dip
S	8014-002	ELECTRICAL SYSTEM WARRANTY	Electrical System Warranty (2) Year RFW0202

ENGINE

O	1701-184	ENGINE	Engine Diesel 565HP/1850Ft-Lbs Cummins X15 HHD - EPA 2027
S	1329-002	CAB ENGINE TUNNEL	Cab Engine Tunnel Large
S	1731-018	DIESEL PARTICULATE FILTER CONTROLS	DPF Ctrl Regeneration Sw & Inhibit Sw w/Digital Dash
S	1718-002	ENGINE PROGRAMMING HIGH IDLE SPEED	Engine Programming High Idle Speed 1250 RPM
S	1719-005	ENGINE HIGH IDLE CONTROL	Engine High Idle Ctrl Automatic and Manual w/Disp Actv
S	1710-001	ENGINE PROGRAMMING ROAD SPEED GOVERNOR	Engine Programming Road Speed Governor Enabled
S	1713-010	AUXILIARY ENGINE BRAKE	Aux Engine Brake Compression Brake w/VG Turbo
O	1708-005	AUXILIARY ENGINE BRAKE CONTROL	Aux Engine Brake Ctrl Off/Low/High Sw Pnl
S	1720-003	ELECTRONIC ENGINE OIL LEVEL INDICATOR	Elec Engine Oil Level Indicator
O	1715-004	FLUID FILLS	Fluid Fills Fwd For Large Displacement Cap
S	1735-001	ENGINE DRAIN PLUG	Engine Drain Plug
S	8002-001	ENGINE WARRANTY	Engine Warranty Cummins (5) Year/100,000 Miles
S	1721-001	ENGINE PROGRAMMING REMOTE THROTTLE	Engine Program Rmt Throttle Off
S	1727-001	ENGINE PROGRAMMING IDLE SPEED	Engine Programming Idle Speed 700 RPM

AIR INTAKE

S	2801-010	ENGINE AIR INTAKE	Engine Air Intake Filtration and Restriction w/Replaceable Element Abv Radiator
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COOLING

S	2704-016	ENGINE FAN DRIVE	Engine Fan Drive Variable Speed
S	2701-021	ENGINE COOLING SYSTEM	Engine Cooling System Serial Flow w/Package Drop-Out Prov
S	2711-005	ENGINE COOLING SYSTEM PROTECTION	Engine Cooling System Protection Light Duty Skid Plate Paint Frame Color
S	2708-001	ENGINE COOLANT	Engine Coolant Extended Life
S	2706-003	ELECTRONIC COOLANT LEVEL INDICATOR	Elec Low Coolant Level Indicator
O	2709-002	COOLANT HOSES	Coolant Hoses Blue Stripe Heater & Radiator
O	2710-005	ENGINE COOLANT OVERFLOW BOTTLE	Engine Coolant Overflow Expansion Bottle

EXHAUST

O	2901-092	ENGINE EXHAUST SYSTEM	Eng Exhaust Sys Under Frm RH Inboard Inner Frame Mnt DPF/SCR
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		Inboard	
S	2907-021	DIESEL EXHAUST FLUID TANK	Diesel Exhaust Fluid Tank LH 5 Gal Fill Thru Rr Step
S	2902-010	ENGINE EXHAUST ACCESSORIES	Engine Exhaust Acc Temp Mitigation
S	2906-002	ENGINE EXHAUST WRAP	Engine Exhaust Wrap
O	8018-006	EMISSIONS SYSTEM WARRANTY	Emissions System Warranty (10) Years Heavy HDE/450K Miles/22K Hours RFW0144
S	8018A-002	REGULATED EMISSIONS WARRANTY TIRES	Regulated Emissions Warranty Tires (2) Years/24,000 Miles RFW0145
S	8018B-002	REGULATED EMISSIONS WARRANTY AIR CONDITIONING	Regulated Emissions Warranty Air Conditioning (5) Years/100,000 Miles RFW0146

TRANSMISSION

O	1801-018	TRANSMISSION	Transmission Allison 4000 EVS w/Retarder
O	1806-003	TRANSMISSION MODE PROGRAMMING	Transmission Mode Programming 5th Startup/6th Mode
O	1811-005	TRANSMISSION FEATURE PROGRAMMING	Transmission Feature Programming Allison Gen 5 & 6-E I/O Package 227/Rescue
S	1807-005	TRANSMISSION SHIFT SELECTOR	Transmission GEN 5 & 6-E Shift Sel Key Pad/Push Button
S	1815-002	ELECTRONIC TRANSMISSION OIL LEVEL INDICATOR	Elec Transmission Oil Level Indicator
O	1812-042	TRANSMISSION RETARDER CONTROL	Trans Ret Ctrl Lever Ctr Pnl On/Off Disp Actv Def On/Reversed Lever
O	1816-004	TRANSMISSION RETARDER CAPACITY LEVEL	Transmission Retarder Capacity Level High
S	1814-002	TRANSMISSION PRE-SELECT WITH AUXILIARY BRAKE	2nd Gear Pre-Select
S	1808-007	TRANSMISSION COOLING SYSTEM	Transmission Cooling System
S	1817-001	TRANSMISSION DRAIN PLUG	Transmission Drain Plug
S	8005-001	TRANSMISSION WARRANTY	Transmission Warranty Allison (5) Year

POWER TAKE OFF

O	2004-003	LH PTO	LH PTO Chassis Sply
O	2001-154	LH PTO MODEL	LH PTO Model Chelsea 281-GGFJP-E5XD
O	2005-008	PTO LOCATION	PTO Location 8:00/1:00
O	2015-004	LH PTO CONTROL	LH PTO Ctrl Prog Disp Actv

DRIVELINE

O	3001-017	DRIVELINE	Driveline MSI 1810/1710 w/Meritor U-Joints w/Thrust Washers
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FUEL SYSTEMS

O	3109-070	FUEL FILTER/WATER SEPARATOR	Fuel Filter/Wtr Separator Fuel Pro 488 Htd w/Lt & Alarm 18" Loop
S	3111-002	FUEL LINES	Fuel Lines Wire Braid
S	3103-008	ELECTRIC FUEL PRIMER	Electric Fuel Primer Engine Sply Electric Lift Pump
O	3112-018	FUEL COOLER	Fuel Cooler w/Active Cooling Fan/Temp Ctrl Sw
O	3101-102	FUEL TANK	Fuel Tank 68 Gallon
S	3130-001	FUEL TANK MATERIAL AND FINISH	Fuel Tank Material Steel & Finish Painted Frame Components Color
S	3131-001	FUEL TANK STRAP MATERIAL AND FINISH	Fuel Tank Strap Material Steel & Finish Painted Frame Components Color

- O 3132-011 **FUEL TANK MISCELLANEOUS OPTIONS** Fuel Tank Miscellaneous Options - Temporarily Mounted
- O 3102-016 **FUEL TANK FILL PORT** Fuel Tank Fill Port LH Mid/RH Mid/LH Fwd
- O 3114-006 **FUEL TANK SERVICEABILITY PROVISIONS** Fuel Tank Serviceability Prov 12' Fuel Line Extension
- S 3115-002 **FUEL TANK DRAIN PLUG** Fuel Tank Drain Plug Magnetic

FRONT AXLE

- O 2401-039 **FRONT AXLE** Frt Axle Hendrickson STEERTEK NXT Fabricated Box Beam 24000#
- O 8059-025 **FRONT AXLE WARRANTY** Front Axle Warranty Hendrickson STEERTEK NXT Extended
- S 2405-001 **FRONT WHEEL BEARING LUBRICATION** Frt Wheel Bearing Lube Oil

FRONT SUSPENSION

- O 2502-006 **FRONT SHOCK ABSORBERS** Frt Shock Absorbers Suspension Sply
- O 2501-019 **FRONT SUSPENSION** Frt Suspension Parabolic STEERTEK NXT Integrated 18000-24000# Spring Pack

STEERING

- S 2601-006 **STEERING COLUMN/WHEEL** Steering Column/Wheel Tilt/Telescopic 18" 4 Spoke
- S 2609-002 **ELECTRONIC POWER STEERING FLUID LEVEL INDICATOR** Elec Power Steering Fluid Level Indicator
- S 2603-011 **POWER STEERING PUMP** Power Steering Pump TRW w/Passive Cooler
- O 2606-005 **FRONT AXLE CRAMP ANGLE** Front Axle Cramp Angle 45 Degrees
- S 2610-005 **POWER STEERING GEAR** Power Steering Gear TRW TAS 85 w/Assist
- S 2608-001 **CHASSIS ALIGNMENT** Chassis Alignment

REAR AXLE

- O 3401-011 **REAR AXLE** Rear Axle 48000# Meritor RT-46-160
- S 3403-001 **REAR AXLE DIFFERENTIAL LUBRICATION** Rear Axle Differential Lubrication Oil
- S 8061-022 **REAR AXLE WARRANTY** Rear Axle Warranty Meritor 2027
- S 3411-001 **REAR WHEEL BEARING LUBRICATION** Rear Wheel Bearing Lubrication Oil
- O 3407-033 **REAR AXLE DIFFERENTIAL CONTROL** Rear Axle Differential Ctrl Interaxle Lock
- O 3408-004 **VEHICLE TOP SPEED** Vehicle Top Speed 65 MPH
- S 3410-001 **REAR AXLE EXTERNAL VENT** Rear Axle External Vent OEM Housing Breather

REAR SUSPENSION

- O 3501-030 **REAR SUSPENSION** Rear Susp Hendrickson FireMaax Air 40000-48000#
- O 3503-003 **REAR SHOCK ABSORBERS** Rear Shock Absorbers Suspension Sply

TIRES

- S 3625-002 **TIRE INTERMITTENT SERVICE RATING** Tire Intermittent Service Ratings Acceptable
- O 3601-083 **FRONT TIRE** Frt Tire 385/65R 22.5 Michelin X Multi HL Z
- O 3602-010 **REAR TIRE** Rear Tire 12R 22.5 Michelin XZE

O	3413-563	REAR AXLE RATIO	Rear Axle Ratio 5.63
S	3614-030	TIRE PRESSURE INDICATOR	Tire Pressure Ind Frt & Rr LED

WHEELS

O	3701-034	FRONT WHEEL	Frnt Wheel Alcoa Dura-Bright 22.5 x 12.25 Alum
O	3703-062	REAR WHEEL	Rr Whl Alcoa Dura-Bright 22.5 x 8.25 Alum
O	3719-002	BALANCE WHEELS AND TIRES	Balance Wheels & Tires
O	3702-002	WHEEL TRIM	Wheel Trim Hub & Nut Covers SS Shiploose

BRAKES

O	3205-015	BRAKE SYSTEM	Brake System ABS/ATC/ESC Tandem Axle Disp Actv
S	3206-003	FRONT BRAKES	Frnt Brakes Meritor EX225 Disc 17"
O	3207-001	REAR BRAKES	Rr Brakes S-Cam Drum 16.5" x 7"
S	3208-001	PARK BRAKE	Prk Brake Rr Wheels Only
O	3219-002	SUPPLEMENTAL BRAKE	Supplemental Brake Frnt Service Brakes Prk Brk Actv
S	3204-029	PARK BRAKE CONTROL	Prk Brake Ctrl LH Tunnel Mnt, Integrated w/Shift Pod, Adjacent To Trans Shifter
S	3214-001	REAR BRAKE SLACK ADJUSTERS	Rr Brake Slack Adjusters Meritor
O	3202-007	AIR DRYER	Air Dryer Bendix AD-IP Bhd LH Batt Box
O	3215-009	FRONT BRAKE CHAMBERS	Frnt Brake Chambers Hendrickson STEERTEK NXT Type 24
O	3210-014	REAR BRAKE CHAMBERS	Rr Brake Chambers TSE 30/30

AIR SUPPLY SYSTEMS

S	3320-001	AIR COMPRESSOR	Air Compressor Wabco SS318 18.7 CFM
S	3339-004	AIR GOVERNOR	Air Governor Mnt on Air Dryer Bracket
S	3303-001	MOISTURE EJECTORS	Moisture Ejectors Manual
O	3307-001	AIR SUPPLY LINES	Air Sply Lines Nylon w/Compression Fittings
O	3309-033	AIR INLET CONNECTION	Air Inlet Connection
O	3349-002	AIR INLET LOCATION	Air Inlet Location LH Lwr Frnt Step Fwd
O	3310-012	AIR OUTLET CONNECTION	Air Outlet Conn LH Upr Frnt Step Fwd
O	3328-002	PLUMBING AIR OUTLET CONNECTION	Plumbing Air Outlet Conn
O	3326-002	AIR INLET/OUTLET FITTING TYPE	Air Inlet/Outlet Manual Conn Tru-Flate Interchange 1/4"
S	3338-002	REAR AIR TANK MOUNTING	Rear Air Tank Mnt Any Bhd Rear Axle Perpendicular w/Frame

FRAME

O	2103-2250	WHEELBASE	Wheelbase 225.0"
O	2106-0600	REAR OVERHANG	Rear Overhang 60.0"
S	2101-002	FRAME	Frame Double Channel 35.00" Width
O	2111-136	MISC FRAME OPTIONS	Misc Frame Options Smeal Aerials 105RM, 100RM, 125RM, 100MM Layout 4
O	2117-004	FRAME CLEAR AREA	Frame Clear Area Inside/Outside Rail 30" Rwd Back of Cab
O	2110-101	FRAME PAINT	Frame Paint Powder Coat Black
S	8007-036	FRAME ASSEMBLY STRUCTURAL WARRANTY	Frame Assembly Structural Warranty (50) Year RFW0305
O	8019-002	FRAME RAIL CORROSION WARRANTY	Frame Rail Corrosion Warranty (3) Year RFW0311

S 8022-004 **FRAME COMPONENTS CORROSION WARRANTY** Frame Components Corrosion Warranty (3) Year RFW0315

BUMPER

O 2201-002 **FRONT BUMPER** Frt Bumper Structural Steel Channel Severe Duty
 O 2202-001 **FRONT BUMPER EXTENSION LENGTH** Frt Bumper Extension Length 6"
 O 2206-001 **FRONT BUMPER PAINT** Frt Bumper Paint Primary/Lower Cab Color
 O 2208-002 **FRONT BUMPER APRON** Frt Bumper Apron For 6" Extension
 O 5503-021 **MECHANICAL SIREN** Mechanical Siren Federal Signal Q2B Recess Mnt
 O 2218-011 **MECHANICAL SIREN LOCATION** Mech Siren Location Frt Bmpr Face Ctr
 O 5501-045 **AIR HORN** Air Horn (2) 21" Round Emergency Tone
 S 2216-010 **AIR HORN LOCATION** Air Horn Location (2) Frt Bmpr Face R/L IB
 S 2232-002 **AIR HORN RESERVOIR** Air Horn Reservoir (1) 1200 Cu In
 O 5504-061 **ELECTRONIC SIREN SPEAKER** Elect Siren Speaker (2) 100W Federal Signal Dynamax w/EF Grille
 O 2217-011 **ELECTRONIC SIREN SPEAKER LOCATION** Elec Siren Speaker Location (2) Frt Bmpr Face R/L OB
 O 2204-006 **FRONT BUMPER TOW EYES** Frt Bumper Tow Eyes 2" Chrome Through

CAB TILT

S 2301-036 **CAB TILT SYSTEM** Cab Tilt System w/Pump Bhd RH Frt Step
 A 2302-QXX **CAB TILT AUXILIARY PUMP** Cab Tilt Aux Pump Manual Mnt w/Fwd Tilt Pump & Insulated lines
 O 2303-003 **CAB TILT LIMIT SWITCH** Cab Tilt Limit Sw Preset Limit
 S 2305-001 **CAB TILT CONTROL RECEPTACLE** Cab Tilt Ctrl Receptacle Temp
 S 2306-002 **CAB TILT LOCK DOWN INDICATOR** Cab Tilt Lock Down Indicator

CAB GLASS

S 1401-109 **CAB WINDSHIELD** Cab Windshield
 O 1402-002 **GLASS FRONT DOOR** Glass Frt Dr Pwr
 O 1407-002 **GLASS TINT FRONT DOOR** Glass Tint Frt Dr Automotive Dark Gray
 O 1419-008 **GLASS REAR DOOR RIGHT HAND** Glass Rr Dr RH Pwr
 O 1430-002 **GLASS TINT REAR DOOR RIGHT HAND** Glass Tint Rr Door RH Automotive Dark Gray
 O 1412-008 **GLASS REAR DOOR LEFT HAND** Glass Rr Dr LH Pwr
 O 1431-002 **GLASS TINT REAR DOOR LEFT HAND** Glass Tint Rr Door LH Automotive Dark Gray

CLIMATE CONTROL

O 1640-013 **CABIN AIR FILTRATION** Cabin Air Filtration System Active Air Pur Eng Tunnel Rear Horiz Ign/Shore Pwr
 O 1614-203 **CLIMATE CONTROL** Climate Ctrl Htr Defroster A/C SGM Ovrhd Alum (2) Htr Shutoff Valves
 S 1632-002 **CLIMATE CONTROL DRAIN** Climate Control Drain Gravity
 S 1617-201 **CLIMATE CONTROL ACTIVATION** Climate Ctrl Actv Rotary Dash Mnt Ctr
 O 1620-019 **HVAC OVERHEAD COVER PAINT** HVAC Overhead Cover Paint Multi-tone Onyx Black
 O 1603-002 **A/C CONDENSER LOCATION** A/C Condenser Location Roof Mnt Mid LH
 S 1601-013 **A/C COMPRESSOR** A/C Compressor TM-31/QP-31
 O 1530-103 **UNDER CAB INSULATION** Under Cab Insulation Eng Tnl w/Removable Alum Overlay

CAB INTERIOR

O	1327-031	INTERIOR TRIM FLOOR	Interior Trim Floor w/TPlt Overlay & Wrapped Entry Ways
S	1302-001	INTERIOR TRIM	Interior Trim Vinyl
S	1368-002	REAR WALL INTERIOR TRIM	Rear Wall Interior Trim Vinyl
S	1306-006	HEADER TRIM	Header Trim XDuty
S	1305-015	TRIM CENTER DASH	Trim Center Dash XDuty w/Gas Cylinder Stay
S	1339-102	TRIM LEFT HAND DASH	Trim LH Dash XDuty
O	1321-004	TRIM RIGHT HAND DASH	Trim RH Dash XDuty Glove Cmpt/MDT Prov
S	1307-002	ENGINE TUNNEL TRIM	Eng Tnl Trim Flr Mat
O	5040-200	POWER POINT DASH MOUNT	Pwr Pnt Dash Mnt Batt Dir (2) Powerwerx Comb USB/Type-C Sw Pnl No Ind Lt
O	1303-032	STEP TRIM	Step Trim Grip Strut Lwr TPlt Mid w/Small Splash Guard
S	1379-003	UNDER CAB ACCESS DOOR	Under Cab Access Door Rear Step LH Painted
O	1102-028	INTERIOR DOOR TRIM	Interior Door Trim (2) Piece Brushed SS
O	1105-008	CAB DOOR TRIM REFLECTIVE	Remove Cab Door Trim Reflective
S	1308-001	INTERIOR GRAB HANDLE "A" PILLAR	Interior Grab Handle 'A' Pillar 11" Molded
S	1332-008	INTERIOR GRAB HANDLE FRONT DOOR	Interior Grab Handle Frt Door Horiz 9"
S	1345-002	INTERIOR GRAB HANDLE REAR DOOR	Int Grab Handle Rr Dr Alum Window Span 30" Black Powder Coat
O	1301-001	INTERIOR SOFT TRIM COLOR	Interior Soft Trim Color Black
O	1337-004	INTERIOR TRIM SUNVISOR	Interior Trim Sunvisor Vinyl Black
O	1304-002	INTERIOR FLOOR MAT COLOR	Interior Floor Mat Color Black
O	1371-021	HEADER TRIM INTERIOR PAINT	Header Trim Interior Paint Multi-tone Onyx Black
O	1370-023	TRIM CENTER DASH INTERIOR PAINT	Trim Center Dash Interior Paint Multi-tone Onyx Black
O	1378-022	TRIM LEFT HAND DASH INTERIOR PAINT	Trim LH Dash Interior Paint Multi-tone Onyx Black
O	1373-022	TRIM RIGHT HAND DASH INTERIOR PAINT	Trim RH Dash Interior Paint Multi-tone Onyx Black
O	1344-009	DASH PANEL GROUP	Dash Pnl Group 3-Pnl w/Black Textured Aluminum Panels
O	1312-078	SWITCHES CENTER PANEL	Switches Ctr Pnl 1
O	1313-035	SWITCHES LEFT PANEL	Switches Left Pnl 3 (2+1) w/Wiper
S	1314-001	SWITCHES RIGHT PANEL	Switches Right Pnl 0

CAB SEATS

S	1225-007	SEAT BELT WARNING	Seat Belt Warn Disp w/VDR
O	1237-002	SEAT MATERIAL	Seat Material Vinyl
O	1243-003	SEAT COLOR	Seat Color Black/Red Seat Belts
O	1249-253	SEAT BACK LOGO	Seat Back Logo Fresno FD
O	1201-035	SEAT DRIVER	Seat Driver USSC Valor 4-Way Air ABTS
O	1213-024	SEAT BACK DRIVER	Seat Back Driver Non-SCBA ABTS Reclining
S	1219-001	SEAT MOUNTING DRIVER	Seat Mounting Driver
O	1202-039	SEAT OFFICER	Seat Officer USSC Valor 4-Way Air ABTS
O	1214-027	SEAT BACK OFFICER	Seat Back Officer Non-SCBA ABTS Reclining
S	1220-002	SEAT MOUNTING OFFICER	Seat Mounting Officer
S	1273-001	SEAT BELT ORIENTATION CREW	Seat Belt Orientation Crew Outboard Shoulder To Inboard Hip

S	1263-001	SEAT REAR FACING OUTER LOCATION	Seat RFO Location Primary Pos (2) R/L
O	1203-022	SEAT CREW REAR FACING OUTER	Seat Crew RFO USSC Valor Flip-Up ABTS
O	1215-001	SEAT BACK REAR FACING OUTER	Seat Back RFO Non-SCBA ABTS
S	1221-009	SEAT MOUNTING REAR FACING OUTER	Seat Mounting RFO Rwd 2"
O	1265-001	SEAT FORWARD FACING OUTER LOCATION	Seat FFO Location Primary Pos (2) R/L
O	1205-011	SEAT CREW FORWARD FACING OUTER	Seat Crew FFO Flip-Up Theatre Style
O	1217-016	SEAT BACK FORWARD FACING OUTER	Seat Back FFO None Theatre Style
O	1223-002	SEAT MOUNTING FORWARD FACING OUTER	Seat Mounting FFO Outboard
O	1269-107	SEAT FRAME FORWARD FACING	Seat Frm Fwd Fcg Short Dual Width
O	1281-123	SEAT FRAME FORWARD FACING STORAGE ACCESS	Seat Frm Fwd Fcg Strg Acc Cutout (1) Ctr Fwd (2) R/L Sd
S	1311-101	CAB FRONT UNDERSEAT STORAGE ACCESS DOOR	Cab Frt Undrst Strg Acc Dr
O	1355-023	SEAT COMPARTMENT DOOR FINISH	Seat Compartment Door Finish Multi-tone Onyx Black

CAB EXTERIOR

S	1511-200	WINDSHIELD WIPER SYSTEM	Windshield Wiper System
S	1534-002	ELECTRONIC WINDSHIELD FLUID LEVEL INDICATOR	Electronic Windshield Fluid Level Indicator
O	1103-004	CAB DOOR HARDWARE	Cab Door Hardware Chrome w/Scuff Plate
O	1111-004	DOOR LOCKS	Door Locks Power (4) Entry Doors
O	1112-004	POWER DOOR LOCK COMPARTMENT ACTIVATION	Power Door Lock Cmpt Actv Key Fob & Keypads
O	1503-201	GRAB HANDLES	Grab Handles 3-Pc Alum Knurled 18"
O	1503D-003	LIGHTED EXTERIOR GRAB HANDLES	Lighted Grab Handles Clear LED
O	1504-043	REARVIEW MIRRORS	Mirror Bus Style Ramco CRM-310-1350-PCHR
O	1553-005	REARVIEW MIRROR CONTROLS	Rearview Mirror Ctrl On Top of Ctr Dash Above Ctr Sw Panel
S	1529-003	REARVIEW MIRROR HEAT SWITCH	Rearview Mirror Heat Sw Disp
O	1513-025	CAB FENDER	Cab Fender SS
S	1514-002	MUD FLAPS FRONT	Mud Flaps Frt
O	1526-031	CAB EXTERIOR FRONT & SIDE EMBLEMS	Cab Ext Frt & Side Emblems Spartan w/Side Shiploose
S	1502-052	CAB EXTERIOR MODEL NAMEPLATE	Cab Exterior Model Nameplate Gladiator

START / CHARGING SYSTEMS

S	5109-015	IGNITION	Ign Mstr Rkr Sw w/Push-Button Start
S	5101-035	BATTERY	Batt (5) Group 31 Harris
S	5106-003	BATTERY TRAY	Batt Tray (2) R/L Steel
S	5107-028	BATTERY BOX COVER	Batt Box Cover (2)
S	5102-001	BATTERY CABLE	Batt Cables
S	5108-010	BATTERY JUMPER STUD	Batt Jumper Stud Frt LH Lwr Step 8" Apart
S	5104-002	ALTERNATOR	Alternator Leece-Neville 320A

S 5105-001 **STARTER MOTOR** Starter Motor Delco

LINE VOLTAGE ELECTRICAL POWER DISTRIBUTION

O 5202-403 **BATTERY CONDITIONER** Batt Cond Blue Sea P12 7532 40A
O 5218-002 **BATTERY CONDITIONER LOCATION** Batt Cond Loc LH RFO Seat Position
O 5203-207 **BATTERY CONDITIONER DISPLAY** Batt Cond Display Blue Sea EV 7517
O 5220-010 **BATTERY CONDITIONER DISPLAY LOCATION** Batt Cond Display Location LH Mid Frt Step Rwd
O 3314-208 **AUXILIARY AIR COMPRESSOR** Aux Air Cmp Kussmaul Auto Pump 120V w/Auto Drain
O 3370-002 **AUX AIR COMPRESSOR LOCATION** Aux Air Compressor Location RH Under Dash
O 5209-029 **ELECTRICAL INLET LOCATION** Elec Inlet Location LH Cab Side Fwd
O 5204-111 **ELECTRICAL INLET** Elec Inlet 120V 20A Sure Eject Blue Sea
O 5210-005 **ELECTRICAL INLET CONNECTION** Elec Inlet Conn to Batt Conditioner & Air Pump
O 5206-003 **ELECTRICAL INLET COLOR** Elec Inlet Color Red

LIGHTING

S 5301-102 **HEADLIGHTS** Headlights 4 Headlamps LED
S 5337-001 **HEADLIGHT LOCATION** Headlights Below Frt Warn Lts
O 5303-026 **FRONT TURN SIGNALS** Frt Turn Signals Whelen M6 LED Above Frt Warn Rad Mnt
O 5336-003 **SIDE TURN/MARKER LIGHTS** Side Turn/Marker Lts LED Weldon 9186-8589-24
O 5302-003 **MARKER & ICC LIGHTS** Marker & ICC Lts Face Mnt LED Weldon 9186-1500-20
O 5350-090 **HEADLIGHT AND MARKER LIGHT ACTIVATION** Hdlt & Mrkr Lt Actv MUX/Mrkr Lt Mstr Sw/Hdlt Ign Sw
O 5305-351 **INTERIOR OVERHEAD LIGHTS** Interior Overhead Lts Weldon Red/Clear Split Lens LED
O 5388-002 **INTERIOR OVERHEAD LIGHTING ACTIVATION** Int Ovrhd Lt Actv Resp Dr
O 5403-079 **LIGHTBAR PROVISION** Lightbar Prov Wire & Mnt (2) Chassis Supply w/Painted Jct Box
O 5450N-006 **CAB FRONT LIGHTBAR MODEL** Cab Front Lightbar Model Whelen F4NMINI (2)
S 5450-999 **CAB FRONT LIGHTBAR** Cab Front Lightbar - Configured in 5450M Subcategory
S 5450M-002 **FRONT LIGHTBAR LAYOUT** Cab Front Lightbar Layout
O 5450X-004 **FRONT LIGHTBAR ORIENTATION** Front Lightbar Orientation - 30-Deg Mnt
O 5450L2-002 **FRONT LIGHTBAR LIGHT POSITION 2** Cab Front Lightbar Position 2 - Red LH Side
O 5450L4-003 **FRONT LIGHTBAR LIGHT POSITION 4** Cab Front Lightbar Position 4 - White
O 5450L5-003 **FRONT LIGHTBAR LIGHT POSITION 5** Cab Front Lightbar Position 5 - White
O 5450L12-003 **FRONT LIGHTBAR LIGHT POSITION 12** Cab Front Lightbar Position 12 - White
O 5450L13-003 **FRONT LIGHTBAR LIGHT POSITION 13** Cab Front Lightbar Position 13 - White
O 5450L15-032 **FRONT LIGHTBAR LIGHT POSITION 15** Cab Front Lightbar Position 15 - Red RH Side
O 5426-008 **LIGHTBAR SWITCH** Lightbar Sw Disp w/Clear Lt Cutoff
O 5306-060 **SIDE SCENE LIGHTS** Side Scene Lts Whelen M9 Series 12V LED

O	5318-018	SIDE SCENE LIGHT LOCATION	Side Scene Lt Loc Upper Mid Rwd Flat Roof Position
O	5316-062	SIDE SCENE ACTIVATION	Side Scene Actv Indv Disp Actv & Resp Side Doors Labeled DC Scene
S	5308-300	GROUND LIGHTS	Ground Lts Tecniq T44 LED
S	5386-004	GROUND LIGHTING ACTIVATION	Ground Lt Actv Prk Brk, Resp Sd Dr & Disp
O	5319-003	UNDER BUMPER LIGHTS	Under Bmpr Lts 4" LED Prk Brk & Marker Lts
S	5309-003	LOWER CAB STEP LIGHTS	Lwr Cab Step Lts Tecniq T44 LED
O	5382-007	INTERMEDIATE STEP LIGHTS	Intermediate Step Lts Tecniq D06 LED
O	5307-093	CAB SPOTLIGHTS	Cab Spotlights GoLight 20204GTWhite LED R/L Rf Mnt Abv Ltbar w/RmtCtrl Abv SwPnl
O	5312-004	ENGINE COMPARTMENT LIGHT	Engine Cmpt Work Lt LED (2)

OPTICAL WARNING DEVICES

O	5406-076	DO NOT MOVE APPARATUS LIGHT	Do Not Move App Lt Flashing Red Whelen Ion LED w/Alarm
S	5422-002	MASTER WARNING SWITCH	Mstr Warn Sw Disp
S	5409-002	HEADLIGHT FLASHER	Headlight Flasher Alternating
S	5425-003	HEADLIGHT FLASHER SWITCH	Headlight Flasher Sw Disp
O	5401-061	INBOARD FRONT WARNING LIGHTS	Inboard Frt Warn Lts Whelen M6 LED Steady Burn Chrm Bezel
O	5413-002	INBOARD FRONT WARNING LIGHTS COLOR	Inboard Frt Warn Lts Color Red
O	5414-046	OUTBOARD FRONT WARNING LIGHTS	Outboard Frt Warn Lts Whelen 600 LED Rota-Beam Chrm Bezel
O	5415-002	OUTBOARD FRONT WARNING LIGHTS COLOR	Outboard Frt Warn Lts Color Red
O	5423-003	FRONT WARNING SWITCH	Frt Warn Sw Disp
O	5404-027	INTERSECTION WARNING LIGHTS	Intersection Warn Lts Whelen M6 LED
O	5419-002	INTERSECTION WARNING LIGHTS COLOR	Int Warn Lts Color Red
O	5420-016	INTERSECTION WARNING LIGHTS LOCATION	Intersection Warn Lts Location Bumper Corner Recess Mnt
O	5402-075	SIDE WARNING LIGHTS	Side Warn Lts Whelen M6 V-Series LED
O	5418-002	SIDE WARNING LIGHTS COLOR	Side Warn Lts Color Red
O	5412-009	SIDE WARNING LIGHTS LOCATION	Side Warn Lts Location Lwr Mid Fwd Position
O	5424-003	SIDE AND INTERSECTION WARNING SWITCH	Side & Intersection Warn Sw Disp
O	5405-083	TRAFFIC CONTROL	Traffic Ctrl Opticom 794H LED Rf Mnt LH Sd Mstr Warn Ctrl/No Ind Lt
O	5449-020	REAR WARNING LIGHTS	Rr Warn Lts Sw Pnl Whelen TACTL5 Cont & TAL65 Advsr Shplse
O	5383-004	AUXILIARY GROUND/PERIMETER LIGHTING	Aux Gnd/Perimeter Lts Side Wrn V-Series On w/Gnd Lts

AUDIBLE WARNING DEVICES

O	5514-102	STEERING WHEEL HORN BUTTON SELECTOR SWITCH	Horn Btn Sel Sw Elec Horn/Air Horn MUX Def Air Horn On
O	5526-004	AUDIBLE WARNING LH FOOT SWITCH	Audible Warning LH Foot Switch Siren
O	5526D-001	MECHANICAL SIREN FOOT SWITCH LH	Mechanical Siren Foot Switch LH Linemaster 491-S
O	5526E-001	MECHANICAL SIREN FOOT SWITCH LH LOCATION	Mechanical Foot Switch LH Location A-Pillar

O	5526F-001	MECHANICAL SIREN FOOT SWITCH LH POSITION	Mechanical Siren Foot Switch Position Outboard of Other Foot Switches
O	5529-002	AUDIBLE WARNING LH FOOT SWITCH BRACKET	Audible Warn LH Ft Sw Double Brkt 30Deg TPlate
S	5512-600	AIR HORN AUXILIARY ACTIVATION	Air Horn Actv PB Sw Pnl
O	5513-500	MECHANICAL SIREN BRAKE/AUXILIARY ACTIVATION	Mech Siren Brk Sw
O	5532-001	MECHANICAL SIREN INTERLOCK	Mechanical Siren Interlock Master Warn Only
S	5505-002	BACK-UP ALARM	Back-Up Alarm Ecco 575

INSTRUMENTATION

S	5601-063	INSTRUMENTATION	Instrumentation Digital Innovative Controls Touchscreen
S	5624-005	BACKLIGHTING COLOR	Backlighting Color Red Switch Backlighting w/White Digital Dash Display
O	5607-031	HOURLY METER	Hour Meter Digital Dash Engine

COMMUNICATIONS SYSTEMS

O	5701-300	RADIO	Radio Jensen WB/AM/FM/BT
O	5736-100	RADIO LOCATION	Radio Overhead LH
O	5707-002	AM/FM ANTENNA	AM/FM Antenna LH Fwd Cab Roof
A	5737QXX	RADIO SPEAKERS	Radio Speakers (4) Front/Rear OB
O	5728-012	CAMERA REAR	Camera HD Rear Box w/o Speaker
O	5731-004	CAMERA DISPLAY	Camera Display on Disp
S	5020-002	PANEL LAYOUT	Panel Layout

ADDITIONAL EQUIPMENT

S	8806-001	FIRE EXTINGUISHER	Fire Extinguisher Shiploose
O	8807-002	ROAD SAFETY KIT	Road Safety Kit Shiploose
O	8810-003	DOOR KEYS	Door Keys for Manual Locks (6)

SALES ADMIN

S	8030-006	CHASSIS OPERATION MANUAL	Chassis Operation Manual Digital Copy (2)
S	8031-024	ENGINE & TRANSMISSION OPERATION MANUAL	Eng & Trans Operation Man Eng Hard Copy/Trans Digital/Eng Owner Digital
S	8805-007	CAB/CHASSIS AS BUILT WIRING DIAGRAMS	Cab/Chassis As Built Wiring Diagrams Digital Copy (2)
S	8039-001	SALES TERMS	Sales Terms

ENGINEERING

O	9005-002	DRIVELINE LAYOUT CONFIRMATION	Driveline Layout Confirmation Required
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Specification

MODEL

The chassis shall be a Gladiator model. The cab and chassis shall include design considerations for multiple emergency vehicle applications, rapid transit and maneuverability. The chassis shall be manufactured for heavy duty service with the strength and capacity to support a fully laden apparatus, one hundred (100) percent of the time.

MODEL YEAR

The chassis shall have a vehicle identification number that reflects a 2027 model year.

COUNTRY OF SERVICE

The chassis shall be put in service in the country of United States of America (USA).

The chassis will meet applicable U.S.A. federal motor vehicle safety standards per CFR Title 49 Chapter V Part 571 as clarified in the incomplete vehicle book per CFR Title 49 Chapter V Part 568 Section 4 which accompanies each chassis. The chassis manufacturer is not responsible for compliance to state, regional, or local regulations. Dealers should identify those regulations and order any necessary optional equipment from the chassis manufacturer or their OEM needed to be in compliance with those regulations.

CAB AND CHASSIS LABELING LANGUAGE

The cab and chassis shall include the applicable caution, warning, and safety notice labels with text to be written in English. All applicable caution, warning, and safety notice labels shall be Innovative Controls brand. Where applicable to the location within the specific layout and label package of the cab and chassis, the labels shall include decorative chrome bezels. Designs shall include bezels that fit individual labels or packaged configurations of labels in certain common locations.

APPARATUS TYPE

The apparatus shall be an aerial vehicle designed for emergency service use. The apparatus shall be equipped with a ladder, elevating platform or water tower that shall be rear mounted thus providing the following vehicle benefits:

- Improved mobility vs. mid-ship mounted units, due to shorter overall travel length and wheelbase.
- Increased compartment space, hose load, and water capacity in the body, resulting from ladder being raised to clear the cab.
- Shorter vehicle wheelbase.

Shorter overall length of vehicle.

VEHICLE TYPE

The chassis shall be manufactured for use as a straight truck type vehicle and designed for the installation of a permanently mounted apparatus behind the cab. The apparatus of the vehicle shall be supplied and installed by the apparatus manufacturer.

VEHICLE ANGLE OF APPROACH PACKAGE

The angle of approach of the apparatus shall be a minimum of 8.00 degrees.

NFPA1901 Angle of Approach definition:

“To determine the angle of approach, place a thin steel strip against the front of the tires where they touch the ground or stretch a tight string from one front tire to the other at the front where they touch the ground. Determine the lowest point (component or equipment) on the vehicle forward of the front tire that would make the smallest angle of approach. Hang a plumb bob from the lowest point and mark the point on the ground where the point of the plumb bob touches. Measure the vertical distance from the ground to the point where the plumb bob was hung (distance V). Measure the horizontal distance from the plumb bob point to the steel strip or string running from front tire to front tire (distance H). Divide the vertical distance by the horizontal distance. The ratio of V/H is the tangent of the angle of approach. If the ratio is known, the angle of approach can be determined from a table of trigonometric functions of angles or from a math calculator. The standard requires a minimum angle of approach of 8.00 degrees: since the tangent of 8.00 degrees is 0.1405, if V divided by H is 0.1405 or larger, the angle of approach is 8.00 degrees or greater.”

AXLE CONFIGURATION

The chassis shall feature a 6 x 4 axle configuration consisting of a tandem rear drive axle set with a single front steer axle.

GROSS AXLE WEIGHT RATINGS FRONT

The front gross axle weight rating (GAWR) of the chassis shall be 23,000 pounds.

This front gross axle weight rating shall be adequate to carry the weight of the completed apparatus including all equipment and personnel.

GROSS AXLE WEIGHT RATINGS REAR

The rear gross axle weight rating (GAWR) of the chassis shall be 48,000 pounds.

This rear gross axle weight rating shall be adequate to carry the weight of the completed apparatus including all equipment and personnel.

WARRANTY

Purchaser shall receive a Custom Chassis Two (2) Years or 36,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0102. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

CAB STYLE

The cab shall be a custom, fully enclosed, MFD model with a flat roof over the driver, officer, and crew area, designed and built specifically for use as an emergency response vehicle by a company specializing in cab and chassis design for all emergency response applications. The cab shall be designed for heavy-duty service utilizing superior strength and capacity for the application of protecting the occupants of the vehicle. This style of cab shall offer up to eight (8) seating positions.

The cab shall incorporate a fully enclosed design with side wall roof supports, allowing for a spacious cab area with no partition between the front and rear sections of the cab. To provide a superior finish by reducing welds that fatigue cab metal; the roof, the rear wall and side wall panels shall be assembled using a combination of welds and proven industrial adhesives designed specifically for aluminum fabrication for construction.

The cab shall be constructed using multiple aluminum extrusions in conjunction with aluminum plate, which shall provide proven strength and the truest, flattest body surfaces ensuring less expensive paint repairs if needed. All aluminum welding shall be completed to the American Welding Society and ANSI D1.2-96 requirements for structural welding of aluminum.

All interior and exterior seams shall be sealed for optimum noise reduction and to provide the most favorable efficiency for heating and cooling retention.

The cab shall be constructed of 5052-H32 corrosion resistant aluminum plate. The cab shall incorporate tongue and groove fitted 6061-T6 0.13 & 0.19 inch thick aluminum extrusions for extreme duty situations. A single formed, one (1) piece extrusion shall be used for the "A" pillar, adding strength and rigidity to the cab as well as additional roll-over protection. The cab side walls and roof skin shall be 0.13 inch thick; the rear wall skin shall be 0.09 inch thick; the front cab structure shall be 0.19 inch thick.

The exterior width of the cab shall be 99.40 inches wide with a minimum interior width of 91.00 inches. The overall cab length shall be 131.10 inches with 54.00 inches from the centerline of the front of the axle to the back of the cab.

The cab interior shall be designed to afford the maximum usable interior space and attention to ergonomics with hip and legroom while seated which exceeds industry standards. The crew cab floor shall be flat across the entire walking area for ease of movement inside the cab.

The cab shall offer an interior height of 57.50 inches from the front floor to the headliner in the non-raised roof area and a rear floor to headliner height of 55.00 inches at a minimum. The cab shall offer an interior measurement at the floor level from the rear of the engine tunnel to the rear wall of the cab of 49.88 inches. All interior measurements shall include the area within the interior trimmed surfaces and not to any unfinished surface.

The cab shall include a driver and officer area with two (2) cab doors large enough for personnel in full firefighting gear. The front doors shall offer a clear opening of 40.25 inches wide X 53.50 inches high, from the cab floor to the top of the door opening. The cab shall also include a crew area with up to two (2) cab doors, also large enough for personnel in full firefighting gear. The rear doors shall offer a clear opening of 32.25 inches wide X 51.00 inches high, from the cab floor to the top of the door opening.

The cab shall incorporate a progressive two (2) step configuration from the ground to the cab floor at each door opening. The progressive steps are vertically staggered and extend the full width of each step well allowing personnel in full firefighting gear to enter and exit the cab easily and safely.

The first step for the driver and officer area shall measure approximately 11.50 inches deep X 31.13 inches wide. The intermediate step shall measure approximately 8.50 inches deep X 32.50 inches wide.

The height from the first step to the intermediate step and the intermediate step to the cab floor shall not exceed 11.00 inches.

The first step for the crew area shall measure approximately 11.50 inches deep X 20.44 inches wide. The intermediate step shall measure approximately 10.25 inches deep X 22.75 inches wide. The height from the first step to the intermediate step and the intermediate step to the cab floor shall not exceed 12.80 inches.

OCCUPANT PROTECTION

With this selection, the customer shall acknowledge and document a willful opt-out of a vehicle standard advanced safety system feature.

Review and acknowledge Factory Option PDF

CAB FRONT FASCIA

The front cab fascia shall be constructed of 5052-H32 Marine Grade, 0.13 of an inch thick aluminum plate which shall be an integral part of the cab.

The cab fascia will encompass the entire front of the aluminum cab structure from the bottom of the windshield to the bottom of the cab and shall be the "Classic" design.

The front cab fascia shall include two (2) molded plastic modules on each side accommodating a total of up to four (4) Hi/Low beam headlights and two (2) turn signal lights or up to four (4) warning lights. A chrome plated molded plastic bezel shall be provided on each side around each set of four lamps.

FRONT GRILLE

The front cab fascia shall include a classic box style, 304 stainless steel front grille. The grille shall measure 55.45 wide X 33.50 inches high X 1.50 inches deep. The upper portion of the grille shall be hinged to provide service access behind the grille. The grille shall include a minimum free air intake of 750.00 square inches.

CAB UNDERCOAT

There shall be undercoating applied to the underside of the cab which provides an abrasion resistant coating for protection against corrosion caused by moisture, salt, alkalis and galvanic reaction.

CAB SIDE DRIP RAIL

There shall be a drip rail along the top radius of each cab side. The drip rails shall help prevent water from the cab roof running down the cab side.

CAB PAINT EXTERIOR

The cab exterior shall be painted two tone per customers specified paint colors following the RFG-SR-001 paint standards.

CAB PAINT PROCESS/MANUFACTURER

The cab shall be painted with PPG Industries paint prior to the installation of glass accessories and all other cab trim to ensure complete paint coverage and the maximum in corrosion protection of all metal surfaces.

All metal surfaces on the cab shall be mechanically etched by sanding disc to remove any surface oxidation or surface debris which may hinder the paint adhesion. Once all imperfections on the exterior surfaces are removed and sanded smooth, body fillers shall be applied to the cab on all surfaces that require a critically aesthetic finish and sanded smooth.

The entire cab shall then be coated with a high quality base primer that is designed to fill any minor surface defects, provide an adhesive bond between the primer and the paint and improve the color and gloss retention of the color. The finish to this procedure shall be sanding the cab to a smooth finish followed by sealing the seams with an automotive seam sealer. The minimum thickness of the primer coat after sanding shall be 2.50 mils with a maximum thickness of 5.00 mils.

The cab shall then be painted the specific color(s) designated by the customer with an acrylic urethane type system designed to retain color and resist acid rain and most atmospheric chemicals found on an emergency scene. The paint shall have a minimum thickness of 1.00 mils with a maximum of 4 mils, followed by a clear top coat with a minimum of 2.5 mils and a maximum of 3.5 mils. The entire cab shall then be baked to speed the curing process of the coatings.

CAB PAINT PRIMARY/LOWER COLOR

The lower paint color shall be PPG FBCH 71096 ALT Red.

CAB PAINT SECONDARY/UPPER COLOR

The secondary/upper paint color shall be PPG FBCH 2185 white.

CAB PAINT EXTERIOR BREAKLINE

The upper and lower paint shall meet at a breakline on the cab which shall be located approximately 1.00 inch below the door windows on each side of the cab. The breakline shall curve down at the front cab corners to approximately 5.00 inches below the windshields on the front of the cab.

CAB PAINT PINSTRIPE

A 0.50 inch wide gold leaf tape with black borders shall be applied on the break line between the two different colored surfaces.

CAB PAINT WARRANTY

Purchaser shall receive a Paint and Finish (Exterior Clear coated) Ten (10) Years limited warranty in accordance with, and subject to, warranty certificate RFW0710. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

CAB PAINT INTERIOR

The visible interior cab structure surfaces shall be painted with a multi-tone onyx black texture finish.

CAB ENTRY DOORS

The cab shall include four (4) entry doors, two (2) front doors and two (2) crew doors designed for ease of entering and egress when outfitted with an SCBA. The doors shall be constructed of extruded aluminum with a nominal thickness of 0.13 inch. The exterior skins shall be constructed of 0.13 inch aluminum plate.

The doors shall include a double rolled style automotive rubber seal around the perimeter of each door frame and door edge which ensures a weather tight fit.

All door hinges shall be hidden within flush mounted cab doors for a pleasing smooth appearance and perfect fit along each side of the cab. Each door hinge shall be piano style with a 0.38 inch pin and shall be constructed of stainless steel.

CAB ENTRY DOOR TYPE

All cab entry doors shall be barrier clear design resulting in exposed lower cab steps. The doors shall provide approximately 32.00 inches of clearance from the ground to the bottom of the door so cab doors may be opened un-hindered by most obstacles encountered, such as guard rails along interstate highways.

Entry doors shall include Pollak mechanical plunger style switches for electrical component activation.

CAB INSULATION

The cab ceiling and walls shall include a nonwoven polyester fiber insulation. The insulation shall act as a barrier absorbing noise as well as assisting in sustaining the desired climate within the cab interior.

CAB STRUCTURAL WARRANTY

Purchaser shall receive a Cab Structure (Aluminum) Ten (10) Years or 100,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0602. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

CAB TEST INFORMATION

The cab shall have successfully completed the preload side impact, static roof load application and frontal impact without encroachment to the occupant survival space when tested in accordance with Section 4 of SAE J2420 COE Frontal Strength Evaluation Dynamic Loading Heavy Trucks, Section 5 of SAE J2422 Cab Roof Strength Evaluation Quasi –Static Loading Heavy Trucks and ECE R29 Uniform Provisions Concerning the Approval of Vehicles with regard to the Protection of the Occupants of the Cab of a Commercial Vehicles Annex 3 Paragraph 5.

The above tests have been witnessed by and attested to by an independent third party. The test results were recorded using cameras, high speed imagers, accelerometers and strain gauges. Documentation of the testing shall be provided upon request.

ELECTRICAL SYSTEM

The chassis shall include a single starting electrical system which shall include a 12 volt direct current multiplexing system, suppressed per SAE J551. The wiring shall be appropriate gauge cross link with 311 degree Fahrenheit insulation. All SAE wires in the chassis shall be color coded and shall include the circuit number and function where possible. The wiring shall be protected by 275 degree Fahrenheit minimum high temperature flame retardant loom. All nodes and sealed Deutsch connectors shall be waterproof.

MULTIPLEX DISPLAY

The multiplex electrical system shall include an FRC OmniPlex S-Core 10-inch Touchscreen display which shall be located on the left side dash in the switch panel. The Touchscreen displays shall feature full color LCD display screens.

LOAD MANAGEMENT SYSTEM

The apparatus load management shall be performed by the included multiplex system. The multiplex system shall also feature the priority of sequences and shall shed electrical loads based on the priority list specifically programmed.

DATA RECORDING SYSTEM

The chassis shall have a Vehicle Data Recorder (VDR) system installed. The system shall be designed to meet NFPA 1901 and shall be integrated with the ControlMaxx Multiplex electrical system. The following information shall be recorded:

- Vehicle Speed

- Acceleration
- Deceleration
- Engine Speed
- Engine Throttle Position
- ABS Event
- Seat Occupied Status
- Seat Belt Status
- Master Optical Warning Device Switch Position
- Time
- Date

Each portion of the data shall be recorded at the specified intervals and stored for the specified length of time to meet NFPA 1901 guidelines and shall be retrievable by connecting a laptop computer to the VDR system. The laptop connection shall be a panel mounted female type C USB connection point, mounted in dash.

ACCESSORY POWER

The electrical distribution panel shall include two (2) power studs. The studs shall be size #10 and each of the power studs shall be circuit protected with a fuse of the specified amperage. One (1) power stud shall be capable of carrying up to a 40-amp battery direct load. One (1) power stud shall be capable of carrying up to a 15-amp ignition switched load. The two (2) power studs shall share one (1) #10 ground stud.

The Master power distribution box (MPD) shall include five (5) fuses. The battery direct bus bar shall include one (1) 300-amp fuse labeled E-PUMP and one (1) 300-amp fuse labeled PUMP PRIMER. The master power bus bar shall include one (1) 200-amp fuse labeled PUMP MASTER, one (1) 300-amp fuse labeled BODY MASTER, and one (1) 300-amp fuse labeled AERIAL MASTER. Each bus bar stud is size 5/16”.

EXTERIOR ELECTRICAL TERMINAL COATING

All terminals exposed to the elements will be sprayed with a high visibility protective rubberized coating to prevent corrosion.

ELECTRICAL SYSTEM WARRANTY

Purchaser shall receive an Electrical System Two (2) Years or 36,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0202. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

ENGINE

The chassis engine shall be a Cummins heavy heavy duty (HHD) certified X15 engine. The X15 engine shall be an in-line six (6) cylinder, four-cycle diesel-powered engine. The engine shall offer a rating of 565 horsepower at 1800 RPM and shall be governed at 2100 RPM. The torque rating shall feature 1850-foot pounds of torque at 1000 RPM with 912 cubic inches (14.9 liter) of displacement.

The engine shall feature a VGT™ Turbocharger, a high-pressure common rail fuel system, fully integrated electronic controls with an electronic governor, and shall be EPA certified to meet the 2027 emissions standards.

A wiring harness shall be supplied ending at the back of the cab. The harness shall include a connector which shall allow an optional harness for the pump panel. The included circuits shall be provided for a tachometer, oil pressure, engine temperature, hand throttle, high idle and a PSG system. A circuit for J1939 data link shall also be provided at the back of the cab.

Until the 2027 EPA engine integration is finalized, option availability and body design relative to engine and aftertreatment are subject to change. Additional costs associated with the 2027 EPA engine will be passed on to the end user. No exceptions.

CAB ENGINE TUNNEL

The cab interior shall include an integrated engine tunnel constructed of 5052-H32 Marine Grade 0.19 of an inch thick aluminum alloy plate. The tunnel shall be a maximum of 46.50 inches wide X 29.00 inches high.

DIESEL PARTICULATE FILTER CONTROLS

There shall be two (2) controls for the diesel particulate filter. One (1) control shall be for regeneration and one (1) control shall be for regeneration inhibit. The controls shall be located on the digital dash display.

ENGINE PROGRAMMING HIGH IDLE SPEED

The engine high idle control shall maintain the engine idle at approximately 1250 RPM when engaged.

ENGINE HIGH IDLE CONTROL

The vehicle shall be equipped with an automatic high-idle speed control which shall be pre-set to operate the engine at a specified RPM to increase alternator output if the system voltage drops to 12.5 volts. This device shall automatically operate only when the engine is running, the transmission is in neutral, and with the parking brake set. The automatic high idle will stay engaged for a minimum of ten (10) minutes and until the system, voltage has reached 13.0 volts. Application of the service brake will override the automatic high idle and reset timer. The vehicle shall be equipped with a high-idle speed virtual button on the vehicle display and control screen to activate/deactivate manual control only. It shall be pre-set so when activated, it will operate the engine at the specified RPM to increase alternator output. This device shall operate only when the engine is running, the transmission is in neutral, and with the parking brake set. When automatically engaged the high idle shall disengage when the operator depresses the brake pedal, or the transmission is placed in gear, and shall be available to manually or automatically re-engage when the brake pedal is released, or when the transmission is placed in neutral. Virtual control screen shall not override automatic high idle between voltage parameters during timed cycle. Display shall indicate when high idle is disabled, enabled, or active.

ENGINE PROGRAMMING ROAD SPEED GOVERNOR

The engine shall include programming which will govern the top speed of the vehicle.

AUXILIARY ENGINE BRAKE

A compression brake, for the six (6) cylinder engine shall be provided. A cutout relay shall be installed to disable the compression brake when in pump mode or when an ABS event occurs. The engine compression brake shall activate upon 0% accelerator when in operation mode and actuate the vehicle's brake lights.

The engine shall utilize a variable geometry turbo (VGT) as an integrated auxiliary engine brake to offer a variable rate of exhaust flow, which when activated in conjunction with the compression brake shall enhance the engine's compression braking capabilities.

AUXILIARY ENGINE BRAKE CONTROL

An engine compression brake control device shall be included. The electronic control device shall monitor various conditions and shall activate the engine brake only if all of the following conditions are simultaneously detected:

- A valid gear ratio is detected.
- The driver has requested or enabled engine compression brake operation.
- The throttle is at a minimum engine speed position.
- The electronic controller is not presently attempting to execute an electronically controlled final drive gear shift.

- There is no active ABS event.

The compression brake shall be controlled through an off/low/high rocker switch on the dash.

ELECTRONIC ENGINE OIL LEVEL INDICATOR

The engine oil shall be monitored electronically and shall send a signal to activate a warning in the instrument panel when levels fall below normal. The warning shall activate in a low oil situation upon turning on the master battery and ignition switches without the engine running.

FLUID FILLS

The front of the chassis shall accommodate fluid fill for the engine oil through the grille. This area shall also accommodate a check for the engine oil. The transmission, power steering, and coolant fluid fills and checks shall be under the cab. The windshield washer fill shall be accessible through the front left side mid step.

ENGINE DRAIN PLUG

The engine shall include an original equipment manufacturer installed oil drain plug.

ENGINE WARRANTY

The Cummins engine shall be warranted for a period of five (5) years or 100,000 miles, whichever occurs first.

ENGINE PROGRAMMING REMOTE THROTTLE

The engine ECM (Electronic Control Module) discreet wire remote throttle circuit shall be turned off for use with a J1939 based pump controller or when the discreet wire remote throttle controls are not required.

ENGINE PROGRAMMING IDLE SPEED

The engine low idle speed will be programmed at 700 rpm.

ENGINE AIR INTAKE

The engine air intake system shall include an ember separator. This ember separator shall be designed to protect the downstream air filter from embers using a combination of unique flat and crimped metal screens packaged in a heavy duty galvanized steel frame. This multilayered screen shall trap embers and allow them to burn out before passing through the pack.

The engine air intake system shall also include an air cleaner mounted above the radiator. This air cleaner shall utilize a replaceable dry type filter element designed to prevent dust and debris from being ingested into the engine. A service cover shall be provided on the housing, reducing the chance of contaminating the air intake system during air filter service.

The air intake system shall include a restriction indicator light in the warning light cluster on the instrument panel, which shall activate when the air cleaner element requires replacement.

ENGINE FAN DRIVE

The engine cooling system fan shall incorporate a thermostatically controlled, Horton fully variable type fan drive with SmartClutch J-1939 CAN controller.

The variable speed fan clutch only engages at the amount needed for proper cooling to facilitate improved vehicle performance, cab heating in cold climates, and fuel economy. The fan clutch design

shall be fail-safe so that if the clutch drive fails the fan shall engage to prevent engine overheating due to the fan clutch failure. The fan speed shall include a J-1939 CAN clutch controller to receive signal from the engine control module to activate at variable rates of speed. Variable speeds shall be set through thermostatic and engine speed signals to run as efficiently and quietly as required to maintain temperature.

ENGINE COOLING SYSTEM

There shall be a heavy-duty aluminum cooling system designed to meet the demands of the emergency response industry. The cooling system shall have the capacity 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 requirements specified by the engine and transmission manufacturer and all EPA requirements. The complete cooling system shall be mounted to isolate the entire system from vibration or stress. The individual cores of the cooling system shall be mounted in a manner to allow expansion and contraction at various rates without inducing stress into the adjoining cores.

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 front of the radiator, recirculation shields, a shroud, a fan, and required tubing.

The radiator shall be a down-flow design constructed with aluminum cores, plastic end tanks, and a steel frame. The radiator shall be equipped with a drain cock to drain the coolant for serviceability.

The cooling system shall include a one piece injected molded polymer fan with a three (3) piece fiberglass fan shroud.

The cooling system shall be equipped with a surge tank that is capable of removing entrained air from the system. The surge tank shall be equipped with a low coolant probe and rearward oriented sight glass to observe coolant in the system. A cold fill and observation line shall be included within the frame mounted translucent recovery bottle to monitor the level of the coolant. The surge tank shall have a dual seal cap that meets the engine manufacturer's pressure requirements and allows for expansion and recovery of coolant into a separate integral expansion chamber.

All radiator tubes shall be formed from aluminized steel tubing. Recirculation shields shall be installed where required to prevent heated air from reentering the cooling package and affecting performance.

The charge air cooler shall be a cross-flow design constructed completely of aluminum with cast tanks. All charge air cooler tubes shall be formed from aluminized steel tubing and installed with silicone hump hoses and stainless steel "constant torque" style clamps meeting the engine manufacturer's requirements.

The radiator and charge air cooler shall be removable through the bottom of the chassis.

ENGINE COOLING SYSTEM PROTECTION

The engine cooling system shall include a recirculation shield designed to act as a light duty skid plate below the radiator to provide additional protection for the engine cooling system from light impacts, stones, and road debris. The skid plate shall be painted to match the frame components.

ENGINE COOLANT

The cooling package shall include Extended Life Coolant (ELC). The use of ELC provides longer intervals between coolant changes over standard coolants providing improved performance. The coolant shall contain a 50/50 mix of ethylene glycol and de-ionized water to keep the coolant from freezing to a temperature of -34 degrees Fahrenheit.

Proposals offering supplemental coolant additives (SCA) shall not be considered, as this is part of the extended life coolant makeup.

ELECTRONIC COOLANT LEVEL INDICATOR

The instrument panel shall feature a low engine coolant indicator light which shall be located in the center of the instrument panel. An audible tone alarm shall also be provided to warn of a low coolant incident.

COOLANT HOSES

The cooling system hoses shall be blue stripe heater hose with formed silicone radiator coolant hoses and formed aluminized steel tubing. The heater hose, radiator hose, and tubing shall be secured with stainless steel constant torque band clamps.

ENGINE COOLANT OVERFLOW BOTTLE

A remote engine coolant overflow expansion bottle shall be provided in the case of over filling the coolant system. The overflow bottle shall capture the expansion fluid or overfill rather than allow the fluid to drain on the ground.

ENGINE EXHAUST SYSTEM

The exhaust system shall include an end-in end-out horizontally mounted dual module after treatment device, and downpipe from the charge air cooled turbo. The dual module shall include a diesel particulate filter (DPF), urea dosing module (UL2), and a selective catalytic reduction (SCR) catalyst to meet current EPA standards.

The system shall utilize 0.07 inch thick stainless steel exhaust tubing between the engine turbo and the DPF. Zero leak clamps seal all system joints between the turbo and DPF.

The DPF, the decomposition tube, and the SCR canister through the end of the tailpipe shall be connected with zero leak clamps. The discharge shall terminate horizontally on the right side of the vehicle ahead of the rear tires.

The exhaust system after treatment modules shall be mounted below the frame, with the DPF in the inner frame inboard position and the SCR rearward in the inboard position. The mounting brackets shall be mounted on the inside of the frame.

Disclaimer - Until the 2027 EPA engine integration is finalized, available options and body design specifications related to the engine and aftertreatment system are subject to change. This may include, but is not limited to, wheelbase dimensions, centerline of suction for pumps, and pump configurations. Any additional costs resulting from the 2027 EPA engine requirements will be passed on to the end user - No exceptions.

DIESEL EXHAUST FLUID TANK

The exhaust system shall include a molded cross linked polyethylene tank for Diesel Exhaust Fluid (DEF). The tank shall have a capacity of five (5) usable gallons and shall be mounted on the left-hand side of the chassis frame behind the rear crew door entry steps.

The DEF tank shall be designed with capacity for expansion in case of fluid freezing. Engine coolant, which shall be thermostatically controlled, shall run through lines in the tank to help prevent the DEF from freezing and to provide a means of thawing the fluid if it should become frozen.

The tank fill tube shall be routed under the rear of the cab with the fill neck and splash guard accessible in the top rear step.

ENGINE EXHAUST ACCESSORIES

An exhaust temperature mitigation device shall be shipped loose for installation by the body manufacturer on the vehicle. The temperature mitigation device shall lower the temperature of the exhaust by combining ambient air with the exhaust gasses at the exhaust outlet.

ENGINE EXHAUST WRAP

The exhaust tubing between the engine turbo and the diesel particulate filter (DPF) shall be wrapped with a thermal cover in order to retain the necessary heat for DPF regeneration. The exhaust wrap shall also help protect surrounding components from radiant heat which can be transferred from the exhaust.

The exhaust flex joint shall not include the thermal exhaust wrap.

EMISSIONS SYSTEMS WARRANTY

Purchaser shall receive a Regulated Emissions Systems ten (10) years, or 450,000 miles, or 22,000 engine hours limited warranty for heavy heavy-duty engines in accordance with, and subject to, warranty certificate RFW0144. The warranty certificate is incorporated by reference into this proposal and included with this proposal or available upon request.

REGULATED EMISSIONS WARRANTY TIRES

Purchaser shall receive a regulated emissions tires two (2) years or 24,000 miles limited warranty in accordance with, and subject to, warranty certificate RFW0145. The warranty certificate is incorporated by reference into this proposal and included with this proposal or available upon request.

REGULATED EMISSIONS WARRANTY AIR CONDITIONING

Purchaser shall receive a regulated emissions air conditioning five (5) years or 100,000 miles limited warranty in accordance with, and subject to, warranty certificate RFW0146. The warranty certificate is incorporated by reference into this proposal and included with this proposal or available upon request.

TRANSMISSION

The drive train shall include an Allison model EVS 4000 torque converting, automatic transmission which shall include electronic controls and an output retarder. The transmission shall feature two (2) 10-bolt PTO pads located on the converter housing.

The transmission shall include two (2) internal oil filters which shall offer Allison formulated Castrol TranSynd™ synthetic transmission fluid which shall be utilized in the lubrication of the EVS transmission. An electronic oil level sensor shall be included with the readout located in the shift selector.

The transmission gear ratios shall be:

- 1st 3.51:1
- 2nd 1.91:1
- 3rd 1.43:1
- 4th 1.00:1
- 5th 0.74:1
- 6th 0.64:1 (if applicable)
- Rev 4.80:1

TRANSMISSION MODE PROGRAMMING

The transmission, upon start-up, will select five (5) speeds of operation. The sixth speed over drive shall be available with the activation of the mode button on the shifting pad.

TRANSMISSION FEATURE PROGRAMMING

The Allison Gen V/VI-E transmission EVS group package number 127 shall contain the 227 vocational package in consideration of the duty of this apparatus for rescue. This package shall incorporate an automatic neutral with selector override. This feature commands the transmission to neutral when the park brake is applied, regardless of drive range requested on the shift selector. This requires re-selecting drive range to shift out of neutral for the override.

A transmission interface connector shall be provided in the cab. This package shall contain the following input/output circuits to the transmission control module. The Gen V/VI-E transmission shall include prognostic diagnostic capabilities. These capabilities shall include the monitoring of the fluid life, filter change indication, and transmission clutch maintenance.

<u>Function ID</u>	<u>Description</u>	<u>Wire assignment</u>
Inputs		
C	PTO Request	143
F	Aux. Function Range Inhibit (Special)	101/142
Outputs		
G	PTO Enable Output (See Input Function C)	130
S	Neutral Indicator for PTO	145
	Signal Return	103

TRANSMISSION SHIFT SELECTOR

An Allison pressure sensitive range selector touch pad shall be provided and located to the right of the driver within clear view and easy reach. The shift selector shall have a graphical Vacuum Florescent Display (VFD) capable of displaying two lines of text. The shift selector shall provide mode indication and a prognostic indicator (wrench symbol) on the digital display. The prognostics monitor various operating parameters and shall alert you when a specific maintenance function is required.

ELECTRONIC TRANSMISSION OIL LEVEL INDICATOR

The transmission fluid shall be monitored electronically.

TRANSMISSION RETARDER CONTROL

An Allison transmission retarder control lever, model 29521372, shall be provided to vary the intensity of the output level. The seven (7) position lever shall have a graduated control, ranging from the off position to full on. The retarder shall be controlled via a virtual switch on the vehicle display and control screen. The lever shall be mounted in the center switch panel. The lever shall be oriented so that

down is full on and up is off. The activation of the retarder shall activate the brake lights and shall be inactive during pump mode.

The virtual button will default to the “on” setting when vehicle power is switched from off to on.

TRANSMISSION RETARDER CAPACITY LEVEL

The transmission retarder shall be programmed so the maximum retardation shall be at the high capacity level.

TRANSMISSION PRE-SELECT WITH AUXILIARY BRAKE

When the auxiliary brake is engaged, the transmission shall automatically shift to second gear to decrease the rate of speed assisting the secondary braking system and slowing the vehicle.

TRANSMISSION COOLING SYSTEM

The transmission shall include a water to oil cooler system located in the cooling loop between the radiator and the engine. The transmission cooling system shall meet all transmission manufacturer requirements. The transmission cooling system shall feature continuous flow of engine bypass water to maintain uninterrupted transmission cooling.

TRANSMISSION DRAIN PLUG

The transmission shall include an original equipment manufacturer installed magnetic transmission fluid drain plug.

TRANSMISSION WARRANTY

The Allison EVS series transmission shall be warranted for a period of five (5) years with unlimited mileage. Parts and labor shall be included in the warranty.

LH PTO

A ten (10) bolt standard duty clutched drive PTO shall be provided by the chassis manufacturer and installed on the transmission. Installation shall include mounting of the PTO and wiring the unit with a control switch.

LH PTO MODEL

A ten (10) bolt Chelsea model 281-GGFJP-E5XD heavy duty transmission driven PTO shall be installed. The clutched shifted PTO is designed specifically for the Allison world transmission and provides an intermittent and continuous torque rating of 360 lb. ft.

PTO LOCATION

The transmission shall have two (2) power take off (PTO) mounting locations, one (1) in the 8:00 o'clock position and one (1) in the 1:00 o'clock position.

LH PTO CONTROL

The left hand power take off shall be controlled by the transmission. It will use a virtual button on the vehicle display and control screen with text messages. Disable is displayed when switch is off. Enable is displayed when the switch is turned on. Active is displayed when the switch is on with positive engagement of the power take off.

Required operating conditions for enabling this function are:

- Throttle position is low
- Engine speed is within customer specified constant limits
- Transmission output speed is within customer specified constant limits

Park brake set

DRIVELINE

All drivelines shall be heavy duty metal tube and equipped with MSI 1810 series universal joints for the main drivelines, and 1710 series for the inter-axle shaft. The shafts shall be dynamically balanced prior to installation to alleviate future vibration. In areas of the driveline where a slip shaft is required, the splined slip joint shall be coated with Glide Coat[®]. The drivelines shall include Meritor brand u-joints with thrust washers.

FUEL FILTER/WATER SEPARATOR

The fuel system shall have a Fuel Pro 488 fuel filter/water separator with a thermostatically controlled integral heater as a primary filter. The fuel filter shall have a see-through cover to allow visual inspection of fuel and filter condition and a drain valve. The fuel lines shall be extended an additional eighteen (18) inches in front and behind the fuel filter to allow the fuel filter to be easily relocated.

A secondary fuel filter shall be included as approved by the engine manufacturer.

An instrument panel lamp and audible alarm which indicates when water is present in the fuel-water separator shall also be included.

FUEL LINES

The fuel system supply and return lines installed from the fuel tank to the engine shall be black textile braided lines which are reinforced with braided high tensile steel wire. The fuel lines shall be connected with reusable steel fittings.

ELECTRIC FUEL PRIMER

Integral to the engine assembly is an electric lift pump that serves the purpose of pre-filter fuel priming.

FUEL COOLER

A fuel cooler shall be provided to lower fuel temperature allowing the vehicle to operate at higher ambient temperatures. The fuel cooler shall include an electrical fan and temperature-controlled relay switch.

FUEL TANK

The fuel tank shall have a capacity of sixty-eight (68) gallons and shall measure 35.00 inches in width X 17.00 inches in height X 29.00 inches in length.

The baffled tank shall have a vent port to facilitate venting to the top of the fill neck for rapid filling without "blow-back" and a roll over ball check vent for temperature related fuel expansion and draw.

The tank is designed with dual draw tubes and sender flanges. The tank shall have 2.00 inch NPT fill ports for right or left hand fill. A 0.50 inch NPT drain plug shall be centered in the bottom of the tank.

The fuel tank shall be mounted below the frame, behind the rear axle. Two (2) three-piece strap hanger assemblies with "U" straps bolted midway on the fuel tank front and rear shall be utilized to allow the tank to be easily lowered and removed for service purposes. Rubber isolating pads shall be provided between the tank and the upper tank mounting brackets. Strap mounting studs through the rail, hidden behind the body shall not be acceptable.

FUEL TANK MATERIAL AND FINISH

The fuel tank shall be constructed of 12 gauge aluminized steel. The exterior of the tank shall be powder coated black and then painted to match the frame components.

All powder coatings, primers and paint shall be compatible with all metals, pretreatments and primers used. The cross hatch adhesion test per ASTM D3359 Method B, results to be 5B minimum. The pencil hardness test per ASTM D3363 shall have a final post-curved pencil hardness of H-2H. The direct impact resistance test per ASTM D2794, results to be 5B minimum.

Any proposals offering painted fuel tanks with variations from the above process shall not be accepted. The film thickness of vendor supplied parts shall also be sufficient to meet the performance standards as stated above.

FUEL TANK STRAP MATERIAL

The fuel tank straps shall be constructed of ASTM A-36 steel. The fuel tank straps shall be powder coated black and then painted to match the frame components if possible.

FUEL TANK MISCELLANEOUS OPTIONS

The fuel tank shall be temporarily mounted, to be permanently relocated by the OEM. The tank and mounting straps as specified shall be included with the chassis along with components for permanent standard installation.

FUEL TANK FILL PORT

The fuel tank fill ports shall be provided with two (2) left fill ports located one (1) in the forward position and one (1) in the middle position and the right fill port located in the middle position of the fuel tank.

FUEL TANK SERVICEABILITY PROVISIONS

The chassis fuel lines and sender wiring shall have additional length provided so the tank can be easily lowered and removed for service purposes. The additional 12.00 feet of length shall be located above the fuel tank and shall be coiled and secured. The fuel line fittings shall be pointed towards the right side (curbside) of the chassis.

FUEL TANK DRAIN PLUG

A 0.5 inch NPT magnetic drain plug shall be centered in the bottom of the fuel tank.

FRONT AXLE

The front axle shall be a Hendrickson STEERTEK Non-drive front axle, NXT Fire/Rescue model. The axle shall include 3.74 inches of drop and a 70.87 inches wide king pin intersection (KPI). The axle shall be a box-shaped fabricated beam with integrated suspension. The axle shall include a conventional style hub with a standard knuckle. The weight capacity for the axle shall be rated up to 24,000 pounds.

FRONT WHEEL BEARING LUBRICATION

The front axle wheel bearings shall be lubricated with oil. The oil level can be visually checked via clear inspection windows in the front axle hubs.

FRONT SHOCK ABSORBERS

Shock absorbers shall be supplied by the suspension manufacturer and installed on the front axle suspension.

FRONT SUSPENSION

The front suspension shall include a parabolic leaf spring pack integrated into the Hendrickson STEERTEK NXT axle consisting of 58.40 inches long and 4.00 inches wide tapered leaf springs and shall feature a military double wrapped front eye. Spring eyes shall have Hendrickson's proprietary threaded pin bushings to increase roll stiffness. The spring capacity shall be rated specifically to the axle configuration from 18,000 and up to 24,000 pounds.

STEERING COLUMN/ WHEEL

The cab shall include a Douglas Autotech steering column which shall include a seven (7) position tilt, a 2.25 inch telescopic adjustment, and an 18.00 inch, four (4) spoke steering wheel located at the driver's position. The steering wheel shall be covered with black polyurethane foam padding.

The steering column shall contain a horn button, self-canceling turn signal switch, four-way hazard switch and headlamp dimmer switch.

ELECTRONIC POWER STEERING FLUID LEVEL INDICATOR

The power steering fluid shall be monitored electronically and shall send a signal to activate an audible alarm and visual warning in the instrument panel when fluid level falls below normal.

POWER STEERING PUMP

The hydraulic power steering pump shall be a TRW PS and shall be gear driven from the engine. The pump shall be a balanced, positive displacement, sliding vane type. The power steering system shall include an oil to air passive cooler.

FRONT AXLE CRAMP ANGLE

The chassis shall have a front axle cramp angle of 45-degrees to the left and right.

Note: Addition of optional equipment may require cramp angle to be reduced.

POWER STEERING GEAR

The power steering gear shall be a TRW model TAS 85 with an assist cylinder.

CHASSIS ALIGNMENT

The chassis frame rails shall be measured to insure the length is correct and cross checked to make sure they run parallel and are square to each other. The front and rear axles shall be laser aligned. The front tires and wheels shall be aligned and toe-in set on the front tires by the chassis manufacturer.

REAR AXLE

The rear axle shall be a Meritor model RT-46-160 tandem drive axle. The axle shall include precision forged, single reduction differential gearing, and shall have a fire service rated capacity of 48,000 pounds.

The axle shall be built of superior construction and quality components to provide the rugged dependability needed to stand up to the fire industry's demands. The axle shall include rectangular shaped, hot-formed housing with a standard wall thickness of 0.50 of an inch for extra strength and rigidity and a rigid differential case for high axle strength and reduced maintenance.

The axle shall have heavy-duty Hypoid gearing for longer life, greater strength and quieter operation. Industry-standard wheel ends for compatibility with both disc and drum brakes, and unitized oil seal technology to keep lubricant in and help prevent contaminant damage will be used.

REAR AXLE DIFFERENTIAL LUBRICATION

The rear axle differential shall be lubricated with oil.

REAR AXLE WARRANTY

The rear axle shall be warranted by Meritor for five (5) years with unlimited miles under the general service application. Details of the Meritor warranty are provided on the PDF document attached to this option.

REAR WHEEL BEARING LUBRICATION

The rear axle wheel bearings shall be lubricated with oil.

REAR AXLE DIFFERENTIAL CONTROL

The tandem axle chassis shall include an inter-axle differential lock, which shall allow both axles to be engaged as drive axles. The inter-axle differential lock shall be controlled by a locking rocker switch on the switch panel. The light on the switch shall illuminate with positive engagement of the inter-axle differential lock.

VEHICLE TOP SPEED

The top speed of the vehicle shall be approximately 65 MPH +/-2 MPH at governed engine RPM.

REAR SUSPENSION

The tandem rear axle shall feature a Hendrickson Firemaax™ air suspension. Each axle will be independently suspended for optimum performance. The suspension shall include four optimized air springs mounted to cast structural trailing arms, transverse cross beams for increased roll stability and four heavy duty shock absorbers. Dual air height control valves shall be installed to ensure equal frame height on both sides of the vehicle regardless of the load. Axle alignment is maintained using four eccentric bushings at each frame bracket. The rear tandem suspension shall have 54.00 inch axle centers.

The rear suspension capacity shall be rated at 40,000 to 48,000 pounds.

REAR SHOCK ABSORBERS

Shock absorbers shall be supplied by the suspension manufacturer and installed on the rear axle suspension.

TIRE INTERMITTENT SERVICE RATING

The chassis shall be rated using Intermittent Service ratings provided to the emergency vehicle market by the tire manufacturers as the basis for determining the maximum vehicle load and speed.

FRONT TIRE

The front tires shall be Michelin 385/65R22.5 “L” tubeless radial X Multi HL Z regional tread.

The front tire stamped load capacity shall be 22,000 pounds per axle with a nominal speed rating of 68 miles per hour when properly inflated to 130 pounds per square inch.

The Michelin Intermittent Service Rating maximum load capacity shall be 23,540 pounds per axle with a maximum speed of 68 miles per hour when properly inflated to 130 pounds per square inch.

The Michelin Intermittent Service Rating maximum speed capacity shall be 22,000 pounds per axle with a speed rating of 75 miles per hour when properly inflated to 130 pounds per square inch.

The Michelin Intermittent Service Rating limits the operation of the emergency vehicle to no more than fifty (50) miles of continuous operation under maximum recommended payload, or without stopping for at least twenty (20) minutes. The emergency vehicle must reduce its speed to no more than 50 MPH after the first fifty (50) miles of travel.

REAR TIRE

The rear tires shall be Michelin 12R-22.5 16PR "H" tubeless radial XZE regional tread.

The rear tire stamped load capacity shall be 27,120 pounds per axle with a speed rating of 75 miles per hour when properly inflated to 120 pounds per square inch.

The Michelin Tire Intermittent Service Rating load capacity shall be 28,880 pounds per axle with a speed rating of 75 miles per hour when properly inflated to 120 pounds per square inch. The Michelin Intermittent Service Rating limits the operation of the emergency vehicle to one (1) hour of loaded travel with a one (1) hour cool down prior to another loaded run.

REAR AXLE RATIO

The rear axle ratio shall be 5.63:1.

TIRE PRESSURE INDICATOR

There shall be electronic chrome LED valve caps shipped loose for installation by the OEM which shall illuminate with a red LED when tire pressure drops 8psi provided. The valve caps are self-calibrating and set to the pressure of the tire upon installation.

FRONT WHEEL

The front wheels shall be Alcoa hub piloted, 22.50 inch X 12.25 inch aluminum wheels. The outer face of the wheels shall feature Alcoa's Dura-Bright® finish as an integral part of the wheel surface. Alcoa Dura-Bright® wheels keep their shine without polishing. Brake dust, grime and road debris are easily removed by simply cleaning the wheels with soap and water. The hub piloted mounting system shall provide easy installation and shall include two-piece flange nuts.

REAR WHEEL

The rear wheels shall be Alcoa hub piloted, 22.50 inch X 8.25 inch aluminum wheels with a polished finish and Alcoa Dura-Bright® wheel treatment as an integral part of the wheel surface. The inner rear wheels shall be Alcoa hub piloted, 22.50 inch X 8.25 inch aluminum wheels with a polished finish and Alcoa Dura-Bright® wheel treatment as an integral part of the wheel surface. The hub piloted mounting system shall provide easy installation and shall include two-piece flange nuts.

BALANCE WHEELS AND TIRES

All of the wheels and tires, including any spare wheels and tire assemblies, shall be dynamically balanced.

WHEEL TRIM

The front wheels shall include stainless steel lug nut covers and stainless steel baby moons shipped loose with the chassis for installation by the apparatus builder. The baby moons shall have cutouts for oil seal viewing when applicable.

The rear wheels shall include stainless steel lug nut covers and band mounted spring clip stainless steel high hats shipped loose with the chassis for installation by the apparatus builder.

The lug nut covers, baby moons, and high hats shall be RealWheels® brand constructed of 304L grade, non-corrosive stainless steel with a mirror finish. Each wheel trim component shall meet D.O.T. certification.

BRAKE SYSTEM

A rapid build-up air brake system shall be provided. The air brakes shall include, at a minimum, a three (3) air tank, four (4) reservoir system with a total of 6236 cubic inch of air capacity. A floor mounted treadle valve shall be mounted inside the cab for graduated control of applying and releasing the brakes. An inversion valve shall be installed to provide a service brake application in the unlikely event of primary air supply loss. All air reservoirs provided on the chassis shall be labeled for identification.

The tandem rear axle spring brakes shall automatically apply in any situation when the air pressure falls below 25 PSI and shall include a mechanical means for releasing the spring brakes when necessary. An audible alarm shall designate when the system air pressure is below 60 PSI.

A six (6) sensor, six (6) modulator Anti-lock Braking System (ABS) shall be installed on the front and tandem rear axles in order to prevent the brakes from locking or skidding while braking during hard stops or on icy or wet surfaces. This in turn shall allow the driver to maintain steering control under heavy braking and in most instances, shorten the braking distance. The electronic monitoring system shall incorporate diagonal circuitry which shall monitor wheel speed during braking through a sensor and tone ring on each wheel. A dash mounted ABS lamp shall be provided to notify the driver of a system malfunction. The ABS system shall automatically disengage the auxiliary braking system device when required. The speedometer screen shall be capable of reporting all active defaults using PID/SID and FMI standards.

Additional safety shall be accommodated through Automatic Traction Control (ATC) which shall be installed on the tandem rear axle. The ATC system shall apply the ABS when the drive wheels lose traction. The system shall scale the electronic engine throttle back to prevent wheel spin while accelerating on ice or wet surfaces.

A virtual button on the vehicle display and control screen shall be provided and properly labeled "mud/snow". When the switch is pressed once, the system shall allow a momentary wheel slip to obtain traction under extreme mud and snow conditions. During this condition the ATC light shall blink continuously notifying the driver of activation. Pressing the switch again shall deactivate the mud/snow feature.

The Electronic Stability Control (ESC) unit is a functional extension of the electronic braking system. It is able to detect any skidding of the vehicle about its vertical axis as well as any rollover tendency. The control unit comprises an angular-speed sensor that measures the vehicle's motion about the vertical axis, caused, for instance, by cornering or by skidding on a slippery road surface. An acceleration sensor measures the vehicle's lateral acceleration. The Controller Area Network (CAN) bus provides

information on the steering angle. On the basis of lateral acceleration and steering angle, an integrated microcontroller calculates a theoretical angular speed for the stable vehicle condition.

FRONT BRAKES

The front brakes shall be Meritor EX225 Disc Plus disc brakes with 17.00 inch vented rotors.

REAR BRAKES

The rear brakes shall be Meritor 16.50 inch X 7.00 inch S-cam drum type.

PARK BRAKE

Upon application of the push-pull valve in the cab, the rear brakes will engage via mechanical spring force. This is accomplished by dual chamber rear brakes, satisfying the FMVSS parking brake requirements.

SUPPLEMENTAL BRAKE

A supplemental brake engagement shall be supplied that can only be engaged while the rear spring brakes are engaged. In addition to the mechanical rear brake engagement, the front service brakes shall also be engaged via air pressure, providing additional braking capability. Front service brake activation shall be accomplished with activation of the rear mechanical park brake valve.

PARK BRAKE CONTROL

A Meritor-Wabco manual hand control push-pull style valve shall operate the parking brake.

The parking brake actuation valve shall be mounted to the left side of the engine tunnel integrated into the transmission shift pod console within easy access of the driver.

REAR BRAKE SLACK ADJUSTERS

The rear brakes shall include Meritor automatic slack adjusters installed on the axle which features a simple, durable design offering reduced weight. The automatic slack adjusters shall feature a manual adjusting nut which cannot inadvertently be backed off and threaded grease fittings for easy serviceability.

AIR DRYER

The brake system shall include an internal purge Bendix AD-IP fully self contained air dryer which shall not require an extra purge tank or additional valves. The AD-IP system shall include a spin-off desiccant filter with a 12-volt, 75-watt thermostatically controlled heating element. The air dryer shall feature 3.9 pounds of premium, high crush strength desiccant which shall be produced with a composition that shall be more effective and longer lasting than other desiccants. It shall also offer protection against contamination and desiccant breakdown. The air dryer shall be mounted behind the battery box on the left hand side.

FRONT BRAKE CHAMBERS

The front brakes shall be provided with type 24 brake chambers as supplied with the Hendrickson STEERTEK NXT axle.

REAR BRAKE CHAMBERS

The rear axle shall include TSE 30/30 brake chambers which shall convert the energy of compressed air into mechanical force and motion. This shall actuate the brake camshaft, which in turn shall operate the foundational brake mechanism forcing the brake shoes against the brake drum. The TSE Type 30 brake chamber shall offer a 30.00 square inch effective area.

AIR COMPRESSOR

The air compressor provided for the engine shall be a Wabco® SS318 single cylinder pass-through drive type compressor which shall be capable of producing 18.7 CFM at 1200 engine RPMs. The air compressor shall feature a higher delivery efficiency translating to more air delivery per horsepower absorbed. The compressor shall include an aluminum cylinder head which shall improve cooling, reduce weight and decrease carbon formation. Superior piston and bore finishing technology shall reduce oil consumption and significantly increasing the system component life.

AIR GOVERNOR

An air governor shall be provided to control the cut-in and cut-out pressures of the engine mounted air compressor. The governor shall be calibrated to meet FMVSS requirements. The air governor shall be located on the air dryer bracket.

MOISTURE EJECTORS

Manual pet-cock type drain valves shall be installed on all reservoirs of the air supply system.

AIR SUPPLY LINES

The air system on the chassis shall be plumbed with color coded reinforced nylon tubing air lines. The primary (rear) brake line shall be green, the secondary (front) brake line red, the parking brake line orange and the auxiliary (outlet) will be blue.

Brass compression type fittings shall be used on the nylon tubing except as noted. All drop hoses shall include fiber reinforced neoprene covered hoses.

Note: The IR-2 valve shall include push to connect fittings.

AIR INLET CONNECTION

An air connection for the shoreline air inlet shall be supplied.

AIR INLET LOCATION

The air inlet shall be installed in the left hand side lower front step in the forward position.

AIR OUTLET CONNECTION

A quick release air outlet female connector shall be installed in the left upper cab step towards the front of the cab for the use of auxiliary air tools. The air outlet connector shall be compatible with a Milton 787, Parker Hannifin B13 or Meyers 54-410 connector.

PLUMBING AIR OUTLET CONNECTION

The cab mounted air outlet connection shall be plumbed to the chassis auxiliary air system reservoir.

AIR INLET/ OUTLET FITTING TYPE

The air connector supplied shall be a 0.25 inch size Tru-Flate Interchange style manual connection which is compatible with Milton 'T' style, Myers 0.25 inch Automotive style and Parker 0.25 inch 10 Series connectors.

REAR AIR TANK MOUNTING

If a combination of wheel base, air tank quantity, or other requirements necessitate the location of one or more air tanks to be mounted rear of the fuel tank, these tank(s) will be mounted perpendicular to frame.

WHEELBASE

The chassis wheelbase shall be 225.00 inches.

REAR OVERHANG

The chassis rear overhang shall be 60.00 inches.

FRAME

The frame shall consist of double rails running parallel to each other with cross members forming a ladder style frame. The frame rails shall be formed in the shape of a "C" channel, with the outer rail measuring 10.25 inches high X 3.50 inches deep upper and lower flanges X 0.38 inches thick with an inner channel of 9.44 inches high X 3.13 inches deep and 0.38 inches thick. Each rail shall be constructed of 110,000 psi minimum yield high strength low alloy steel. Each double rail section shall be rated by a Resistance Bending Moment (RBM) minimum of 3,213,100 inch pounds and have a minimum section modulus of 29.21 cubic inches. The frame shall measure 35.00 inches in width.

Proposals calculating the frame strength using the "box method" shall not be considered.

Proposals including heat treated rails shall not be considered. Heat treating frame rails produces rails that are not uniform in their mechanical properties throughout the length of the rail. Rails made of high strength, low alloy steel are already at the required yield strength prior to forming the rail.

A minimum of seven (7) fully gusseted 0.25 inch thick cross members shall be installed. The inclusion of the body mounting, or bumper mounting shall not be considered as a cross member. The cross members shall be attached using zinc coated grade 8 fasteners. The bolt heads shall be flanged type, held in place by distorted thread flanged lock nuts. Each cross member shall be mounted to the frame rails utilizing a minimum of 0.25 inch thick gusset reinforcement plates at all corners balancing the area of force throughout the entire frame.

Any proposals not including additional reinforcement for each cross member shall not be considered.

All relief areas shall be cut in with a minimum 2.00 inch radius at intersection points with the edges ground to a smooth finish to prevent a stress concentration point.

MISCELLANEOUS FRAME OPTIONS

The frame shall include drillings which shall be specific to mounting a Smeal 105RM, 100RM, 125RM, or 100MM substructure.

See PDF for OEM Specified pattern.

FRAME CLEAR AREA

The chassis frame shall be left clear of chassis mounted components inside or outside the frame rails within the first 30.00 inches behind the cab to allow space for OEM installed components. Cross members may be installed in the clear area if required for proper frame or driveline configuration.

FRAME PAINT

The frame shall be powder coated black prior to any attachment of components.

All powder coatings, primers and paint shall be compatible with all metals, pretreatments and primers used. The cross hatch adhesion test per ASTM D3359 shall not have a fail of more than ten (10) squares. The pencil hardness test per ASTM D3363 shall have a final post-curved pencil hardness of H-2H. The direct impact resistance test per ASTM D2794 shall have an impact resistance of 120.00 inches per pound at 2 mils.

Any proposals offering painted frame with variations from the above process shall not be accepted. The film thickness of vendor supplied parts shall also be sufficient to meet the performance standards as stated above.

FRAME ASSEMBLY STRUCTURAL

Purchaser shall receive a Frame Assembly Structural Fifty (50) Years or 250,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0305. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

FRAME RAIL CORROSION

Purchaser shall receive a Frame Rail Corrosion (Powder Coat) Three (3) Years or 48,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0311. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

FRAME COMPONENTS CORROSION

Purchaser shall receive a Frame Components Corrosion (Powder Coat) Three (3) Years or 48,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0313. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

FRONT BUMPER

The chassis shall be equipped with a severe duty front bumper constructed from structural steel channel. The bumper material shall be 0.38 thick ASTM A36 steel which shall measure 12.00 inches high with a 3.05 inch flange and shall be 104.50 inches wide with angled front corners.

The bumper shall be primed and painted as specified.

FRONT BUMPER EXTENSION LENGTH

The front bumper shall be extended approximately 6.00 inches ahead of the cab.

FRONT BUMPER PAINT

The front bumper shall be painted the same as the lower cab color.

FRONT BUMPER APRON

The 6.00 inch extended front bumper shall include an apron constructed of 0.19 inch thick embossed aluminum tread plate.

The apron shall be installed between the bumper and the front face of the cab affixed using stainless steel bolts attaching the apron to the top bumper flange.

MECHANICAL SIREN

The front bumper shall include an electro mechanical Federal Q2B™ siren, which shall be streamlined, chrome-plated and shall produce 123 decibels of sound at 10.00 feet. The Q2B™ siren produces a

distinctive warning sound that is recognizable at long distances. A unique clutch design provides a longer coast down sound while reducing the amp draw to 100 amps. The siren shall measure 10.50 inches wide X 10.00 inches high X 14.00 inches deep. The siren shall include mounting hardware designed to recess or flush mount.

MECHANICAL SIREN LOCATION

The siren shall be recess mounted in the center on the front fascia of the bumper between the frame rails.

AIR HORN

The chassis shall include two (2) emergency stutter tone air horns which shall measure 21.00 inches long with a 6.00 inch round flare. The air horns shall be trumpet style with a chrome finish.

AIR HORN LOCATION

The air horns shall be recess mounted in the front bumper face, one (1) on the right side of the bumper in the inboard position relative to the right hand frame rail and one (1) on the left side of the bumper in the inboard position relative to the left hand frame rail.

AIR HORN RESERVOIR

One (1) air reservoir, with a 1200 cubic inch capacity, shall be installed on the chassis to act as a supply tank for operating air horns. The reservoir shall be isolated with a 90 PSI pressure protection valve on the reservoir supply side to prevent depletion of the air to the air brake system.

ELECTRONIC SIREN SPEAKER

There shall be two (2) Federal Signal Inc. Dynamax® model ES100C, 100 watt speakers provided. Each speaker shall measure 5.90 inches tall X 5.50 inches wide X 2.30 inches deep. Each speaker shall include a Federal Signal “Electric F” style grille which shall measure 6.61 inches tall X 6.78 inches wide.

ELECTRONIC SIREN SPEAKER LOCATION

The two (2) electronic siren speakers shall be located on the front bumper face outboard of the frame rails with one (1) on the right side and one (1) on the left side in the outboard positions.

FRONT BUMPER TOW EYES

The bumper shall include two (2) chrome plated tow eyes shall be installed through the front bumper. The eyes shall be fabricated from 0.75 inch thick #1020 ASTM-A36 hot rolled steel. The inside diameter of the eye shall be 2.00 inches and include inside/outside chamfered edges.

CAB TILT SYSTEM

The entire cab shall be capable of tilting approximately 45-degrees to allow for easy maintenance of the engine and transmission. The cab tilt pump assembly shall be located on the right side of the chassis forward of the front axle behind the officer’s door area.

The electric-over-hydraulic lift system shall include an ignition interlock and red cab lock down indicator lamp on the tilt control which shall illuminate when holding the “Down” button to indicate safe road operation.

It shall be necessary to activate the master battery switch and set the parking brake in order to tilt the cab. As a third precaution the ignition switch must be turned off to complete the cab tilt interlock safety circuit.

Two (2) spring-loaded hydraulic hold down hooks located outboard of the frame shall be installed to hold the cab securely to the frame. Once the hold-down hooks are set in place, it shall take the application of pressure from the hydraulic cab tilt lift pump to release the hooks.

Two (2) cab tilt cylinders shall be provided with velocity fuses in each cylinder port. The cab tilt pivots shall be 1.90 inch ball and be anchored to frame brackets with 1.25 inch diameter studs.

A steel safety channel assembly, painted safety yellow shall be installed on the right side cab lift cylinder to prevent accidental cab lowering. The safety channel assembly shall fall over the lift cylinder when the cab is in the fully tilted position. A cable release system shall also be provided to retract the safety channel assembly from the lift cylinder to allow the lowering of the cab.

CAB TILT LIMIT SWITCH

A cab tilt limit switch shall be installed. The switch will effectively limit the travel of the cab when being tilted. The limit adjustment of the switch shall be preset by the chassis manufacturer to prevent damage to the cab or any bumper mounted option mounted in the cab tilt arc. Further adjustment to the limit by the apparatus manufacturer shall be available to accommodate additional equipment.

CAB TILT CONTROL RECEPTACLE

The cab tilt control cable shall include a receptacle which shall be temporarily located on the right hand chassis rail rear of the cab to provide a place to plug in the cab tilt remote control pendant. The tilt pump shall include 8.00 feet of cable with a six (6) pin Deutsch receptacle with a cap.

The remote control pendant shall include 20.00 feet of cable with a mating Deutsch connector. The remote control pendant shall be shipped loose with the chassis.

CAB TILT LOCK DOWN INDICATOR

The cab dash shall include a message located within the dual air pressure gauge which shall alert the driver when the cab is unlocked and ajar. The alert message shall cease to be displayed when the cab is in the fully lowered position and the hold down hooks are secured and locked to the cab mounts.

In addition to the alert message an audible alarm shall sound when the cab is unlocked and ajar and the parking brake is released.

CAB WINDSHIELD

The cab windshield shall have a surface area of 2969.88 square inches and be of a two (2) piece wraparound design for maximum visibility.

The glass utilized for the windshield shall include standard automotive tint. The left and right windshield shall be fully interchangeable thereby minimizing stocking and replacement costs.

Each windshield shall be bonded to the cab using a high strength commercial grade automotive adhesive.

GLASS FRONT DOOR

The front cab doors shall include a window which is 27.00 inches in width X 26.00 inches in height. These windows shall have the capability to roll down completely into the door housing. This shall be accomplished using electric actuation. The left and right front door windows shall be controlled using a switch on each respective side inner door panel. The driver's door shall include a switch for each powered door window in the cab.

There shall be an irregular shaped fixed window which shall measure 2.50 inches wide at the top, 8.00 inches wide at the bottom X 26.00 inches in height, more commonly known as "cozy glass" ahead of the front door roll down windows.

The windows shall be mounted within the frame of the front doors trimmed with a black ring on the exterior.

GLASS TINT FRONT DOOR

The windows located in the left and right front doors shall include a dark gray automotive tint which shall allow forty-five percent (45%) light transmittance. The dark tint shall aid in cab cooling and help protect passengers from radiant solar energy.

GLASS REAR DOOR RH

The rear right hand side crew door shall include a window which is 27.00 inches in width X 26.00 inches in height. The window shall be a powered type and shall be controlled by a switch on the door panel ledge and on the driver's control panel.

GLASS TINT REAR DOOR RIGHT HAND

The window located in the right hand side rear window shall include a dark gray automotive tint which shall allow forty-five percent (45%) light transmittance. The dark tint shall aid in cab cooling and help protect passengers from radiant solar energy.

GLASS REAR DOOR LH

The rear left hand side crew door shall include a window which is 27.00 inches in width X 26.00 inches in height. The window shall be a powered type and shall be controlled by a switch on the door panel ledge and on the driver's control panel.

GLASS TINT REAR DOOR LEFT HAND

The window located in the left hand side rear door shall include a dark gray automotive tint which shall allow forty-five percent (45%) light transmittance. The dark tint shall aid in cab cooling and help protect passengers from radiant solar energy.

CABIN AIR FILTRATION SYSTEM

An Active Air Purification system will be installed in the cab. The system utilizes RGF's Photohydroionization® Cell (PHI-Cell®) technology which produces hydro-peroxides and hydroxide ions, reducing airborne mold, bacteria, viruses, and odors up to 99%.

The system shall include a stainless-steel housing approximately 7.50 inches high X 16.13 inches wide X 6.6 inches deep in a trapezoid shape and shall be located on the upper rear slope of the engine tunnel, mounted in a horizontal orientation. The system shall be 12V DC and shall be active either when the ignition power is on, or when the shoreline is connected.

CLIMATE CONTROL

A ceiling mounted combination defroster and cabin heating and air conditioning system shall be located above the engine tunnel area. The system covers and plenums shall be of severe duty design made of aluminum which shall be coated with a customer specified interior paint. The design of the system's covers shall provide quick access to washable air intake filters as well as easy access to other serviceable items.

The air delivery plenums provide targeted airflow directly to the vehicle occupants. Six (6) adjustable louvers will provide comfort for the front seat occupants and ten (10) adjustable louvers will provide comfort for the rear crew occupants.

The system shall be capable of producing up to 12 FPM of air velocity at all occupant seating positions. Separate front and rear blower motors shall be of brushless design and shall be controlled independently. It shall be capable of reducing the interior cabin air temperature from 122° F (+/- 3° F) to 80° F in thirty minutes with 50% relative humidity and full solar load as described in SAE J2646.

The system shall also provide heater pull up performance which meets or exceeds the performance requirements of SAE J1612 as well as defrost performance that meets or exceeds the performance requirements of SAE J381.

A gravity drain system shall be provided that is capable of evacuating condensate from the vehicle while on a slope of up to a 13% grade in any direction.

The air conditioning system plumbing shall be a mixture of custom bent zinc coated steel fittings and Aeroquip flexible hose with Aeroquip EZ-Clip fittings.

The overhead heater/defroster plumbing shall include an electronic flow control valve that re-directs hot coolant away from the evaporator, via a bypass loop, as the temperature control is moved toward the cold position.

All defrost/heating systems shall be plumbed with one (1) seasonal shut-off valve at the front corner on the right side of the cab. There shall be one (1) additional seasonal shut-off valve located adjacent to the first valve for a total of two (2) shutoff valves, one (1) in each heater/defroster coolant hose. The cab must be tilted to access the shut-off valves. Any component which needs to be accessed to perform system troubleshooting shall be accessible by one person using basic hand tools. Regularly serviced items shall be replaceable by one person using basic hand tools.

*****The chassis manufacturer recommends that the overall climate system performance be based off third-party testing in accordance with the Society of Automotive Engineering standards as a complete system.***

Individual component level BTU ratings is not an accurate indicator of the performance capability of the completed system. System individual component BTU ratings:

- Air conditioning evaporator total BTU/HR: 82,000
- Air conditioning condenser total BTU/HR: 59,000
- Heater coil total BTU/HR: 98,000

Performance data specified is based on testing performed by an independent third-party test facility using a medium four-door 10" raised roof cab equipped with an ISL engine.

CLIMATE CONTROL DRAIN

The climate control system shall include a gravity drain for water management. The gravity drain shall remove condensation from the air conditioning system without additional mechanical assistance.

CLIMATE CONTROL ACTIVATION

The heating, defrosting and air conditioning controls shall be in the center dash center switch panel, in a position which is easily accessible to the driver. The climate control shall be activated by a rotary switch.

HVAC OVERHEAD COVER PAINT

The overhead HVAC cover shall be painted with a multi-tone onyx black texture finish.

A/C CONDENSER LOCATION

A roof mounted A/C condenser shall be installed on the left side of the cab, mid-roof.

A/C COMPRESSOR

The air-conditioning compressor shall be a belt driven, engine mounted compressor. The compressor shall be compatible with R134-a refrigerant.

*****The chassis manufacturer recommends that the overall climate system performance be based off third-party testing in accordance with the Society of Automotive Engineering standards as a complete system.***

Individual component level ratings are not an accurate indicator of the performance capability of the completed system.

Refrigerant Compressor displacement: 19.1 cubic inches per revolution.

UNDER CAB INSULATION

The underside of the cab tunnel surrounding the engine shall be lined with multi-layer insulation, engineered for application inside diesel engine compartments.

The insulation shall act as a noise barrier, absorbing noise thus keeping the decibel level in the cab well within NFPA recommendations. As an additional benefit, the insulation shall assist in sustaining the desired temperature within the cab interior.

The engine tunnel insulation shall measure approximately 0.30 inch thick including a multi-layer foil faced glass cloth and polyester fiber layer. The foil surface acts as protection against heat, moisture and other contaminants. The insulation shall meet or exceed FMVSS 302 flammability test.

The insulation shall be cut precisely to fit each section and sealed for additional heat and sound deflection. The insulation shall be held in place by acrylic pressure sensitive adhesive. In addition, the insulation shall have a removable aluminum overlay installed to protect the insulation and assist in retaining the insulation tight against the engine tunnel surfaces.

The cab floor insulation shall cover the driver and officer floor areas as well as all crew floor areas and compartment floor areas if applicable.

INTERIOR TRIM FLOOR MAT

The floor of the cab shall be covered with a multi-layer mat consisting of 0.25 inch thick sound absorbing closed cell foam with a 0.06 inch thick non-slip vinyl surface with a pebble grain finish. The covering shall be held in place by a pressure sensitive adhesive.

The floor shall have an overlay of 3003-H22 aluminum embossed tread plate. The aluminum plate shall be held down with screws and shall feature a flange wrapping downward into each stepwell, eliminating the need for any additional trim where the cab floor and the step wells meet. All exposed seams shall be sealed with silicone caulk matching the color of the floor mat to reduce the chance of moisture and debris retention.

INTERIOR TRIM

The cab interior shall include trim on the front ceiling, rear crew ceiling, and the cab walls. It shall be easily removable to assist in maintenance. The trim shall be constructed of insulated vinyl over a hard board backing.

REAR WALL INTERIOR TRIM

The rear wall of the cab shall be trimmed with vinyl.

HEADER TRIM

The cab interior shall feature header trim over the driver and officer dash constructed of 5052-H32 Marine Grade, 0.13 inch thick aluminum.

TRIM CENTER DASH

The main center dash area shall be constructed of 5052-H32 Marine Grade, 0.13 inch thick aluminum plate. There shall be four (4) holes located on the top of the dash near each outer edge of the electrical access cover for ventilation. The center dash electrical access cover shall include a gas cylinder stay which shall hold the cover open during maintenance.

TRIM LH DASH

The left hand dash shall be constructed of 5052-H32 Marine Grade, 0.13 inch thick aluminum plate for a perfect fit around the instrument panel. For increased occupant protection the extreme duty left hand dash utilizes patent pending break away technology to reduce rigidity in the event of a frontal crash. The left hand dash shall offer lower vertical surface area to the left and right of the steering column to accommodate control panels.

TRIM RH DASH

The right hand dash shall be constructed of 5052-H32 Marine Grade, 0.13 of an inch thick aluminum plate and shall include a glove compartment with a hinged door and a Mobile Data Terminal (MDT) provision. The glove compartment size will measure 14.00 inches wide X 6.38 inches high X 5.88 inches deep. The MDT provision shall be provided above the glove compartment.

ENGINE TUNNEL TRIM

The cab engine tunnel shall be covered with a multi-layer mat consisting of 0.25 inch closed cell foam with a 0.06 inch thick non-slip vinyl surface with a pebble grain finish. The mat shall be held in place by pressure sensitive adhesive. The engine tunnel mat shall be trimmed with anodized aluminum stair nosing trim for an aesthetically pleasing appearance.

POWER POINT DASH MOUNT

The cab shall include two (2) Powerwerx combination fast charging (USB) and (USB) type-C power delivery receptacles in the cab dash switch panel to provide a power source for USB chargeable electrical equipment. The USB receptacle shall be capable of 1.5 amp output and the USB type C receptacle shall be capable of a 3.0 amp output. The receptacles shall be wired battery direct.

STEP TRIM

Each cab entry door shall include a three step entry. The first step closest to the ground shall be constructed of polished 5052 H32 aluminum Grip Strut® grating with angled outer corners. The grating shall allow water and other debris to flow through rather than becoming trapped within the stepping surface. The step shall feature a splash guard to reduce water and debris from splashing in to the step. The splash guard shall have an opening on both sides and two (2) rows of slotted openings to allow debris and water to flow through rather than becoming trapped within the stepping surface. The lower step shall be mounted to a frame which is integral with the construction of the cab for rigidity and strength. The middle step shall be integral with the cab construction and shall be trimmed in 0.08 inch thick 3003-H22 embossed aluminum tread plate.

UNDER CAB ACCESS DOOR

The cab shall include an aluminum access door in the left crew step riser painted to match the cab interior paint with a push and turn latch. The under cab access door shall provide access to the diesel exhaust fluid fill.

INTERIOR DOOR TRIM

The interior trim on the doors of the cab shall consist of a two (2) piece panel constructed of SAE 304 stainless steel. The stainless steel shall have a brushed finish.

CAB DOOR TRIM REFLECTIVE

In accordance with the current standards of NFPA, the body builder shall provide 96.00 square inches of reflective material on the interior of each cab door.

INTERIOR GRAB HANDLE "A" PILLAR

There shall be two (2) rubber covered 11.00 inch grab handles installed inside the cab, one on each "A" post at the left and right door openings. The left handle shall be located 7.88 inches above the bottom of the door window opening and the right handle shall be located 2.88 inches above the bottom of the door window opening. The handles shall assist personnel in entering and exiting the cab.

INTERIOR GRAB HANDLE FRONT DOOR

Each front door shall include one (1) ergonomically contoured 9.00 inch cast aluminum handle mounted horizontally on the interior door panels. The handles shall feature a textured black powder coat finish to assist personnel entering and exiting the cab.

INTERIOR GRAB HANDLE REAR DOOR

A black powder coated cast aluminum assist handle shall be provided on the inside of each rear crew door. A 30.00 inch long handle shall extend horizontally the width of the window just above the window sill. The handle shall assist personnel in exiting and entering the cab.

INTERIOR SOFT TRIM COLOR

The cab interior soft trim surfaces shall be black in color.

INTERIOR TRIM SUNVISOR

The header shall include two (2) sun visors, one each side forward of the driver and officer seating positions above the windshield. Each sun visor shall be constructed of Masonite and covered with padded black vinyl trim.

INTERIOR FLOOR MAT COLOR

The cab interior floor mat shall be black in color.

HEADER TRIM INTERIOR PAINT

The metal surfaces in the header area shall be coated with multi-tone onyx black texture finish.

TRIM CENTER DASH INTERIOR PAINT

The entire center dash shall be coated with multi-tone onyx black texture finish. Any accessory pods attached to the dash shall also be painted this color.

TRIM LH DASH INTERIOR PAINT

The left hand dash shall be painted with a multi-tone onyx black texture finish.

TRIM RIGHT HAND DASH INTERIOR PAINT

The right hand dash shall be painted with multi-tone onyx black texture finish.

DASH PANEL GROUP

The main center dash area shall include three (3) aluminum removable panels located one (1) to the right of the driver position, one (1) in the center of the dash and one (1) to the left of the officer position. The

panels shall be coated with a black texture finish. The center panel shall be within comfortable reach of both the driver and officer.

SWITCHES CENTER PANEL

The center dash panel shall include one (1) rocker switch position in the panel.

A rocker switch with a blank legend installed directly above shall be provided for any position without a switch and legend designated by a specific option. The non-specified switches shall be two-position, black switches with a green indicator light. Each blank switch legend can be custom engraved by the body manufacturer. All switch legends shall have backlighting provided.

SWITCHES LEFT PANEL

The left dash panel shall include three (3) switches. There shall be two (2) across the top of the panel with one (1) below. One (1) of the top row of switches shall be rocker type and the left one (1) shall be the windshield wiper/washer control switch. The lower switch shall be a rocker type switch.

A rocker switch with a blank legend installed directly above shall be provided for any position not designated by a specific option. The non-designated switches shall be two-position, black switches with a green indicator light. Each blank switch legend can be custom engraved by the body manufacturer. All switch legends shall have backlighting provided.

SWITCHES RIGHT PANEL

The right dash panel shall include no rocker switches or legends.

SEAT BELT WARNING

A seat belt warning system, integrated with the Vehicle Data Recorder system, shall be installed for each seat within the cab. The system shall provide a visual warning indicator in the vehicle display and control screen(s).

The warning system shall activate when any seat is occupied with a minimum of 60 pounds, the corresponding seat belt remains unfastened, and the park brake is released. The warning system shall also activate when any seat is occupied, the corresponding seat belt was fastened in an incorrect sequence, and the park brake is released. Once activated, the visual indicators and applicable audible alarm shall remain active until all occupied seats have the seat belts fastened.

SEAT MATERIAL

The seats shall be covered with a 45.00 ounce vinyl material. This material shall be semi-resistant to UV rays and from being saturated or contaminated by fluids.

SEAT COLOR

All seats supplied with the chassis shall be black in color. All seats shall include red seat belts.

SEAT BACK LOGO

The seat backs shall include the logo for the Fresno Fire department. The logo shall be centered on the standard headrest of the seat back and on the left side of a split headrest.

SEAT DRIVER

The driver's seat shall be a USSC Valor M Series Magnus air suspension. The four-way seat shall feature a 2.00 inches vertical travel air suspension and manual fore and aft adjustment with 9.40 inches

of travel. The suspension control shall be located on the seat below the front of the cushion. The seat shall also feature integral springs to isolate shock.

The seat shall feature an all belts to seat (ABTS) style of safety restraint. The ABTS feature shall include a three-point shoulder harness with the lap belt and automatic retractor as an integral part of the seat assembly. The buckle portion of the seat belt shall extend from the seat base towards the driver position within easy reach of the occupant.

This model of seat shall have successfully completed the static load tests set forth by FMVSS 207/210. This testing shall include a simultaneous forward load of 3000 pounds each on the lap and shoulder belts and twenty (20) times the weight through the center of gravity.

The materials used in construction of the seat shall also have successfully completed testing with regard to the flammability of materials used in the occupant compartments of motor vehicles as outlined in FMVSS 302, of which dictates the allowable burning rate of materials in the occupant compartments of motor vehicles.

SEAT BACK DRIVER

The driver's seat shall include a standard seat back incorporating the all belts to seat feature (ABTS) as described above. The seat back shall recline up to 19-degrees.

SEAT MOUNTING DRIVER

The driver's seat shall be installed in an ergonomic position in relation to the cab dash.

SEAT OFFICER

The officer's seat shall be a USSC Valor M Series Magnus air suspension. The four-way seat shall feature a 2.00 inches vertical travel air suspension and manual fore and aft adjustment with 9.40 inches of travel. The suspension control shall be located on the seat below the front of the cushion. The seat shall also feature integral springs to isolate shock.

The seat shall feature an all belts to seat (ABTS) style of safety restraint. The ABTS feature shall include a three-point shoulder harness with the lap belt and automatic retractor as an integral part of the seat assembly. The buckle portion of the seat belt shall extend from the seat base towards the driver position within easy reach of the occupant.

The minimum vertical dimension from the seat H-point to the ceiling for this belted seating position shall be 37.00 inches measured with the seat suspension height adjusted to the upper limit of its travel.

This model of seat shall have successfully completed the static load tests by FMVSS 207/210. This testing shall include a simultaneous forward load of 3000 pounds each on the lap and shoulder belts and twenty (20) times the weight through the center of gravity. The model of seats shall also have successfully completed the flammability of materials used in the occupant compartments of motor vehicles as outlined in FMVSS 302, of which decides the burning rate of materials in the occupant compartments of motor vehicles.

SEAT BACK OFFICER

The officer's seat shall include a standard seat back incorporating the all belts to seat feature (ABTS) as described above. The seat back shall recline up to 19-degrees.

SEAT MOUNTING OFFICER

The officer's seat shall be installed in an ergonomic position in relation to the cab dash.

SEAT BELT ORIENTATION CREW

The crew position seat belts shall follow the standard orientation which extends from the outboard shoulder extending to the inboard hip.

SEAT REAR FACING OUTER LOCATION

The crew area shall include two (2) rear facing crew seats, which include one (1) located directly behind the left side front seat and one (1) located directly behind the right side front seat.

The primary position designation per NFPA 1900 2024 edition, shall only declare the positioning in the cab offers a minimum width of 27.60 inches of shoulder clearance without overlap of any other primary seating position and a minimum of 10.80 inches each side of seat center line. Clear width may be offset from center of seat cushion by up to 3.00 inches. It shall also offer a minimum of 22.00 inches of shoulder width clearance without any overlap of any position.

SEAT CREW REAR FACING OUTER

The crew area shall include a seat in the rear facing outboard position which shall be a USSC Valor ABTS Crew series. The seat shall feature an 18.00 inches wide padded seat cushion. The seat shall include a "Flip and Hold" feature so that the cushion shall remain in the seated position and simply touched to flip up.

The seat shall feature an all belts to seat (ABTS) style of safety restraint. The ABTS feature shall include a three-point shoulder harness with the lap belt and automatic retractor as an integral part of the seat assembly. The buckle portion of the seat belt shall extend from the seat base towards the driver position within easy reach of the occupant.

The minimum vertical dimension from the seat H-point to the ceiling for each belted seating position shall be 35.00 inches.

This model of seat shall have successfully completed the static load tests by FMVSS 207/210. This testing shall include a simultaneous forward load of 3000 pounds each on the lap and shoulder belts and twenty (20) times the weight through the center of gravity. The model of seats shall also have successfully completed the flammability of materials used in the occupant compartments of motor vehicles as outlined in FMVSS 302, of which decides the burning rate of materials in the occupant compartments of motor vehicles.

SEAT BACK REAR FACING OUTER

The rear facing outer seat(s) shall include a standard seat back incorporating the all belts to seat feature (ABTS). The seat back shall feature a contoured head rest.

SEAT MOUNTING REAR FACING OUTER

The rear facing outer seats shall offer special mounting positions which shall be 2.00 inches towards the rear wall offering additional space between the front seats and the outer rear facing seats.

SEAT FORWARD FACING OUTER LOCATION

The crew area shall include two (2) forward facing outboard seats, which include one (1) located next to the outer wall of the cab on the left side of the cab and one (1) located next to the outer wall on the right side of the cab.

The primary position designation per NFPA 1900 2024 edition, shall only declare the positioning in the cab offers a minimum width of 27.60 inches of shoulder clearance without overlap of any other primary seating position and a minimum of 10.80 inches each side of seat center line. Clear width may be offset from center of seat cushion by up to 3.00 inches. It shall also offer a minimum of 22.00 inches of shoulder width clearance without any overlap of any position.

SEAT CREW FORWARD FACING OUTER

The crew area shall include a seat in the forward facing outer position which shall be a theatre style series. The seat shall feature a padded seat cushion which shall be hinged and attached to the wall providing optimum space savings. The seat shall remain in the stored position until occupied.

The minimum vertical dimension from the seat H-point to the ceiling for each belted seating position shall be 35.00 inches.

The buckle portion of the seat belt shall be mounted on a rigid or semi-rigid stalk such that the buckle remains positioned in an accessible location. The seat belt assembly anchorages shall conform to the Federal Safety Standard (FMVSS) No. 210, "Seat belt assembly anchorages".

This model of seat shall have successfully completed the static load tests by FMVSS 207/210. This testing shall include a simultaneous forward load of 3000 pounds each on the lap and shoulder belts and twenty (20) times the weight through the center of gravity. This model of seat installed in the cab model, as specified, shall have successfully completed the dynamic sled testing using FMVSS 208 as a guide with the following accommodations. In order to reflect the larger size outfitted firefighters, the test dummy used shall be a 95th percentile hybrid III male weighing 225 pounds rather than the 50th percentile male dummy weighing 165 pounds as referenced in FMVSS 208. The model of seats shall also have successfully completed the flammability of materials used in the occupant compartments of motor vehicles as outlined in FMVSS 302, of which decides the burning rate of materials in the occupant compartments of motor vehicles.

SEAT BACK FORWARD FACING OUTER

The crew area shall include a seat in the forward facing outer position which shall be a theatre style seat. The rear wall padded trim shall act as the backrest for each seat.

There shall be a red, three-point shoulder harness with lap belt and an automatic retractor attached to the cab and available to the seat. The buckle portion of the seat belt shall be mounted on a rigid or semi-rigid stalk such that the buckle remains positioned in an accessible location. The seat belt assembly anchorages shall conform to the Federal Safety Standard (FMVSS) No. 210, "Seat belt assembly anchorages".

SEAT MOUNTING FORWARD FACING OUTER

The forward facing outer seat shall be mounted in the furthest outboard position facing the front of the cab.

SEAT FRAME FORWARD FACING

The forward facing center seating positions shall include an enclosed seat frame located and installed on the rear wall. The seat frame shall measure 42.38 inches wide X 8.63 inches high X 22.00 inches deep. The seat frame shall be constructed of Marine Grade 5052-H32 0.19 inch thick aluminum plate. The seat box shall be painted with the same color as the remaining interior.

SEAT FRAME FORWARD FACING STORAGE ACCESS

There shall be three (3) access points to the storage area one (1) each side of the seat frame and one (1) on the front face of the seat frame.

CAB FRONT UNDERSEAT STORAGE ACCESS

The left and right under seat storage areas shall have a solid aluminum hinged door with non-locking latch.

SEAT COMPARTMENT DOOR FINISH

All underseat storage compartment access doors shall have a multi-tone onyx black texture finish.

WINDSHIELD WIPER SYSTEM

The cab shall include a triple arm linkage wiper system which shall clear the windshield of water, ice and debris. There shall be two (2) windshield wipers; each shall be affixed to a radial arm. The wiper motor shall be activated by an intermittent wiper control located within easy reach of the driver's position.

ELECTRONIC WINDSHIELD FLUID LEVEL INDICATOR

The windshield washer fluid level shall be monitored electronically. When the washer fluid level becomes low the yellow "Check Message Center" indicator light on the instrument panel shall illuminate and the message center in the dual air pressure gauge shall display a "Check Washer Fluid Level" message.

CAB DOOR HARDWARE

The cab entry doors shall be equipped with exterior pull handles, suitable for use while wearing firefighter gloves. The handles shall be made of aluminum with a chrome plated finish.

The interior exit door handles shall be flush paddle type with a black finish, which are incorporated into the upper door panel.

All cab entry doors shall include locks which are keyed alike. The door locks shall be designed to prevent accidental lockout.

The exterior pull handles shall include a scuff plate behind the handle constructed of polished stainless steel to help protect the cab finish.

DOOR LOCKS

The cab entry doors shall include a Controller Area Network (CAN) based electronic door lock system which shall include two (2) external keypads, one (1) located on the left side next to the front grab handle and one (1) on the right side next to the front grab handle. There shall be one (1) red rocker switch provided on the inside of each front cab entry door to actuate the cab door locks. Each door lock may also be manually actuated from the inside of the cab by means of a red knob located on the paddle handle of the respective door. The electronic door lock system shall include four (4) key fobs for actuation with buttons for cab entry door locks and for compartment door locks.

When the doors are unlocked using the external keypad or the key fobs the interior dome lights shall illuminate and remain on for a period of twenty (20) seconds. The interior dome safety feature shall require the interior lighting power to be battery direct.

Wiring shall also be provided for up to four (4) exterior cab compartments and up to four (4) body compartments.

POWER DOOR LOCK COMPARTMENT ACTIVATION

The power door lock feature shall include activation for exterior compartment door locks through the key fob and keypads.

GRAB HANDLES

The cab shall include one (1) 18.00 inch three-piece knurled aluminum, anti-slip exterior assist handle, installed behind each cab door. The assist handle shall be made of extruded aluminum with a knurled finish to enable non-slip assistance with a gloved hand.

LIGHTED GRAB HANDLES

The grab rails shall include a 12 volt, 17.00 inch long clear LED light to provide an increased margin of safety for night time cab entry and egress.

REARVIEW MIRRORS

Ramco model CRM-310-1350-PCHR bus style mirrors shall be provided. The mirror heads shall be injection molded chrome plated ABS plastic and shall measure 9.75 inches wide X 13.50 inches high. The mirrors shall be mounted one (1) on each the driver and officer doors of the cab with polished die-cast aluminum arms.

The mirrors shall feature an upper heated remote controlled flat glass and a lower heated remote controlled convex glass. The mirror control switches shall be located within easy reach of the driver. The mirrors shall be manufactured using the finest quality non-glare glass and shall feature a rigid mounting thereby reducing vibration. The mirrors shall be corrosion free under all weather conditions.

REARVIEW MIRROR CONTROLS

The rearview mirror control switches shall be mounted within reach of the driver above the center switch panel. The driver mirror control switch shall be located as far outboard as possible while still within reach.

REARVIEW MIRROR HEAT SWITCH

The heat for the rearview mirrors shall be controlled through a virtual button on the vehicle display and control screen.

CAB FENDER

Wheel well liners shall be integrated into cab design and include a bed liner undercoat to limit road splash and enable easier cleaning. Each outer fenderette shall be 3.50 inches wide made of SAE 304 polished stainless steel.

MUD FLAPS FRONT

The front wheel wells shall have mud flaps installed on them.

CAB EXTERIOR FRONT & SIDE EMBLEMS

The cab shall include three (3) Spartan emblems. There shall be one (1) installed on the front air intake grille and two (2) for the exterior sides of the cab shipped loose with the chassis for installation by the body manufacturer.

CAB EXTERIOR MODEL NAMEPLATE

The cab shall include "Gladiator" nameplates on the front driver and officer side doors.

IGNITION

A master battery system with a keyless start ignition system shall be provided. There shall be a three-position rocker switch with off, battery, and ignition positions as well as a stainless-steel etched engine start push-button. The engine start button shall include an illuminated LED halo ring. Both switches shall be mounted to the left of the steering wheel on the dash.

The engine start switch shall only operate when the master battery and ignition switch is in the "ignition" position.

BATTERY

The single start electrical system shall include five (5) Harris BCI 31 925 CCA batteries with a 210 minute reserve capacity and 4/0 welding type dual path starter cables per SAE J541.

BATTERY TRAY

The batteries shall be installed within two (2) steel battery trays located on the left side and right side of the chassis, securely bolted to the frame rails. The battery trays shall be coated with the same material as the frame.

The battery trays shall include drain holes in the bottom for sufficient drainage of water. A durable, non-conducting, interlocking mat made by Dri-Dek shall be installed in the bottom of the trays to allow for air flow and help prevent moisture build up.

BATTERY BOX COVER

Each battery box shall include a cover which protects the top of the batteries. The covers shall be constructed of a composite material which is resistant to corrosion.

BATTERY CABLE

The starting system shall include cables which shall be protected by 275 degree F. minimum high temperature flame retardant loom, sealed at the ends with heat shrink and sealant.

BATTERY JUMPER STUD

The starting system shall include battery jumper studs. These studs shall be located in the forward most portion of the driver's side lower step, 8.00 inches apart. The studs shall allow the vehicle to be jump started, charged, or the cab to be raised in an emergency in the event of battery failure.

ALTERNATOR

The charging system shall include a 320 amp Leece-Neville 12 volt alternator. The alternator shall include a self-exciting integral regulator.

STARTER MOTOR

The single start electrical system shall include a Delco brand starter motor.

BATTERY CONDITIONER

A Blue Sea Auto Charger P12 7532 battery conditioner shall be supplied. The battery conditioner shall provide a circuit protected 40-amp output for the chassis batteries.

BATTERY CONDITIONER LOCATION

The battery conditioner shall be mounted in the cab in the left-hand rear facing outer seating position.

BATTERY CONDITIONER DISPLAY

A Blue Sea EV 7517 battery charger display shall be supplied.

BATTERY CONDITIONER DISPLAY LOCATION

The battery conditioner display shall be mounted in the left side front step on the vertical area above the intermediate step towards the rear of the step well.

AUXILIARY AIR COMPRESSOR

A Kussmaul Auto Pump 120V air compressor shall be supplied. The air compressor shall be plumbed to the air brake system to maintain air pressure. The air compressor shall include an auto drain to prevent moisture from entering the air system. The automatic moisture drain shall be plumbed into the system between the auxiliary air compressor pump and the air tanks.

AUXILIARY AIR COMPRESSOR LOCATION

The air compressor shall be installed under the dashboard on the right-hand side, forward of the officer's seating position.

ELECTRICAL INLET LOCATION

An electrical inlet shall be installed on the left hand side of the cab ahead of the front door.

ELECTRICAL INLET

A Blue Sea 20 amp Sure Eject electrical receptacle shall be supplied. It shall automatically eject the plug when the starter button is depressed.

A single item or an addition of multiple items must not exceed the rating of the electric inlet that it's connected to.

Amp Draw Reference List:

Kussmaul 40 LPC Charger - 5 Amps

Kussmaul 40/20 Charger - 8.5 Amps

Kussmaul 80 LPC Charger - 13 Amps

Kussmaul EV-40 - 6.2 Amps

Blue Sea P12 7532 - 7.5 Amps

Iota DLS-45/IQ4 - 11 Amps

1000W Engine Heater - 8.33 Amps

1500W Engine Heater - 12.5 Amps

120V Air Compressor - 4.2 Amps

120V Dometic HVAC - 15 Amps

ELECTRICAL INLET CONNECTION

The electrical inlet shall be connected to the battery conditioner and the air pump.

ELECTRICAL INLET COLOR

The electrical inlet connection shall include a red cover.

HEADLIGHTS

The cab front shall include four (4) rectangular LED headlamps with separate high and low beams mounted in bright chrome bezels. Each lamp shall include a heating system that de-ices the headlight.

HEADLIGHT LOCATION

The headlights shall be located on the front fascia of the cab directly below the front warning lights.

FRONT TURN SIGNALS

The front fascia shall include two (2) Whelen model M6 4.00 inch X 6.00 inch amber LED turn signals which shall be installed in a chrome radius mount housing above and outboard of the front warning and head lamps.

SIDE TURN/MARKER LIGHTS

The sides of the cab shall include two (2) Weldon 9186-8589-24 LED round side marker lights which shall be provided just behind the front cab radius corners.

MARKER AND ICC LIGHTS

In accordance with FMVSS, there shall be five (5) Weldon 9186-1500-20 LED cab marker lamps designating identification, center and clearance provided. These lights shall be installed on the face of the cab within full view of other vehicles from ground level.

HEADLIGHT AND MARKER LIGHT ACTIVATION

The headlights and marker lights shall be controlled via a virtual button on the vehicle display and control screen. The marker lights shall turn on when the master switch is in the "On" position. The headlamps and markers lamps shall illuminate to 100% brilliance when the ignition switch is in the "On" position. There shall be a virtual dimmer control on the vehicle display to adjust the brightness of the dash lights.

INTERIOR OVERHEAD LIGHTS

The cab shall include a Weldon LED dome lamp located over each door. The lights shall include push switches on each lamp to activate both the clear and red portions of the light individually.

INTERIOR OVERHEAD LIGHTS ACTIVATION

The clear portion of each lamp shall be activated by opening the respective door.

LIGHTBAR PROVISION

There shall be two (2) light bars installed on the cab roof. The light bars shall be provided and installed by the chassis manufacturer. The junction boxes on the roof with the light bar electrical connections shall be painted the same color as the cab roof in the area of the light bar. The light bar installation shall include mounting and wiring to a control switch on the cab dash.

CAB FRONT LIGHTBAR MODEL

The cab shall be provided with two (2) Whelen model F4NMINI light bars. Each light bar shall be 21.50 inches in length and feature eight (8) customizable pods.

See the light bar layout for specific details.

If applicable, clear lights shall be disabled with park brake engaged.

LIGHTBAR SWITCH

The light bar shall be controlled through a virtual button on the vehicle display and control screen. There shall be an additional button located on the vehicle display and control screen to control the clear lights.

SIDE SCENE LIGHTS

The cab shall include two (2) Whelen M9 LED scene lights, one (1) each side which shall be surface mounted. The Whelen lights shall provide directional lighting from twenty four (24) Super-LEDs and a clear gradient lens. The scene light shall have specialized TIR optics for ideal scene illumination.

SIDE SCENE LIGHT LOCATION

The scene lighting located on the left and right sides of the cab shall be mounted rearward of the cab "B" pillar between the front and rear crew doors.

SIDE SCENE ACTIVATION

The scene lights shall be activated by two (2) virtual buttons on the vehicle display and control screen(s), one (1) for each light. The virtual buttons shall be labeled "LEFT DC SCENE" for the left light and "RIGHT DC SCENE" for the right light. The lights shall also be activated by opening the respective side cab doors.

GROUND LIGHTS

Each door shall include a Tecniq T44 LED ground light mounted to the underside of the cab step below each door. The lights shall include a polycarbonate lens, a housing which is vibration welded and LEDs which shall be shock mounted for extended life.

GROUND LIGHTS

The ground lighting shall be activated when the parking brake is set, by the opening of the door on the respective cab side, and through a virtual button on the vehicle display and control screen.

UNDER BUMPER LIGHTS

There shall be two (2) 4.00 inch round LED NFPA compliant ground lights mounted under the bumper. The lights shall include a polycarbonate lens, a housing which is vibration welded, and LEDs which shall be shock mounted for extended life. The under bumper ground lighting shall be interlocked with the park brake and the marker light activation.

LOWER CAB STEP LIGHTS

The middle step located at each door shall include a Tecniq T44 LED light which shall activate with the opening of the respective door. The lights shall include a polycarbonate lens, a housing which is vibration welded and LEDs which shall be shock mounted for extended life.

INTERMEDIATE STEP LIGHTS

The intermediate step well area at each door shall include a TecNiq D06 LED light within a chrome housing. The egress step lights shall provide visibility to the step well area for the first step exiting the vehicle. The egress step lights shall activate with entry step lighting.

CAB SPOTLIGHTS

The cab shall include two (2) Golight model 20204GT white remote controlled LED spotlights mounted on a bracket above the lightbar as far outboard as possible. Each spotlight shall feature an LED lamp, capable of 370-degree rotation and 135-degree vertical adjustment. Each spotlight shall include a remote control on the top of the dash, one (1) within reach of each of the driver and officer's position.

ENGINE COMPARTMENT LIGHT

There shall be two (2) LED NFPA compliant lights mounted under the engine tunnel for area work lighting on the engine. The lights shall activate automatically when the cab is tilted.

DO NOT MOVE APPARATUS LIGHT

The front headliner of the cab shall include a flashing red Whelen Ion LED light clearly labeled "Do Not Move Apparatus". In addition to the flashing red light, an audible alarm shall be included which shall sound while the light is activated.

The flashing red light shall be located centered left to right for greatest visibility.

The light and alarm shall be interlocked for activation when either a cab door is not firmly closed or an apparatus compartment door is not closed, and the parking brake is released.

MASTER WARNING SWITCH

A master switch shall be included, as a virtual button on the display and control screen which shall be labeled "E Master" for identification. The button shall feature control over all devices wired through it. Any warning device switches left in the "ON" position when the master switch is activated shall automatically power up.

HEADLIGHT FLASHER

An alternating high beam headlight flashing system shall be installed into the high beam headlight circuit which shall allow the high beams to flash alternately from left to right.

Deliberate operator selection of high beams will override the flashing function until low beams are again selected. Per NFPA, these clear flashing lights will also be disabled "On Scene" when the park brake is applied.

HEADLIGHT FLASHER SWITCH

The flashing headlights shall be activated through a virtual button on the Vista display and control screen.

INBOARD FRONT WARNING LIGHTS

The cab front fascia shall include two (2) Whelen M6 Super LED front warning lights in the left and right inboard positions. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. Both the left and right side lights shall be programmed to operate in steady burn mode. The lights shall be mounted to the front fascia of the cab within a chrome bezel.

INBOARD FRONT WARNING LIGHTS COLOR

The warning lights mounted on the cab front fascia in the inboard positions shall be red.

OUTBOARD FRONT WARNING LIGHTS

The cab front fascia shall include two (2) Whelen 600 series Super LED Rota-Beam front warning lights in the left and right outboard positions. The lights shall be mounted to the front fascia of the cab within a chrome bezel.

OUTBOARD FRONT WARNING LIGHTS COLOR

The warning lights mounted on the cab front fascia in the outboard position shall be red.

FRONT WARNING SWITCH

The front warning lights shall be controlled through a virtual control on the vehicle display and control screen. This switch shall be clearly labeled for identification.

INTERSECTION WARNING LIGHTS

The chassis shall include two (2) Whelen M6 series Super LED intersection warning lights, one (1) each side. The lights shall feature multiple flash patterns including steady burn.

INTERSECTION WARNING LIGHTS COLOR

The intersection lights shall be red.

INTERSECTION WARNING LIGHTS LOCATION

The intersection warning lights shall be recess mounted within the flat surface of the steel channel bumper's angled front right and left corners.

SIDE WARNING LIGHTS

The cab sides shall include two (2) Whelen M6 V-series Super LED warning/perimeter lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the sides of the cab within a chrome bezel.

SIDE WARNING LIGHTS COLOR

The warning lights located on the side of the cab shall be red.

SIDE WARNING LIGHTS LOCATION

The warning lights on the side of the cab shall be mounted over the front wheel well forward from the center of the front axle.

SIDE AND INTERSECTION WARNING SWITCH

The side warning lights shall be controlled through a virtual button on the vehicle display and control screen. This button shall be clearly labeled for identification.

TRAFFIC CONTROL

There shall be one (1) GTT (Global Traffic Technologies) Opticom model 794H LED high priority traffic control optical emitter, mounted on the left side of the front of the cab roof. The emitter shall be activated by the master warn switch and shall be deactivated when the parking brake is applied.

REAR WARNING LIGHTS

The cab shall include a Whelen TAL65 Traffic Advisor Kit provided by Spartan. The kit shall include the Traffic Advisor with the standard fifteen (15) feet of cable and a Whelen TACTL5 Traffic Advisor control head.

The Whelen TACTL5 Traffic Advisor control head shall be installed and wired in the center dash panel.

The power to the control head shall be ignition switched and activation shall be dependent upon the state of the controllers switched position upon ignition.

Wiring provisions shall be provided and routed to the rear of the frame for the Whelen traffic advisor which shall be shipped loose for OEM installation.

AUXILIARY GROUND/PERIMETER LIGHTS

There shall be two (2) ground/perimeter lights integrated with the V-Series side warning lights. The ground/perimeter function of the V-series lights shall be activated with the vehicle ground lighting activation circuit.

STEERING WHEEL HORN BUTTON SELECTOR SWITCH

A virtual button on the vehicle display and control screen shall be provided to allow control of the electric horn or the air horn from the steering wheel horn button. The horn button selection shall default to the air horn each time the display screen power is cycled off and on.

AUDIBLE WARNING LH FOOT SWITCH

A foot switch wired to actuate the mechanical siren(s) shall be supplied for installation in the front section of the cab for driver actuation.

MECHANICAL SIREN FOOT SWITCH LH

The mechanical siren foot switch shall be a Linemaster model 491-S.

MECHANICAL SIREN FOOT SWITCH LH LOCATION

The mechanical siren foot switch shall be located on the left hand side accessible to the driver between the steering column and the door.

MECHANICAL SIREN FOOT SWITCH LH POSITION

The mechanical siren foot switch shall be positioned outboard of any other foot switch, if applicable.

AUDIBLE WARNING LH FOOT SWITCH BRACKET

A 30.00 degree angled foot switch bracket, wide enough to accommodate (2) foot switches, shall be installed outboard of the steering column for specified driver accessible foot switch activations.

AIR HORN AUXILIARY ACTIVATION

The air horn activation shall be accomplished by a black momentary back lit push button on the switch panel. An air horn activation circuit shall be provided to the chassis harness pump panel harness connector.

MECHANICAL SIREN BRAKE/AUXILIARY ACTIVATION

A red momentary siren brake rocker switch shall be provided in the switch panel on the dash.

MECHANICAL SIREN INTERLOCK

The siren shall only be active when master warning switch is on to prevent accidental engagement.

BACK-UP ALARM

An ECCO model 575 backup alarm shall be installed at the rear of the chassis with an output level of 107 dB. The alarm shall automatically activate when the transmission is placed in reverse.

INSTRUMENTATION

An Innovative Controls Digital Instrument Cluster (DIC) shall be provided that combines gauges, telltales, warning messages, and advanced diagnostic capabilities into a single 12.8-inch digital display. The display screen shall have an anti-reflective coating and include touch screen and mechanical button user interaction with the display as well as video and audio interfaces.

The DIC shall include a vehicle odometer which displays the total vehicle distance traveled. The DIC shall also include two vehicle trip odometers (TRIP A and TRIP B) which indicate the distance traveled and average fuel economy for each respective trip. The operator may select which odometer is displayed and may reset either trip odometer through the on-screen display. The DIC shall include an engine hour meter which displays the total engine hours of operation.

The gauges shall have high-contrast white scales with orange pointers. The following gauges shall be included on the display:

- Speedometer that indicates vehicle speed. The scale on the speedometer shall read from 0 to 100 MPH. A numerical display of vehicle speed shall also be shown on the gauge.
- Tachometer that indicates engine speed. The scale of the tachometer shall read from 0 to 3000 RPM.
- Primary and secondary air pressure gauges shall indicate the pressure in the primary and secondary air systems. The scale of the air pressure gauges shall read from 0 to 160 pounds per square inch (PSI). The gauge icon and scale shall turn amber when the system pressure drops below 70 PSI. The icon and scale shall turn red when the system pressure drops below 62 PSI. An audible alarm shall also sound when air pressure is low.
- Fuel gauge. The fuel gauge shall read from empty to full as a fraction of full tank capacity. The gauge icon and scale shall turn amber when the fuel level is below 1/8th tank capacity (1/4th tank in pump mode). An audible alarm shall also sound with low fuel level.
- Diesel exhaust fluid (DEF) gauge. The DEF gauge shall read from empty to full as a fraction of full tank capacity. The gauge icon and scale shall turn amber, and an audible alarm shall sound to indicate low DEF level.
- Engine oil pressure gauge. The scale of the engine oil pressure gauge shall read from 0 to 100 PSI. The gauge icon and scale shall turn red, and an audible alarm shall sound to indicate low oil pressure.

- Engine coolant temperature gauge. The scale of the coolant temperature shall read from 100 to 250 degrees Fahrenheit (°F). The gauge icon and scale shall turn red, and an audible alarm shall sound to indicate high coolant temperature.
- Voltmeter indicating chassis system voltage. The scale of the voltmeter shall be from 10 to 18 volts. The gauge icon and scale shall turn red, and an audible alarm shall sound when the system voltage drops below 11.8 volts for more than 120 seconds in accordance with the requirements of NFPA 1901. The gauge icon and scale shall turn red, and an audible alarm shall sound when the system voltage rises above 15.5 volts for more than 5 seconds.
- Transmission temperature gauge. The scale of the transmission temperature shall read from 100 to 300 degrees Fahrenheit (°F). The gauge icon and scale shall turn amber, and an audible alarm shall sound to indicate high transmission temperature.

The DIC shall include thirty-six (36) colored telltales to indicate vehicle operating conditions. The DIC shall provide text-based warning messages to accompany all telltales. The DIC shall contain an audible alarm capable of providing different alert sounds based on the type of warning. The audible alarm shall be capable of being heard from all seating positions in the cab. The operator shall be able to silence active alarms that are permitted to be silenced by applicable regulations. The DIC shall contain the following indicators and produce the following audible alarms when supplied in conjunction with applicable configurations:

RED TELLTALES

- Air Filter Restriction - indicates restriction of the engine air intake filter
- Air Pressure (Primary) – indicates critically low primary system air pressure
- Air Pressure (Secondary) – indicates critically low secondary system air pressure
- Cab Tilt Warning - indicates the cab tilt system locks are not engaged
- Coolant Temperature – indicates high engine coolant temperature
- Low Coolant - indicates critically low engine coolant
- Oil Pressure – indicates critically low engine oil pressure
- Park Brake - indicates parking brake is set
- Seat Belt - indicates a seat belt violation
- Stop Engine - indicates critical engine fault
- Voltage – indicates critically low or high system voltage

AMBER TELLTALES

- Supplemental Restraint System (SRS) – ISO Icon indicates an SRS fault
- Anti-Lock Brake System (ABS) - indicates anti-lock brake system fault
- Check Engine - indicates engine fault
- Check Transmission - indicates transmission fault
- Diesel Exhaust Fluid (DEF) level – indicates low DEF level
- Diesel Particulate Filter (DPF) - indicates restriction of the diesel particulate filter
- Electronic Stability Control (ESC) – indicates active electronic stability control system
- Fuel Level – indicates low fuel
- High Exhaust System Temperature (HEST) – indicates elevated exhaust temperature
- Malfunction Indicator Lamp (MIL) - indicates an engine emissions system fault
- Regen Inhibit - indicates regeneration of the DPF has been inhibited by the operator
- Transmission Temperature – indicates high transmission or transmission retarder temperature
- Transmission Range Inhibit - indicates a transmission operation is prevented and requested shift into gear may not occur
- Wait to Start - indicates active engine air preheat cycle

- Water in Fuel - indicates presence of water in fuel filter
- Windshield Washer Fluid – indicates low washer fluid

GREEN TELLTALES

- Automatic Traction Control (ATC) - indicates low wheel traction for automatic traction control equipped vehicles. Also indicates mud/snow mode is active for ATC system
- Auxiliary Brake - indicates secondary braking device is active
- Cruise Control - indicates cruise control is enabled
- High Idle - indicates engine high idle is active
- OK to Pump - indicates that conditions have been met for pump operations
- Left and Right Turn Signal – indicates active turn signal
- Pump Engaged - indicates the pump transmission is currently in pump gear

BLUE TELLTALES

- High Beam indicator

AUDIBLE ALARMS

- ABS System Fault
- Air Filter Restriction
- APS System Fault
- Cab Tilt Warning
- Check Engine
- Check Transmission
- Do Not Move Apparatus (open door/compartment)
- DPF Restriction
- High Coolant Temperature
- High or Low System Voltage
- High Transmission Temperature
- Idle Shutdown
- Low Air Pressure
- Low Coolant Level
- Low DEF Level
- Low Engine Oil Pressure
- Low Fuel
- Seatbelt Warning
- Stop Engine
- Turn Signal On
- Water in Fuel

The DIC shall allow the user to configure settings through an on-screen menu. The following settings shall be adjustable by the user:

- Distance/Speed Units – English (miles/MPH) or metric (kilometers/KPH)
- Temperature Units – degrees Fahrenheit (°F) or degrees Celsius (°C)
- Pressure Units – pounds per square inch (PSI) or kilopascals (kPA)
- Odometer/Trip odometer—chose which odometer is displayed and reset trip odometers
- Display Brightness – adjust brightness levels for both day and night settings
- Volume – adjust volume of display speaker
- Auxiliary Gauges – configure location of auxiliary gauges

The DIC shall include on-screen control of the diesel particulate filter (DPF). The DIC shall be capable of initiating and halting a manual DPF regeneration cycle. Also, the DIC shall be capable of inhibiting DPF regeneration when not desired by the operator.

The DIC shall be capable of displaying detailed diagnostic information. Diagnostic information screens shall only be accessible when the park brake is set to prevent unsafe operation of the vehicle. The following information shall be available through the on-screen menu:

- On-Board Diagnostics (OBD) faults – display of all active OBD faults, including the system reporting the fault, the suspect parameter number (SPN), and the failure mode identifier (FMI)
- Messages– display a list of all active warning messages and the status of alarms
- Vehicle Info – display of broadcast chassis information, including Vehicle Identification Number (VIN)
- Pump Interlocks – display pump interlocks status, engine speed, and transmission output speed
- Input/Output Diagnostics – display the state of all wired inputs and outputs to the DIC
- Symbol Legend – display a glossary of all symbols and icons used on the DIC
- J1939 Databus Info – display a list of all electronic control units (ECUs) communicating on the vehicle J1939 databus and display a list of all current message data on J1939

BACKLIGHTING COLOR

The digital dash instrumentation gauges shall display in white and the switch panel legends shall be backlit using red LED backlighting.

HOUR METER

An hour meter for the pump hours shall be included within the digital dash display which shall measure the amount of hours the engine has been operated.

RADIO

A Jensen brand heavy-duty radio with weather band, AM/FM stereo receiver and Bluetooth capabilities shall be installed in a customer specified location. Radio shall be the current, commercially available heavy-duty single-DIN automotive model at time of vehicle manufacturing date.

RADIO LOCATION

The radio shall be installed in the left hand overhead position above the driver.

AM/FM ANTENNA

A small antenna shall be located on the left hand side of the cab roof for AM/FM and weather band reception.

CAMERA REAR

One (1) Audiovox Voyager heavy duty box shaped HD camera shall be shipped loose for OEM installation in the body to afford the driver a clear view to the rear of the vehicle.

The rear camera display shall activate when the vehicle's transmission is placed in reverse.

CAMERA DISPLAY

The camera system shall be wired to a single vehicle display and control screen located on the driver's side dash. The camera system display can be activated through the vehicle display and control screen.

FIRE EXTINGUISHER

A 2.50 pound D.O.T approved fire extinguisher with BC rating shall be shipped loose with the cab.

ROAD SAFETY KIT

The cab and chassis shall include one (1) emergency road safety triangle kit.

DOOR KEYS

The cab and chassis shall include a total of six (6) door keys for the manual door locks.

CHASSIS OPERATION MANUAL

There shall be two (2) digital copies of the chassis operation manual provided with the chassis. The digital data shall include a parts list specific to the chassis model.

ENGINE AND TRANSMISSION OPERATION MANUALS

The following manuals specific to the engine and transmission models ordered will be included with the chassis in the ship loose items:

(1) Hard copy of the Engine Operation and Maintenance manual with digital copy

(1) Digital copy of the Transmission Operator's manual

(1) Digital copy of the Engine Owner's manual

CAB/CHASSIS AS BUILT WIRING DIAGRAMS

The cab and chassis shall include two (2) digital copies of wiring schematics and option wiring diagrams.

SALES TERMS

The sale of the chassis shall be governed by the terms contained on the Sales Terms – Acceptance of Purchase Order document, a copy of which is attached to this option.

DRIVELINE LAYOUT CONFIRMATION

During the design phase of the chassis the Spartan Chassis driveline engineer shall submit the driveline layout to an OEM engineer to review the chassis design for any potential problems integrating the OEM body to the chassis. This shall also include review and approval of requested clear areas. The OEM engineer shall provide approval to the driveline engineer prior to driveline bills of materials being released.



Quote Summary with Notes

Customer: Fresno City
911 H St

Dealership: Fire Apparatus Solutions
1762 S Sycamore Ave

Fresno , California 93721

Rialto, CA 92376

Quote No: 0025667

Quote Name: Fresno City - 105' Aerial (S5275 Update) 4-24-26

S.O.#:

Unit Type:

Option ID	Description
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General Info

General Info Section

950004	Spartan 107' Rear Mount Aerial Ladder <i>Shop Note:</i> <i>All badging and Logo's shall be Spartan branded</i>
100973	Smeal Branded Badging and Logo's <i>Shop Note:</i> <i>Smeal badging will be shipped loose with the unit, and shall NOT BE INSTALLED on the unit.</i>
911085	Destination, United States
900999	Intent of Specifications, Aerial, No Pump
901160	Engine Availability
911059	Bidding Prerequisites, United States
911060	Standards Version, NFPA
911064	Inspection Certificate, NFPA Compliance <i>Shop Note:</i> <i>The unit will need to pass DOT applied brake test.</i>
911070	Documentation, NFPA
980016	Owner's Manuals, Electronic, (1) USB Drive
901037	Aerial Operations/Parts/Maintenance Manuals, (1) Printed Copy, (1) USB Drive
121744	Aerial Demonstration, Aerial Ladder, (3) Consecutive Days
911081	Misc. Equipment Allowance, 2,500 Lb.
901080	Tilt Table Test, Not Required, Chassis ESC
911304	Apparatus Production Photos
911073	Pre-Construction Meeting, OEM Factory
911074	Final Inspection, OEM Factory, Required
900491	Overall Height, 143" (11'-11")
900251	Overall Length, 496" (41'-4")
900573	Wheelbase, 225 (18'-9")
900653	Angle of Approach, 8 Degrees
900674	Angle of Departure, 8 Degrees
Chassis	<u>Chassis Section</u>
910013	Custom Chassis, Spartan, Gladiator

Option ID	Description
910020	Axles, Tandem
001360	OEM Chassis Preparations, Spartan Metro Star/Gladiator
UPOxxxxxxx	Modify Length of Exhaust Termination
111626	Mud Flaps, Front Chassis Provided, Rear Full-Width OEM Provided
	<p><i>Shop Note:</i> <i>This will be a full one piece flap and will be attached all the way across the top with metal bracing. Mounting location will be the same as previous apparatus.</i></p>
910021	Cab Electrical, Multiplex
UPOxxxxxxx	Clean Wiring Install W/ Node Pocket Power Lead
	<p><i>Shop Note:</i> <i>Leave service loops on battery cables.</i></p>
111519	Route Manual Moisture Ejector, Chassis, Outside of Body, Terminate With Turn Valve
UPOxxxxxxx	Chaffing Protection, Chassis Supplied Items
UPOxxxxxxx	Motion Regulation Straps, Exterior Cab EMS Doors
UPOxxxxxxx	Cab EMS Doors, Exterior Brushed SS Trim
100965	Relocate Cab Tilt Pendant, Special Location
	<p><i>Shop Note:</i> <i>Cab tilt will be located in the SR1 compartment on the upper forward bulkhead. A hook will be installed for the cord.</i></p>
UPOxxxxxxx	Relocate the Chassis Supplied Hydraulic Retarder Accumulator
910156	Front Bumper, Chassis Supplied and Installed
901220	No Front Storage Well Flooring
UPOxxxxxxx	Battery Charger, Chassis Supplied, Relocated at Installed by OEM
000366	Door Open Warning Circuit, Wired to Light in Cab
UPOxxxxxxx	Crew Area Options, Webbing and Red LED On Scene Access Lighting
UPOxxxxxxx	Flashlight, (4), Streamlight, Ultra-Stinger 77555 LED, With Bases – Shipped Loose for Dealer Install
	<p><i>Shop Note:</i> <i>The lights shall be shipped loose with unit for dealer install.</i></p>
UPOxxxxxxx	Flashlights, (4), Streamlight, Survivor LED, Yellow, 90962, with Fast Charger - Shipped Loose for Dealer Install
	<p><i>Shop Note:</i> <i>The lights shall be shipped loose with the unit for dealer install.</i></p>
UPOxxxxxxx	Flashlights, (2), Streamlight, Fire Vulcan LED, Orange, 44315, Vehicle Mount System - Shipped Loose for Dealer Install
	<p><i>Shop Note:</i> <i>The lights shall be shipped loose with the unit for dealer install.</i></p>
UPOxxxxxxx	Accessory (USB/USB-C) Dual Outlet, Four (4), Kussmaul 091-264, Battery Direct, Mtd on Horizontal Crossbars behind Driver's/Officer's Seats
UPOxxxxxxx	Two (2), Dual Outlets, 12V, Kussmaul 091-264 Dual USB/USB-C, Engine Tunnel
	<p><i>Shop Note:</i> <i>Placement will be on the rear of the engine tunnel.</i></p>
UPOxxxxxxx	Storage Compartment, Forward Facing, Rear Cab Wall, Center, 36" H x 36" W x 20" D, Webbing, (1) Slide-Out Tray, (1) Shelf

Option ID	Description
	<i>Shop Note: The depth of the storage box needs to end at the forward corner of the chamfer on the driver side. (Same as Fresno Co)</i>
UPOxxxxxxx	Storage Compartment, Rear Facing, Back of Engine Tunnel, Contoured Depth, Hinged Top Lid, No Lighting
UPOxxxxxxx	Storage Compartment Finish, Multi-Spec to Match Cab Interior/Bed Liner, 2 Storage Compartments
110019	Mounting Plate, On Engine Tunnel, Aluminum, Bedliner Coating, Black
111632	Shelf, Back of Engine Tunnel, Aluminum, Bedliner Coated, Match Chassis (Excluding Red) <i>Shop Note: Black bed liner.</i>
UPOxxxxxxx	Mounting Brackets, Two (2) Axes, Black Bed Liner Finish, Ship Loose
010221	Power and Ground Lead, 12V Drop, Battery Direct, 30 Amp, 6-Position Distribution Panel
910042	Outlet Location, Driver's Seat, Behind <i>Shop Note: The panel will be mounted to the front face of the EMS box behind this seat, centered side to side, and placed half way up from the floor.</i>
010221	Power and Ground Lead, 12V Drop, Battery Direct, 30 Amp, 6-Position Distribution Panel
910043	Outlet Location, Officer's Seat, Behind <i>Shop Note: The panel will be mounted to the front face of the EMS box behind this seat, centered side to side, and placed half way up from the floor.</i>
010220	Power and Ground Lead, 12V Drop, Battery Direct, 20 Amp
910038	Outlet Location, Dash, Center <i>Shop Note: Coil up behind the center dash panel.</i>
010220	Power and Ground Lead, 12V Drop, Battery Direct, 20 Amp
910038	Outlet Location, Dash, Center <i>Shop Note: Coil up behind the center dash panel.</i>
Water/Foam Tanks	<u>Water/Foam Tanks Section</u>
Hose Bed	<u>Hose Bed Section</u>
Body / Pump Module	<u>Body / Pump Module</u>
121630	Body and Forward Body Module, 100" Wide, Rear Mount Aerial, Tandem-Axle, Aluminum, 1/8" (77'/UT 100'/107')
121762	Side Compartment Doors, Roll-Up Doors, ROM, Painted Doors Only
120849	Side Compartment Doors, Roll-Up Doors, ROM, Painted Doors Only (10)
120918	Compartment Door Handles, Roll-up Doors, All Locking, Offset Lock (10) <i>Shop Note: With 1250 key.</i>
120475	Drip Trays, Roll-up Door, ROM, All Compartments
100868	Vendor Supplied Pull Down Straps, (6) Roll-up Doors

Option ID	Description
	<p><i>Shop Note:</i> Install ROM straps for the PR1, PL1, R1, L1, R2, and L2 compartment doors. The blue pull down straps cannot attach where any roll out trays are mounted, as this can cause damage. When the compartment door is fully open, the loop for the pull down straps will not interfere with the pull out trays.</p>
UPOxxxxxxx	<p>Rear Compartment Door, (1), Painted Door, Horizontally Hinged, Single Panel, Aluminum, Pull Down Strap</p> <p><i>Shop Note:</i> The rear door will open well past 90degrees to allow someone tall to walk under it. This will be maximized, and correct struts will be installed to ensure this movement.</p>
120983	Compartment Lighting, ROM, LED (20)
UPOxxxxxxx	Compartment Finish, Bed Liner, Black
120469	Flooring, Black Turtle Tiles, All Interior Body Compartment Floors / Floor Mounted Trays and Shelves / Adjustable Trays
000474	Air Release and Drain Holes, All Compartments
UPOxxxxxxx	<p>Sill Protectors, Anodized Aluminum in SL1, SR1, and SS in Torque Box</p> <p><i>Shop Note:</i> SL1 and SR1 sill protectors need to be installed to both front and rear door openings to match the bottom sill guard. The sill guards are to hide behind the door when closed like the bottom sill protector.</p>
UPOxxxxxxx	Fuel Fills, OEM Stainless Steel Painted Doors, Welded Hinges, No Weather Stripping, Bonded Magnets, Driver's and Officer's Side - Hinged at Front
901150	Wheel Well Storage Design, Tandem Axle, Standard
121558	Driver's (Left) Side Body, No Pump, Mid-Size RMA, Tandem Axle, PL1 Full, L1 Full, L2 Upper, L3 Upper, L4 Full
PL1	PL1 Components
Height	Height - 67"
Width	Width - 42"
Upper Depth	Upper Depth - 98"
Lower Depth	Lower Depth - 23"
Divide Height	Intermediate Divide Height - 30"
002745	<p>Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating</p> <p><i>Shop Note:</i> Located in the lower non-transverse portion.</p>
002749	<p>Shelf (1), Permanent, Aluminum, Full Depth, Matching Compartment Finish</p> <p><i>Shop Note:</i> The floor of the transverse area will be extended out to just inside of the door opening. This component will allow that.</p>
UPOxxxxxxx	Shelf (1), Adjustable, Aluminum, Depth from Center of Transverse to Door Opening (8 Struts), Bed Liner Finish
002502	<p>Tray (1), Floor-Mounted Roll Out, Austin Hardware, 300#, 100% Extension, Bedliner Coating, With Front Drawer Release</p> <p><i>Shop Note:</i> Installed on the floor of the compartment.</p>

Option ID	Description
004674	Tray (1), Floor-Mounted Roll Out, On-Scene, 1000#, 100% Extension, Bedliner Coating <i>Shop Note:</i> The floor of the transverse area will be extended out to just inside of the door opening so the tray depth can be from the center of the transverse area to the door opening.
UPOxxxxxxx	Compartment Struts, Vertical, Welded Aluminum, Transverse Compartment
Cmpt. Layout	
L1	L1 Components
Height	Height - 61"
Width	Width - 27"
Upper Depth	Upper Depth - 98"
Lower Depth	Lower Depth - 23"
Divide Height	Intermediate Divide Height - 46"
002745	Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating <i>Shop Note:</i> Located in the lower non-transverse portion. The shelf will be cut short so it can be adjusted over the PAC Trac, and narrow enough to miss the axe brackets.
004855	Mounting Surface, Back Wall of Compartment, PAC Trac <i>Shop Note:</i> Installed in the upper portion of the compartment, beginning from the transverse divide height and down 26". Hard mount the PAC Trac to the back wall.
UPOxxxxxxx	Mounting Brackets, (2) Axes, Bed Liner Coated, Shipped Loose
UPOxxxxxxx	Stokes Storage Brackets and Strap
120785	Compartment Struts, Vertical, Welded Aluminum <i>Shop Note:</i> Installed in the lower non-transverse portion only.
Cmpt. Layout	
L2	L2 Components
Height	Height - 27"
Width	Width - 72"
Upper Depth	Upper Depth - 98"
Lower Depth	Lower Depth - 23"
Divide Height	Intermediate Divide Height - 12.5"
UPOxxxxxxx	Mounting Surface, Forward Wall of Compartment, PAC Trac
000428	Struts, (2), Horizontal, Back Wall of Compartment, Aluminum <i>Shop Note:</i> Installed on the back wall in the non-transverse area of the compartment.
UPOxxxxxxx	Partition, Vertical, Adjustable, Bed Liner Coated, Standard Height Compartment <i>Shop Note:</i> The partition will be the height of the door opening.
Cmpt. Layout	
L3	L3 Components

Option ID	Description
Height	Height - 16"
Width	Width - 49"
Upper Depth	Upper Depth - 23"
Lower Depth	Lower Depth - 23"
Divide Height	Intermediate Divide Height - 0"
002745	Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating
120785	Compartment Struts, Vertical, Welded Aluminum
Cmpt. Layout	
L4	L4 Components
Height	Height - 47"
Width	Width - 32"
Upper Depth	Upper Depth - 23"
Lower Depth	Lower Depth - 23"
Divide Height	Intermediate Divide Height - 0"
UPOxxxxxxx	Flat Roll-Out Plate, (1) Floor Mounted, Innovative Ind., 300#, Abraded 3/16", 100% Extension
004855	Mounting Surface, Back Wall of Compartment, PAC Trac
	<i>Shop Note:</i>
	<i>PAC Trac will be two (2) sections tall and full width, beginning at the door plate structure.</i>
UPOxxxxxxx	Custom Pocket, Rearward Bulkhead
120785	Compartment Struts, Vertical, Welded Aluminum
Cmpt. Layout	
120648	WL1, Air Bottle Compartment, OEM Brushed SS Door, Single 8"
	<i>Shop Note:</i>
	<i>NO labels to be installed on the door.</i>
UPOxxxxxxx	WL2, Custom Triple Air Bottle Compartment, OEM Brushed SS Drop-Down Door, 8"
	<i>Shop Note:</i>
	<i>NO labels to be installed on the door.</i>
UPOxxxxxxx	WL3, Extinguisher/Water Can Compartment, OEM Brushed SS Door, Single Custom
	<i>Shop Note:</i>
	<i>NO labels to be installed on the door.</i>
121600	Officer's (Right) Side Body, No Pump, Mid-Size RMA, Tandem Axle, PR1 Full, R1 Full, R2 Upper, R3 Upper, R4 Full
PR1	PR1 Components
Height	Height - 67"
Width	Width - 42"
Upper Depth	Upper Depth - 98"
Lower Depth	Lower Depth - 0"
Divide Height	Intermediate Divide Height - 30"
002749	Shelf (1), Permanent, Aluminum, Full Depth, Matching Compartment Finish
	<i>Shop Note:</i>
	<i>The floor of the transverse area will be extended out to just inside of the door opening. This component will allow that.</i>

Option ID	Description
UPOxxxxxxx	Shelf (1), Adjustable, Aluminum, Depth from Center of Transverse to Door Opening (8 Struts), Bed Liner
002500	Tray (1), Adjustable-Height Roll Out, Austin Hardware, 300#, 100% Extension, Bedliner Coating, With Front Drawer Release
	<i>Shop Note:</i>
	<i>Placed in the lower non-transverse area. There are three (3) trays in the compartment. The upper On Scene tray will have the front lip cut off except for the outboard corners, to hold the drip pans.</i>
002502	Tray (1), Floor-Mounted Roll Out, Austin Hardware, 300#, 100% Extension, Bedliner Coating, With Front Drawer Release
	<i>Shop Note:</i>
	<i>Placed on the floor of the non-transverse area.</i>
004674	Tray (1), Floor-Mounted Roll Out, On-Scene, 1000#, 100% Extension, Bedliner Coating
	<i>Shop Note:</i>
	<i>The floor of the transverse area will be extended out to just inside of the door opening so the tray depth can be from the center of the transverse area to the door opening. The tray will have the front lip cut off except for the outboard corners, to allow the tray to hold the drip pans in.</i>
UPOxxxxxxx	Drip Pans for Roll-Out Trays
120785	Compartment Struts, Vertical, Welded Aluminum
Cmpt. Layout	
R1	R1 Components
Height	Height - 61"
Width	Width - 27"
Upper Depth	Upper Depth - 98"
Lower Depth	Lower Depth - 0"
Divide Height	Intermediate Divide Height - 46"
002745	Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating
	<i>Shop Note:</i>
	<i>Located in the lower non-transverse portion. The shelf will be cut short so it can be adjusted over the PAC Trac, and narrow enough to miss the axe brackets.</i>
004855	Mounting Surface, Back Wall of Compartment, PAC Trac
	<i>Shop Note:</i>
	<i>Installed in the upper, 26" from the transverse divide height and 26" down. Hard mount the PAC Trac to the back wall.</i>
UPOxxxxxxx	Mounting Brackets, (2) Axes, Bed Liner Coated, Shipped Loose
	<i>Shop Note:</i>
	<i>Same as previous S5275.</i>
120785	Compartment Struts, Vertical, Welded Aluminum
	<i>Shop Note:</i>
	<i>Installed in the lower non-transverse portion only.</i>
Cmpt. Layout	
R2	R2 Components
Height	Height - 27"
Width	Width - 72"

Option ID	Description
Upper Depth	Upper Depth - 98"
Lower Depth	Lower Depth - 23"
Divide Height	Intermediate Divide Height - 12.5"
002745	Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating <i>Shop Note:</i> <i>The shelf will be in the rearward, non-transverse portion of the compartment only. The shelf will be 32" wide. The shelf shall be bed liner coated black.</i>
000428	Struts, (2), Horizontal, Back Wall of Compartment, Aluminum <i>Shop Note:</i> <i>Installed on the back wall in the non-transverse area of the compartment, in just the area below the transverse portion.</i>
UPOxxxxxxx	Compartment Struts, (4) Vertical, Welded Aluminum
UPOxxxxxxx	Partition, Vertical, Bolt-In, Standard Height Compartment, (2) additional Struts Rearward Face, Bed liner
Cmpt. Layout	
R3	R3 Components
Height	Height - 16"
Width	Width - 49"
Upper Depth	Upper Depth - 23"
Lower Depth	Lower Depth - 0"
Divide Height	Intermediate Divide Height - 0"
002745	Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating
120785	Compartment Struts, Vertical, Welded Aluminum
Cmpt. Layout	
R4	R4 Components
Height	Height - 47"
Width	Width - 32"
Upper Depth	Upper Depth - 23"
Lower Depth	Lower Depth - 24"
Divide Height	Intermediate Divide Height - 0"
002745	Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating <i>Shop Note:</i> <i>The shelf will be in the upper portion only. The R4 compartment will be as deep as practical and will be determined by Smeal engineering.</i>
120785	Compartment Struts, Vertical, Welded Aluminum <i>Shop Note:</i> <i>The struts will be in the upper portion of the compartment. They will not be mounted in the bottom 30" of the compartment.</i>
Cmpt. Layout	
120657	WR1, Air Bottle Compartment, OEM Brushed SS Door, Single 8" <i>Shop Note:</i> <i>NO labels to be installed on the door.</i>
UPOxxxxxxx	WR2, Custom Triple Air Bottle Compartment, OEM Brushed SS Drop-Down Door, 8" <i>Shop Note:</i> <i>NO labels to be installed on the door.</i>

Option ID	Description
UPOxxxxxxx	WR3, Extinguisher/Water Can Compartment, OEM Brushed SS Door, Single Custom <i>Shop Note:</i> <i>NO labels to be installed on the door.</i>
901045	Rear Side Body, Rear Mounts, Torque Box Compartment <i>Shop Note:</i> <i>Same lighting to be used as previous Trucks.</i>
008773	Sub Frame Body Mounts, GS-36, Hot-Dip Galvanized Steel, Aerial (107')
UPOxxxxxxx	Front Stabilizer Compartments, Lap Doors, Locking <i>Shop Note:</i> <i>Doors to be hinged at top to allow cord reel to be pulled in either direction. There will be a Smeal type pull down strap installed on each door due to the height of them when in the open position.</i>
901193	Inner Door Face, Front Stabilizer Doors, Painted Main Body Color
UPOxxxxxxx	Front Stabilizer Compartments Depth, Fully Transverse
121647	Front Stabilizer Compartments Lighting, ROM LED Lighting (2 Lights Total)
UPOxxxxxxx	Front Stabilizer Compartments Option - Pike Pole Storage (4) Each Side <i>Shop Note:</i> <i>Pike poles are listed out in the loose equipment portion of the specs.</i>
UPOxxxxxxx	Gate Valve Storage, SL1/SR1 <i>Shop Note:</i> <i>Gate valve storage mounts to be fabricated the same as previous existing trucks.</i>
UPOxxxxxxx	Pike Pole Package, SL1/SR1 – Fire Hooks (4) RH-6DA, and (4) RH-6 <i>Shop Note:</i> <i>Pike pole storage mounts to be fabricated the same as previous apparatus.</i>
005118	Rub Rails, "C" Channel Design (No Rubber Inserts)
000516	Tow Option, Rear, Tow Eye, Two (2), Chrome
UPOxxxxxxx	Access Panel, Bolt-On, Painted, Front of Forward Body Module
UPOxxxxxxx	Compartment Struts, Dual Vertical, Welded Aluminum, SL1 /SR1
002187	Wheel Wells, Rear, Tandem Axle
003560	Fenderettes, (4), Tandem Axle, Stainless Steel
UPOxxxxxxx	Backboard Storage, Torque Box Ladder Storage Area
120489	Exhaust Heat Deflector Shield, 4"
UPOxxxxxxx	Access Panel for Fuel Tank Gauge, 8" Diameter With Cover, Aerials
UPOxxxxxxx	License Plate Bracket, Cast Products, LED Lit, Special Location
006375	Stainless Steel Screws, Aerial
911283	NO Bag of Bolts
900963	Walkways/Overlays/Stepping Surfaces, Tread Plate, NFPA
UPOxxxxxxx	Turntable Access Ladder- 35 degree Angled, Driver's Side, Grote LED Light, Knurled Aluminum Handrails, Rear Mounts - Brushed SS Overlays

Option ID	Description
	<p><i>Shop Note:</i> <i>The aerial turntable steps will line up with the gaps in the aerial turntable handrails. The proximity switch box shall be made of stainless steel material NOT treadplate.</i></p>
UPOxxxxxxx	<p>Turntable Access Ladder- 35 degree Angled, Officer's Side, Grote LED Light, Knurled Aluminum Handrails, Rear Mounts - Brushed SS Overlays</p> <p><i>Shop Note:</i> <i>The aerial turntable steps will line up with the gaps in the aerial turntable handrails. The proximity switch box shall be made of stainless steel material NOT treadplate.</i></p>
UPOxxxxxxx	<p>Vertical Area Ahead of Turn Table, Painted and NO Overlay</p>
UPOxxxxxxx	<p>Pull-Out Platforms (2), Below PR1 and PL1, Innovative Industries, NO TREADBRITE</p> <p><i>Shop Note:</i> <i>The mounting for the platforms will be reinforced to prevent cracking, or thicker material will be used.</i></p>
900960	<p>Handrail Material, Knurled Aluminum</p>
001287	<p>Ladder Storage, In Torque Box, Rear Mounts</p>
UPOxxxxxxx	<p>Ground Ladder Package, Duo-Safety, (1) 10' "Fresno" Attic 701, (2) 16' Roof 875-DR, (1) 20' Roof Ladder 875-A, (1) 24' Two-Section 900-A, (1) 28' Two-Section 1200-A, (1) 35' Two-Section 1200-A</p>
UPOxxxxxxx	<p>Little Giant Ladder Storage, L2/R2 Transverse Area W/ Straps</p> <p><i>Shop Note:</i> <i>The straps will be installed horizontally not vertically.</i></p>
121815	<p>Ladder (1), Wing Enterprises, 17' Aluminum Little Giant Defender (15187-882)</p>
121684	<p>Pike Pole Storage, In Upper Portion of Torque Box, (4) Tubes</p> <p><i>Shop Note:</i> <i>The labels for these pike poles will be shipped loose, and there will be no hang down bracket for these.</i></p>
UPOxxxxxxx	<p>Pike Pole Package, Torque Box, Nupla I-Beam, Fiberglass, Standard Hooks, (2) 8' Pole (SPD-8), (2) 12' Pole (SPD-12)</p> <p><i>Shop Note:</i> <i>The labels for the tubes will be shipped loose, and there will be no special hang down bracket for these.</i></p>
UPOxxxxxxx	<p>Pike Pole/Tool Storage, For Customer Supplied/Installed Items, Officer Side of Torque Box</p>
UPOxxxxxxx	<p>Animal Snare Storage Tube, 86" Deep</p>
900956	<p>Wheel Chock Storage, Shipped Loose</p>
002415	<p>Chocks, (1) Pair, Cast Products, TMC1008-4 and Bracket</p>
900956	<p>Wheel Chock Storage, Shipped Loose</p>
002415	<p>Chocks, (1) Pair, Cast Products, TMC1008-4 and Bracket</p>
Pump / Foam System	<p><u>Pump / Foam System</u></p>
Tank/Pump Plumbing Labels	<p>Tank/Pump Plumbing Labels - Labels</p>
Intakes	<p><u>Intakes</u></p>
Discharges	<p><u>Discharges</u></p>

Option ID	Description
Discharge Labels	Discharge Labels -
Low Voltage	Low Voltage
002956	Electrical System, Aerial, FRC ControlMaxx Multiplex, QL-12
	Harnesses, Sealed Switches
911058	Electrical System Test, 12 Volt
000842	Tail Lights, LED, Whelen, M6 Series, Stop-Tail (Combination)
	(M62BTT)/Turn (M62T)/Backup (M62BU), 3-Light Vertical Casting
UPOxxxxxxx	Switch, Rear Work Light, Inside Stabilizer Control Box
	<i>Shop Note:</i>
	<i>Make sure a hole is NOT torched in the rear of the body for the rear work light switch.</i>
008730	Turn Signals, (2) in Rub Rail, LED, Truck-Lite, Model 21
UPOxxxxxxx	Ground Lights, LED, T44, Tecniq, Activation by Park Brake, V-Mux
	Switch, and Reverse
	<i>Shop Note:</i>
	<i>The ground light brackets will be painted black.</i>
007397	Clearance Lights, With Rubber Extension Arms, LED, Grote (65282)
	and Truck-Lite (35741R ID), Red
UPOxxxxxxx	Camera System, Back-Up, Chassis Supplied, OEM Installed Recessed
	in TA Pocket
000621	Alarm, Door Open Warning Circuit
100042	Intercom System, Sigtronics US67S, 6 Cab Position, Wired
	Driver/Officer (SE-8), 4 Wired Crew (SE-2)
UPOxxxxxxx	Dealer Supplied and Installed Radio Interface Cable
911317	Upper Zone A, Chassis Supplied and Installed
UPOxxxxxxx	Warning Lights, (2), Upper Zone C, Whelen, LED, 600 Series
	ROTABEAM
Upper Zone C	Light/Lens Color - Red in color.
Light/Lens Color	
UPOxxxxxxx	Upper Zone B/D, Warning Lights (6), Whelen, LED, ION Wide Angle
	WIONSMCR, Chrome Housings, Red with Clear Lenses
Upper Zone B/D	Light/Lens Color - Red in color with clear lenses.
Light/Lens Color	
UPOxxxxxxx	Lower Zone Warning Light Package, (4) OEM Supplied Whelen, LED -
	(2) ION Series WIONSMCR & (2) M6V2R Series (Warning/Perimeter)
Lower Zone	Light/Lens Color - M6V2R - Top lens Red in color, and Bottom lens
Light/Lens Color	Clear ION - Red in color with clear lenses.
101263	Chassis Supplied/OEM Installed Traffic Advisor, Chassis Supplied and
	Installed Controller
910738	Traffic Directional Light Location, Rear Body Face, Recess Mounted
	<i>Shop Note:</i>
	<i>Recessed area for the traffic advisor will be a sloped floor to allow</i>
	<i>water to drain.</i>
000896	Siren Head, 100W/200W, Whelen, 295HFSA7, Remote Siren Head
	<i>Shop Note:</i>
	<i>The PA for the electric siren will be active with ignition power and not E-</i>
UPOxxxxxxx	<i>Master.</i>
	Forward of Shift Pad

Option ID	Description
UPOxxxxxxx	Speakers, Chassis Supplied and Installed
UPO0052344	None
010221	Power and Ground Lead, 12V Drop, Battery Direct, 30 Amp, 6-Position Distribution Panel
900014	Power Lead Location, In L1 Cmpt <i>Shop Note: Install as high up as possible on the forward bulkhead by the rollup door.</i>
010221	Power and Ground Lead, 12V Drop, Battery Direct, 30 Amp, 6-Position Distribution Panel
900019	Power Lead Location, In R1 Cmpt <i>Shop Note: Install as high up as possible on the forward bulkhead by the rollup door.</i>
110980	Power and Ground Lead, 12V Drop, Ignition, 40 Amp, 12-Position Distribution Panel
UPOxxxxxxx	Power Lead Location, Inside Pump Module
110632	Scene Lights, Pair, 12V, Whelen, Surface Mount, LED M6 Series Gradient Scene
910851	Lighting Location, Rear Face of Body, Both Sides
UPOxxxxxxx	Lighting Activation, On V-Mux Screen and Rear Body, 'REAR SCENE', Wired to Rear Work Light Switch, Reverse, "ALL SCENE" Function <i>Shop Note: There will be a button on the V-Mux for "ALL SCENE", which will activate all scene lights around the unit at the same time.</i>
UPOxxxxxxx	Lighting Activation, On V-Mux Screen, One Single Switch for all 12 Volt Scene Lights On Apparatus
Line Voltage	<u>Line Voltage</u>
UPOxxxxxxx	Generator, Hydraulic, Harrison, 10kW, MCR, Meter Display, Cover <i>Shop Note: The display will be installed outboard of the load center. The generator switch on the V-Mux will be a single button activation. The cover will be designed to include the coverage of the hydraulic oil tank which is forward of the generator location. It shall also have "Flush Style" latches.</i>
007539	Generator Start, Hydraulic Gen., In Cab
000859	Transfer Switch, Generator-to-Shoreline
901012	Generator PTO, Standard Hot Shift, PTO
002786	Generator Location, Ahead of Turntable, Harrison
007409	Generator Load Center, 12-Circuit, Non-GFI Breaker Box
UPOxxxxxxx	Generator Load Center Location, SL1, Forward Wall <i>Shop Note: Generator load center will be installed on the forward wall of SL1, hinge the load center door inboard. The node box will be installed on the front wall of SR1.</i>
110052	Receptacle, 120V, 5-20R Straight Blade, Duplex, Wired to Transfer Switch
910914	Receptacle Location, In L3 Cmpt

Option ID	Description
	<i>Shop Note:</i> <i>Will be located on the L3 rear wall towards the rear in the upper corner.</i>
110052	Receptacle, 120V, 5-20R Straight Blade, Duplex, Wired to Transfer Switch
910919	Receptacle Location, In R3 Cmpt
	<i>Shop Note:</i> <i>Located in the upper corner on rearward back wall of R3.</i>
110052	Receptacle, 120V, 5-20R Straight Blade, Duplex, Wired to Transfer Switch
910920	Receptacle Location, In R4 Cmpt
	<i>Shop Note:</i> <i>Locate on the Pac Trac in the upper portion of the compartment on the back wall, forward upper area.</i>
110052	Receptacle, 120V, 5-20R Straight Blade, Duplex, Wired to Transfer Switch
910915	Receptacle Location, In L4 Cmpt
	<i>Shop Note:</i> <i>Will be located in the L4 upper forward corner.</i>
110886	Cord Reel, Hannay, 120V, 200' 10/3 Yellow Cord, Terminate L5-20 Receptacle, Junction Box with Pigtail, Extenda-Lite
901148	Junction Box Option, Powder Coat Gray
910861	Junction Box Receptacle, 120V, 5-20R Straight-Blade, Duplex
910863	Junction Box Receptacle, 120V, L5-20R Twistlock, Single
910863	Junction Box Receptacle, 120V, L5-20R Twistlock, Single
910863	Junction Box Receptacle, 120V, L5-20R Twistlock, Single
901023	Cord Reel Location, In SL1 Cmpt
	<i>Shop Note:</i> <i>Cord reel shall be mounted as high as possible. Cord reel guide rollers shall be installed on the cord reels.</i>
110886	Cord Reel, Hannay, 120V, 200' 10/3 Yellow Cord, Terminate L5-20 Receptacle, Junction Box with Pigtail, Extenda-Lite
901148	Junction Box Option, Powder Coat Gray
910861	Junction Box Receptacle, 120V, 5-20R Straight-Blade, Duplex
910863	Junction Box Receptacle, 120V, L5-20R Twistlock, Single
910863	Junction Box Receptacle, 120V, L5-20R Twistlock, Single
910863	Junction Box Receptacle, 120V, L5-20R Twistlock, Single
901025	Cord Reel Location, In SR1 Cmpt
	<i>Shop Note:</i> <i>Cord reel shall be mounted as high as possible. Cord reel guide rollers shall be installed on the cord reels.</i>
UPOxxxxxxx	Scene Lights (2), 120V, FRC, Surface Mounted, LED Spectra Max 20,000 Lumen, Model SPA260-K20
910853	Lighting Location, Side Face of Body, Rearward, Both Sides
110849	Lighting Activation, Pair, In Cab, 'LEFT SCENE' and 'RIGHT SCENE', Rocker Switches
UPOxxxxxxx	Scene Lights (2), 120V, FRC, Surface Mounted, LED Spectra Max 20,000 Lumen, Model SPA260-K20
UPOxxxxxxx	Lighting Location, Side Face of Body, Forward, Both Sides of Body

Option ID	Description
110849	Lighting Activation, Pair, In Cab, 'LEFT SCENE' and 'RIGHT SCENE', Rocker Switches
<u>Aerial</u>	<u>Aerial</u>
001481	Construction and Dimensions, Rear Mount Ladder Structure (107')
911154	Ladder Specifications (107')
001837	Aerial Information Specification Plate
121500	Aerial Test, Non-Destructive Testing (NDT), Independent Third Party Certification
901000	Aerial Test, Structural Safety Factor, Stability Factor and Testing
911156	Rung Covers
001509	Ladder Travel Support/Cradle, Light, Cradle Interlock System (UT 100'/107')
001514	Elevation System (UT 100'/107')
UPOxxxxxxx	Extension/Retraction System (UT 100'/105') Greaseable Pins and Sheaves
911168	Wear Pads/Bearing Surfaces
911172	Rotation System, Bearing/Gear Box/Interlocks (UT 100'/107')
911175	Cab / Body Damage Protection Interlock System
001632	Aerial Power Take-Off
	<i>Shop Note: The PTO will be activated with the aerial master and will not have it's own switch.</i>
008099	Hydraulic Pump with "Thru-Drive", Generator Operation in Drive (77'/107')
001640	Hydraulic System (UT 100'/107')
111765	Hydraulic Pressure Gauge, Rear Control Station, Inn. Cntrls, 2-1/2", TC Series, psi 0-5000
UPOxxxxxxx	Digital Level Gauge, Hydraulic System Oil Reservoir <i>Shop Note: Gauge will be located in SL1 adjacent to the load center.</i>
UPOxxxxxxx	Aerial Hydraulic Tank Drain
001649	Emergency Hydraulic Pump (77'/UT100'/107')
911194	Swivel
001805	Aerial Angle Indicator, Base Section
001807	Aerial Extension Tape
UPO0043317	None
007719	Torque Box, Painted Black, PPG (107')
UPOxxxxxxx	Stabilizers, Front and Rear "H" Style, 16' Spread, Standard Stroke, WITH Stabilizer Pins (107') - Brushed SS Covers
911178	Stabilizer Extension System (UT100'/107)
001594	Stabilizer Angle Level Gauges (2)
	<i>Shop Note: The level on the side of the truck needs to be accurate to show level front to back and stay within specs of load chart. The driver side level indicator will be mounted centered in the C-channel below L4. Center on rub rail vertically and horizontally.</i>

Option ID	Description
UPOxxxxxxx	<p>Ground Control System, Electric Over Hydraulic Controls, Front and Rear Stabilizers, Lower Center Rear, Horizontal, Painted Stainless Door (Fresno)</p> <p><i>Shop Note:</i> The rear body control station and outrigger control box doors will be constructed in a way to eliminate exposed attachment hardware on the outside face of the doors. Chevron the 3 doors as much as possible. The stabilizer control boxes shall have chrome pull style latches with cables, but no hardware shall be exposed on the outside. The ground control station box will have pop latches, and the striker plates shall be eliminated.</p>
UPOxxxxxxx	<p>Stabilizer 1" Auxiliary Pads (4) Above Front Wheel Wells In Body, Painted Doors</p> <p><i>Shop Note:</i> Remove the compression latch tabs from inside the compartments. No labels on these doors.</p>
111741	Stabilizer Cover Warning Lights (4), Whelen, M6 Super-LED (M6R), Red, Activated with Aerial Master and Emergency Master, Bezel Color to Match Lower Zone Lights
008768	Stabilizer Arm Warning Lights (8), Whelen, 5G Series Super-LED (5GR00FRR), Red
003737	Stabilizer Work Lights (4), Truck-Lite LED (81380), Clear
008306	Turntable, Standard (107')
008346	Turntable Handrails, Knurled SS, Standard Turntable, (2) Openings
008344	Turntable Restraints, (2) ManSaver Bars
111717	Turntable Work Lights, (2) OnScene and (1) Truck-Lite, LED
001614	Ladder Hour Meter, At Turntable
102495	<p>Turntable Control Console, Painted Box/Lid, AL-11, IC Panel, On-Scene Light Under Lid (77'/107'/125')</p> <p><i>Shop Note:</i> The console will be fully painted and there will be NO treadplate. The screws will NOT be painted. Do NOT install the orange indicator light for the nozzle stow on the control pedestal, and there should NOT be an aerial bed interlock for the nozzle stow. Same as S5275. Program the AL-11 body protection values for zone 1 as follows: SLOW ST: 68° NO GO ST: 63° SAFE ELV: 4° NO GO END: 297° SLOW END: 292°</p>
111973	System Lock Control, Red Mushroom Switch on Turntable Console
008025	Retraction Override Safety System, Switched Through AL-11
007407	Load Sensing System, Programmed into AL-11
008264	Load Chart (107')
001654	Communication System, 2-Way, Turntable-Tip, Atkinson (77'/UT 100'/107'/125')
111835	<p>Tracking Lights (2), 12V, On Front of Cradle, Whelen LED Pioneer Micro (MPPW), White</p> <p><i>Shop Note:</i> Activation will be default to "ON".</p>
111842	Tracking Lights Switch, AL-11
101923	Egress, Bolt-On, Standard, Clean Tip, (107')

Option ID	Description
	<p><i>Shop Note:</i> <i>There will NOT be any electrical components installed on the egress. It shall match what was previously done and engineering shall provide a 3D layout for approval.</i></p>
007921	Ladder Creeper Controls at Tip, Switched Through AL-11 (107'/125')
001505	Folding Steps on Fly Section (77'/107'/125')
911157	Load Lifting/Rappelling Eyes on Fly Section
008288	120V Aerial Wiring (107')
111914	Receptacle (1), Ladder Tip, Officer's Side, 120V, L5-20R Twistlock Single
100946	Tip Light (2), 12V, Whelen, LED Micro Pioneer (MPPWCS)
911218	Tip Lights Locations, Ladder Tip, Both Sides
UPOxxxxxxx	Tip Light(s) Switch, AL-11, Additional Activation in Cab With Front Scene Lights
UPOxxxxxxx	Tip Lights (2), 120V, Whelen, LED Pioneer Plus (PFP1AC) Floodlight, Universal Bail Mount (PBA106U), Short Stanchions, Activation Default ON
UPOxxxxxxx	Tip Lights Locations, Front of Positional Waterway Plate, Both Sides
UPOxxxxxxx	Tip Light(s) Switch, AL-11
	<p><i>Shop Note:</i> <i>Lights will default to ON.</i></p>
111897	Locator Lights (2), Whelen, LED TIR3, Blue (RSB03ZCR), Activated by Aerial Master
911222	Locator Lights Locations, Ladder Tip, Both Sides
911201	Waterway System (UT 100'/107')
007925	Positional Waterway, Switched Through AL-11 (77'/UT 100'/107')
001713	Waterway Relief Valve / Drain Valve
111770	Flow Meter with Paddle Wheel, FRC Insight Ultimate, 4", PSI, Turntable
001717	Waterway Inlet, Rear, 4" Inlet and 4" Plumbing (UT 100'/107')
UPOxxxxxxx	Valve, 4", Elkhart, Electric, EB40-E14X, Stainless Ball, APEX300 Controller (Valve, Pressure, Flow)
	<p><i>Shop Note:</i> <i>The sensor for the flowmeter needs to be accessible. It shall be welded on the base section of the waterway, opposite of the aerial relief valve, painted to match the aerial, and its wires fully protected. The controller will be located at the turntable.</i></p>
UPOxxxxxxx	Intake Relief Valve, Aerial, Elkhart, Factory Preset
UPOxxxxxxx	Chrome Bushing, 4" NPT x 4.50" NST (IL3518AC)- NST Cap, Chrome, South Park
102554	Aerial Monitor, Electric, TFT, Flex YN-E21A-L (Ladders - With AL-11)
112023	Monitor Color, TFT Silver, Powder Coat
006605	Nozzle, Electric, TFT Master Stream 1500 GPM, M-ERP1500-NN, 3-1/2" NH
911204	Monitor Sweep, Ladder, Single Monitor
911209	Master Stream Controls, Turntable and Ladder Tip
UPOxxxxxxx	Discharge at Tip 2-1/2" Discharge at Ladder Tip - One (1) Trident 2-1/2" NH Vented Chrome Cap with Chain

Option ID	Description
	<i>Shop Note:</i> <i>The stop for the swivel will have the bolt head cut off and coated.</i>
UPOxxxxxx	Dual Rung Lighting, Red/White/Blue LED (105') <i>Shop Note:</i> <i>The lighting colors will be as follows: Blue- Base Section White- 2 Middle Sections Red- Fly Section. Activation will default to "ON".</i>
111933	Rung Lighting Switch, AL-11
007022	Ladder Signs (2), On Base Section
111948	Solid Beam Roof Ladder Storage, Officer's Side Base Section
101065	Ladder, (1), Duo-Safety, 16' Roof, Double End, 875-DR
Paint / Striping / Decals	<u>Paint / Striping / Decals</u>
900718	Chassis Paint, Chassis Manufacturer Painted, Two Tone
009165	Body Paint, Single Tone, Aerial, Aluminum Material
901219	Non-Metallic Paint
101843	Body Paint Color, Aerial, Single Tone, Red, PPG <i>Shop Note:</i> <i>PPG# FBCH-71096-ALT</i>
901234	Overlays, Pump Module Structure, Match Pump Panel, Side Mount
101863	Ladder Paint Color, White, PPG (77'/UT 100'/107') <i>Shop Note:</i> <i>PPG# FDGH-2185</i>
901219	Non-Metallic Paint
901036	Aerial Corrosion Protection
000968	Aerial Egress Paint, Red, PPG# FDGH-4353
911225	Ladder Sign Paint, Match Aerial Ladder Structure Color
001170	Under Body Finish, Two-Step Undercoating Process
006089	Corrosion Protection, Electrolysis Corrosion Kontrol (ECK)
900875	Coating Material Technical Specification, Bedliner Coating
001033	Sample Paint Card with Paint Formula
911237	Reflective Lettering, White
900879	Front Cab Striping, Wrap to Grill
UPOxxxxxx	Rear Door, Reflective Striping, White, Inner Door Stiffeners
004523	Rub Rail Striping, 2", Silver, Reflective, Aerial
008694	Body Striping, Aerial, 1"-4"-1", Straight Around Perimeter
900888	Upper Stripe Color, White
900906	Main Stripe Color, White
900924	Lower Stripe Color, White
121751	Stabilizer Beam Striping, Front and Rear, (4) Stabilizers, Chevron To Match Rear
900935	Chevron Color, Red / Fluorescent Yellow-Green, 3M 1172EC & 4083
007382	Chevron Layout, Rear Body Surface, EXCLUDE Torque Box Door
901257	Graphics Not Approved
Warranties	<u>Warranties</u>
RFW0002	General Two (2) Years or 36,000 Miles Limited Warranty
RFW0502	Body Structure (Aluminum) Ten (10) Years or 100,000 Miles Limited Warranty

Option ID	Description
RFW0403	Aerial Ladder Structure Twenty (20) Years or 100,000 Miles Limited Warranty
RFW0421	Aerial Leak-Free Hydraulics Three (3) Years or 48,000 Miles Limited Warranty
RFW0810	Aerial Waterway Ten (10) Years or 100,000 Miles Limited Warranty
RFW0232	Control-Maxx Electronics Two (2) Years or 36,000 Miles Limited Warranty
RFW0800	Plumbing and Piping (Stainless Steel) Ten (10) Years or 100,000 Miles Limited Warranty
RFW0710	Paint and Finish (Exterior Clear coated) Ten (10) Years Limited Warranty

Option ID:100973 QTY:1

Smeal Branded Badging and Logo's

Smeal branded badging and Logo's shall be supplied.

Shop Note: Smeal badging will be shipped loose with the unit, and shall NOT BE INSTALLED on the unit.

Option ID:900999 QTY:1

Intent of Specifications, Aerial, No Pump

INTENT OF SPECIFICATIONS

It is the intent of these specifications to cover the furnishing and delivery to the purchaser of a complete apparatus equipped as herein specified. With a view to obtaining the best results and the most acceptable apparatus for service in the fire department, these specifications cover the general requirements as to the type of construction, together with certain details as to finish, equipment, and appliances with which the successful bidder must conform. Minor details of construction and materials where not otherwise specified are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features.

Bids shall only be considered from companies that have an established reputation in the field of fire apparatus construction and have been in business for a minimum of 50 years.

Each bidder shall furnish satisfactory evidence of his ability to construct the apparatus specified. The bidder shall also show that they are in a position to render prompt service and furnish replacement parts for said apparatus.

Aerials containing load ratings and capabilities of the highest level within the respective model class shall be accepted. Bids submitted containing medium duty or light duty aerial ladders shall not be considered as meeting minimum requirements and will automatically be rejected.

CONTRACTOR'S SPECIFICATIONS

Each bid shall be accompanied by a set of "Contractor's Specifications" consisting of a detailed description of the apparatus and equipment proposed and to which the apparatus furnished under contract shall conform.

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

The submitted bids shall clearly describe the capabilities of the aerial device. Items such as safety factor certification, horizontal reach, vertical reach, scrub chart information, load capabilities, flow ratings, monitor capabilities, short set capabilities, safety interlock information, estimated completed weight information and other pertinent information shall be either submitted with the bid or readily available if requested.

TIMELY PROPOSALS

It is the bidder's responsibility to see that their proposals arrive on time. Late proposals,

facsimiles, e-mails, telegram, or telephone bids shall not be considered.

DRAWINGS

All bid drawings shall be stamped PROPOSAL.

- A total of six (6) drawings shall be supplied. The provided drawings can be printed to any paper size, but the scale will only be valid when printed to the paper size listed in the title block
- Drawings shall show five (5) views: left (drivers), right (officers), front, rear, and top
- OAL (overall length) in feet and inches. The estimated length shall be rounded up to the nearest inch
- OAH (overall height) in feet and inches. The estimated height shall be rounded up to the nearest inch
- Wheelbase in inches
- Forward body module width in inches
- Front of the body to the centerline of the rear axle in inches
- Front and rear overhang in inches
- Angle of approach and departure
- Roll up doors will be shown in open position. Lap doors will be shown in the closed position
- Compartment dimensions shall be shown in a table on the drawing. The table shall display
 1. Clear door opening - The width/height of the clear door opening
 2. Interior dimensions - The interior compartment dimensions excluding any accessories or pockets (i.e. roll up door drums, hard suction hose pans, suspension pockets, etc.)
 3. Divide heights - The measurement where the compartment changes from full depth to shallow depth
 4. Compartment depths - Depth of the compartment with the door closed
- Ground ladders shall be labeled with a letter designation referring to the table for an explanation of the ladder
- Rear plumbing, such as 2-1/2" discharges, rear steamers, and direct tank fills, shall be shown
- Water tank outline (if applicable)
- Water tank and foam cell fill towers (if applicable)
- Generator outline (if applicable)
- Warning lights
- D.O.T. lights

Text Block Items

- Chassis make/model
- Water tank capacity (if applicable)
- Foam cell capacity (if applicable)
- Body material
- Hose bed capacity in cubic feet (if applicable)
- Total compartment cubic feet
- Utilize an unique bid number
- Drawings shall be printed on white paper with black ink

PURCHASER'S OBLIGATIONS

The purchaser reserves the right to accept or reject any or all bids on such basis as the

purchaser deems to be in its best interest. All bidders shall be advised that the purchaser is not bound in any manner to automatically accept the lowest bid. The purchaser shall only be obligated to purchase the lowest bid that meets these detailed specifications as closely as possible.

SPECIALIZATION

Due to the complexity of the apparatus proposed, it is the desire of the purchaser to obtain equipment that is built by companies that specialize in the construction in accordance with NFPA, current edition, current edition compliant aerial devices.

The aerial device shall be engineered and fabricated by a manufacturer with a minimum of 40 years of experience in the aerial field. No exceptions shall be allowed.

No prototype devices or aerials without a proven field record shall be acceptable. The aerial device provided shall be of the highest quality available in the industry.

SAFETY REQUIREMENTS

It is required that the bidder shall meet all State and Federal safety standards and laws that are in effect on the date of the bid for the item(s) that are specified and the particular use for which they are meant.

ACQUAINTANCE WITH SPECIFICATIONS

It is the responsibility of the bidder to review all of the bidding requirements. Failure of a bidder to be acquainted with this information shall not relieve them from any obligations of the bid requirements.

QUALITY AND WORKMANSHIP

The design of the apparatus shall embody the latest approved automotive engineering practices. Experimental designs and methods shall not be acceptable.

The workmanship shall be of the highest quality in its respective field. Special consideration shall be given to the following points: accessibility of the various units that require periodic maintenance, ease of operation (including driving), and symmetrical proportions.

Construction shall be rugged and ample safety factors shall be provided to carry loads as specified.

GENERAL CONSTRUCTION

The complete apparatus, assemblies, sub-assemblies, component parts etc., shall be designed and constructed with due consideration to the nature and distribution of the load to be sustained and to the general character of service which the apparatus is to be subjected when placed in service.

All parts of the apparatus shall be strong enough to withstand the general service under full load. The apparatus shall be so designed that the various parts are readily accessible for lubrication, inspection, adjustment, and repair.

The apparatus shall be designed and constructed, and the equipment mounted, with due consideration to the distribution of the load between the front and rear axles, and side to side loading that all specified equipment, including a full complement of specified ground ladders, full water tank, loose equipment, and firefighters; shall be carried without overloading or damaging the apparatus in accordance with NFPA, current edition, current edition requirements.

LIABILITY

The bidder, if their bid is accepted, shall defend any and all suits and assume all liability for the use of any patented process, device or article forming a part of the apparatus or any appliance furnished under the contract.

WARRANTY

A copy of the warranties for the chassis, body, paint, water tank (if applicable), aerial device, waterway, and waterway seals shall be furnished with each bidder's proposal.

INFORMATION REQUIRED UPON DELIVERY

The manufacturer shall supply at the time of delivery at least two copies of a complete operation and maintenance manual covering the completed aerial device as delivered.

Parts manuals, where possible, shall be cross-referenced to show the actual manufacturer's name, part number and description on all parts and fittings that are commercially available.

DESIGN / CONSTRUCTION / TESTING CRITERIA

The following criteria shall be applicable to this specification to the extent specified herein:

- NFPA, Current Edition
- American Society for Testing and Materials (ATSM A-36)
- Society of Automotive Engineers, Inc. (SAE) "SAE Handbook"
- American Welding Society (AWS) AWSO 14.4-77
- American Welding Society (AWS) D1.1 and D1.2
- American Society of Non-Destructive Testing (ASNT) "ASNT CP-189"

The aerial ladder shall be designed, fabricated, and tested in accordance with the above codes and specifications, as well as all other applicable codes, standards, and specifications that may be referenced by any of the above.

NON-DESTRUCTIVE TESTING

Steel ladders, turntable, stabilizers, and torque box shall have 100% of all welds tested using both magnetic particle method and visual testing method. Aerials that are fabricated of aluminum shall have 100% of all welds tested using dye penetrant method and visual method. All testing shall be performed by certified technicians, which are employees of an independent nationally recognized and certified third-party testing company. Manufacturers who rely on visual inspection (either in-house or by a third party) as the primary method of testing, and magnetic particle or dye penetrant as a secondary or "proving" test method for only suspect areas shall not be acceptable. In any case, welds shall be tested using two (2) separate NDT inspection methods

regardless of the material used to construct the aerial device.

THIRD PARTY CERTIFICATION

All bids shall include copies of the certification of testing of the aerial device. The purchaser desires a device that has been tested by a third party for compliance with the minimum 2 to 1 safety factor specified in accordance with NFPA, current edition. Devices that have not been certified by a third party engineering firm that is independent of the manufacturer shall not be acceptable, no exceptions.

AERIAL DEVICE SAFETY FACTOR AND RATED CAPACITY

The purchaser desires to purchase, using these specifications, an aerial device with a minimum 2.0:1 Safety Factor as required and defined in accordance with NFPA, current edition. Therefore, the aerial manufacturer shall hereby certify, by submitting a bid for these specifications that the aerial device meets or exceeds all requirements and conditions in these specifications, no exceptions.

BID FORMS / SPECIFICATIONS

All bid forms shall be submitted on the attached bid form. The bid form and/or these specifications shall be filled out by checking either the "YES" or "NO" column for each and every section/paragraph. Failure to use this form and/or these specifications shall be cause for immediate rejection of any bid.

EXCEPTION TO SPECIFICATIONS

The following chassis and body specifications shall be strictly adhered to. Exceptions shall be allowed if they are equal to or superior to that specified and provided they are listed and fully explained on a separate page entitled "EXCEPTIONS TO SPECIFICATIONS". Exception lists shall refer to the specification page number. Each check in the "NO" column shall be listed and fully explained. Where no check is made in a particular paragraph either "YES" or "NO", it shall be assumed the bidder is taking exception to that paragraph. If a paragraph contains an empty column, where the bidder neglected to check the proper "YES" or "NO" column, it is assumed the bidder is not conforming to the requirements of this paragraph. If no explanation is given in the "EXCEPTIONS TO SPECIFICATIONS" document, the bid is subject to immediate rejection.

PROPOSALS TAKING TOTAL EXCEPTION TO THESE SPECIFICATIONS WILL BE IMMEDIATELY REJECTED.

The buyer is aware that all bidders shall have to take some exceptions, therefore; **BIDDERS THAT TAKE NO EXCEPTIONS shall BE REQUIRED TO MEET EVERY PARAGRAPH TO THE FULLEST EXTENT SHOULD THEIR BID BE ACCEPTED.** It is the intent of the purchaser to receive bids that do not require telephone calls or other communications to ascertain what a bidder is intending to supply.

Upon delivery, the apparatus shall be inspected against these specifications and not those supplied by the bidder with their proposal. Deviations shall not be acceptable unless noted as exceptions at the time of bid. The apparatus shall be rejected until said deviations are corrected to the satisfaction of the buyer.

Decisions regarding equal to or better than shall be the sole responsibility of the recipient of the bids rather than companies submitting bids. All deviations, regardless of significance, must be explained in the "EXCEPTIONS TO SPECIFICATIONS" section of the bid.

When exceptions are not taken but inconsistencies are noted in the submitted detailed specifications, the bid may be rejected.

ROADABILITY

The apparatus, when fully equipped and loaded, shall be capable of the following performance while on dry paved roads that are in good condition:

- Accelerating from 0 to 35 mph within 25 seconds on a 0 percent grade
- Attaining a speed of 50 mph on 0 percent grade
- Maintaining a speed of at least 20 mph on any grade up to and including 6 percent
- The maximum top speed of the apparatus shall not exceed the tire manufacturer's maximum speed rating for the tires installed on the apparatus

FAILURE TO MEET TESTS

In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the bidder within 30 days of the date of the first trials.

Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes as required to conform to any clause of the specifications within 30 days after notice is given to the bidder of such changes, shall be cause for rejection of the apparatus.

Permission to keep or store the apparatus in any building owned or occupied by the department during the specified period, with the permission of the bidder, shall not constitute acceptance.

PROPOSAL SEQUENCE

Bid specifications shall be submitted in the same sequence as these specifications for ease of checking compliance. No exceptions shall be allowed to this requirement. The apparatus committee intends to be thorough during the evaluation of bids process. In order to maximize efficiency and minimize time to thoroughly evaluate all received bids, this requirement must be strictly enforced.

AWARD OF CONTRACT

All bids submitted shall be valid for a minimum of 30 days during which time bid securities submitted with the proposals shall be held by the purchaser. Criteria for the award shall include, but not be limited to, the following:

- Apparatus Performance And Safety Levels / Considerations
- Completeness of proposal
- Accuracy of accompanying data
- Past performance of bidder
- Compliance with the detailed specifications
- Compliance with purchasers request(s) for personnel qualifications or certifications
- Exceptions and clarifications
- Financial stability of bidder
- Local representation of the manufacturer
- Serviceability of the proposed apparatus
- Service capabilities of the bidder's local representative
- Compliance with NFPA, current edition
- Any other factor the purchaser deems relevant

After the evaluation and award process is complete, all bidders shall be notified of the results and securities shall be returned.

Option ID:901160 QTY:1
Engine Availability

ENGINE AVAILABILITY

If an L9 engine is NOT available or cannot be provided for that specific quote or build slot at time of production, the engine will automatically be upgraded and charged for an X12 (or the X10 engine) with all costs associated with the upgrade being passed on to the end user. No exceptions.

If a pre-2027 emission engine is NOT available at the time of build (starting production on January 1, 2026) the order will automatically be upgraded and charged for either the 2027 engine compliant Cummins X-10 or X-15, with all associated costs being passed on to the end user. No exceptions.

Option ID:911059 QTY:1
Bidding Prerequisites, United States

PREREQUISITE BIDDING REQUIREMENTS

Any manufacturer submitting a proposal or bid, to these specifications, shall meet the following conditions:

- The manufacturer of the apparatus herein specified, shall be wholly owned (100%) and managed by a Company, Corporation, and/or Parent Company that is wholly based and permanently resides in the United States of America.
- The Company, Corporation, and/or Parent Company, and all assets belonging to such, shall be wholly owned and managed (100%) by the entities specified above.

Any proposal, bid, or response to these specifications by any foreign based, owned, or managed (in part or in whole) Company, Corporation, and/or Parent Company shall be cause for immediate rejection. Any proposal, bid, or response to these specifications by any Company, Corporation, and/or Parent Company, that is owned, operated, managed, or held in contract, in part or wholly by a partnership or other agreement, shall be cause

for immediate rejection.

Exceptions to these conditions will not be allowed under any circumstances.

Option ID:911060 QTY:1
Standards Version, NFPA

NFPA

The National Fire Protection Association "Standard for Automotive Fire Apparatus", is hereby adopted and made a part of these specifications, the same as if it were written out in full detail, with the exception of the section dealing with "Equipment Recommended for Various Types of Apparatus". Bidders shall provide the equipment requested herein and the buyer shall supply the rest before the apparatus is put into service. It is the intent of the purchaser to purchase an apparatus that meets 100% of the minimum standards defined and outlined in NFPA latest edition. There are to be no exceptions to this requirement.

Option ID:911064 QTY:1
Inspection Certificate, NFPA Compliance

INSPECTION CERTIFICATE - NFPA COMPLIANCE

An OEM inspection certificate for the apparatus shall be furnished upon delivery. The purpose of this NFPA compliance inspection shall be to serve as proof to the customer that all applicable standards have been met or exceeded by the responsible manufacturer.

The following objectives shall be achieved as a result (this listing shall not be construed as being all inclusive):

- Ensure that understanding of all parties respective responsibilities have been addressed by the actual referencing of NFPA and the amendments in these specifications and the purchase contract and documentation.
- Ensure that only structural materials complying with appropriate standards and codes are used for construction.
- Ensure the applicable standards of design and manufacturing have been met or exceeded.
- Ensure that safety factors have been met or exceeded where required.
- Ensure that applicable standards for testing and inspection have been met or exceeded by personnel with the appropriate qualifications, experience, and certifications.
- Ensure that where applicable components, equipment, and loose equipment carry the appropriate characteristics, classifications, and/or certifications.
- Ensure that in general and as a whole, all applicable requirements set forth in NFPA, and those codes, standards, and specifications referenced by said parties are met, exceeded, and/or addressed.

Shop Note: The unit will need to pass DOT applied brake test.

Option ID:911070 QTY:1

Documentation, NFPA

CONSTRUCTION DOCUMENTATION

The contractor shall supply, at the time of delivery, at least one (1) copy of the following documents:

1. The manufacturer's record of apparatus construction details, including the following information:

- Owners name and address
- Apparatus manufacturer, model, and serial number
- Chassis make, model, and serial number
- GAWR of front and rear axles
- Front tire size and total rated capacity in pounds or kilograms
- Rear tire size and total rated capacity in pounds or kilograms
- Chassis weight distribution in pounds with water and manufacturer mounted equipment (front and rear)
- Engine make, model, serial number, rated horsepower, related speed, and governed speed
- Type of fuel and fuel tank capacity
- Electrical system voltage and alternator output in amps
- Battery make, model, and capacity in cold cranking amps (CCA)
- Chassis transmission make, model, and serial number; and if so equipped, chassis transmission PTO(s) make, model, and gear ratio
- If applicable, the pump make, model, rated capacity in gallons or liters per minute, and serial number
- Pump transmission make, model, serial number, and gear ratio, if unit is equipped with a pump
- If applicable, the auxiliary pump make, model, rated capacity in gallons or liters per minute, and serial number
- Water tank certified capacity in gallons or liters
- On aerial apparatus, the device type, rated vertical height in feet or meters, rated horizontal reach in feet or meters, and rated capacity in pounds or kilograms
- Paint manufacturer and paint number(s)
- Company name and signature of responsible company representative

2. Certification of slip resistance of all stepping, standing, and walking surfaces

3. If the apparatus has a fire pump, a copy of the following shall be provided: pump manufacturers certification of suction capability, apparatus manufacturers approval for stationary pumping applications, engine manufacturers certified brake horsepower curve showing the maximum governed speed, pump manufacturers certification of the hydrostatic test, and the certification of inspection and test for the fire pump

4. If the apparatus has an aerial device, the certification of inspection and test for the aerial device, and all the technical information required for inspections to comply with NFPA 1914, Standard for Testing Fire Department Aerial Devices

5. If the apparatus has a fixed line voltage power source, the certification of the test for the fixed power source

6. If the apparatus is equipped with an air system, test results of the air quality, the SCBA fill station, and the air system installation

7. Weight documents from a certified scale showing actual loading on the front axle, rear axle(s), and overall fire apparatus (with the water tank full but without personnel, equipment, and hose)

8. Written load analysis and results of the electrical system performance tests

9. When the apparatus is equipped with a water tank, the certification of water tank capacity

OPERATION AND SERVICE DOCUMENTATION

The contractor shall supply at the time of delivery, at least two (2) sets of complete operation and service documentation covering the completed apparatus as delivered and accepted. The documentation shall address at least the inspection, service, and operations of the fire apparatus and all major components thereof. The contractor shall also provide documentation of the following items for the entire apparatus and each major operating system or major component of the apparatus:

- Manufacturers name and address
- Country of manufacturer
- Source of service and technical information
- Parts and replacement information
- Descriptions, specifications, and ratings of the chassis, pump, and aerial device
- Wiring diagrams for low voltage and line voltage systems to include the following information: representations of circuit logic for all electrical components and wiring, circuit identification, connector pin identification, zone location of electrical components, safety interlocks, alternator-battery power distribution circuits, and input/output assignment sheets or equivalent circuit logic implemented in multiplexing systems
- Lubrication charts
- Operating instructions for the chassis, any major components such as a pump or aerial device, and any auxiliary systems
- Precautions related to multiple configurations of aerial devices, if applicable
- Instructions regarding the frequency and procedure for recommended maintenance
- Overall apparatus operating instructions
- Safety considerations
- Limitations of use
- Inspection procedures
- Recommended service procedures
- Troubleshooting guide
- Apparatus body, chassis, and other component manufacturers warranties
- Special data required by this standard
- Copies of required manufacturer test data or reports, manufacturer certifications, and independent third-party certifications of test results
- A material safety data sheet (MSDS) for any fluid that is specified for use on the apparatus
- One (1) copy of the FAMA Safety Guide

The contractor shall deliver with the apparatus all manufacturers operations and service documents supplied with components and equipment that are installed or supplied by the contractor.

STATEMENT OF EXCEPTIONS

The proposed apparatus as described in this specification document and all related material with the bid package shall meet or exceed all applicable sections for the category of apparatus as defined by NFPA unless specifically noted within this specification or other official documents associated with this bid.

Should any area, section or portion of the apparatus not meet the intent and applicable requirements, a clearly defined listing or explanation of what and why compliance was not achieved shall be provided to the purchaser at the time of delivery.

Option ID:980016 QTY:1

Owner's Manuals, Electronic, (1) USB Drive

OWNER'S MANUAL

An owner's manual containing the construction, operation, and service documentation shall be provided on a USB Drive. One (1) copy of the USB shall be provided with the apparatus.

ELECTRICAL MANUAL

A complete electrical manual for the apparatus shall also be provided on the USB Drive. This manual shall be specifically prepared for this individual unit rather than a generic schematic manual designed to accommodate all apparatus. The electrical manual shall also include electrical schematics, harness layouts, ControlMaxx specifications (including Node Input/output Spreadsheet and Node Relationship Spreadsheet), and Master Wire Listing. A contact letter shall also be provided by the electrical engineer, who built the manual, with instructions on using the manual and contact information for assistance with electrical manual questions.

ELECTRICAL SCHEMATICS

A section of the electrical manual shall include schematics of the electrical system and components on the apparatus. These schematics shall be specifically prepared for this individual unit rather than a generic schematic designed to accommodate all apparatus.

PUMP PLUMBING SCHEMATICS (if applicable)

A section of the electrical manual shall include a schematic of the pump plumbing. This schematic shall be specifically prepared for this individual unit rather than a generic schematic designed to accommodate all apparatus.

HYDRAULIC SCHEMATICS (if applicable)

A section of the electrical manual shall include schematics of the hydraulic components on the apparatus including but not limited to:

- Ladder Rack(s) and Hose Bed Door(s) (if applicable)
- Aerial - Retraction/Extension (if applicable)
- Aerial - Rotation (if applicable)
- Tiller - HVAC Hydraulics System (if applicable)

FIRE APPARATUS SAFETY GUIDE

One (1) printed copy of the FAMA Fire Apparatus Safety Guide shall be provided with the apparatus. This guide provides safety instructions for operations of the fire apparatus.

Option ID:901037 QTY:1

Aerial Operations/Parts/Maintenance Manuals, (1) Printed Copy, (1) USB Drive

AERIAL OPERATION/PARTS/MAINTENANCE MANUALS

One (1) printed aerial operation and maintenance manual shall be provided with the apparatus at the time of delivery. These manuals shall be written in a "step by step" format for ease of reference. One (1) USB shall be provided with a digital copy of the aerial manuals included with the printed version. Finally, a digital version of the aerial manuals will also be included with the complete Owner's Manual USB for the apparatus.

Information included in the manuals shall include, but no be limited to the following:

1. Manufacturer Defined Terminology; (to help impart full understanding of terminology used in the manuals)
2. Safety Information and Warnings; (to warn of dangerous conditions/personnel injury/equipment damage)
3. Complete Rated Capacities Information; (allowable loads and GPM flows)
4. Complete and Detailed Operating Systems Descriptions; (to impart understanding of operation/capabilities/working principles)
5. Instruction For Manufacturer Recommended Deployment and Operation Of All Systems During All Specific Conditions; (to ensure safer, more efficient operation of the aerial device)
6. Current, Actual Illustrations Of Aerial Components Throughout The Manual; (to aid in location of specific components, being addressed in the manual)
7. Complete Maintenance Instructions/Methods/Materials/Intervals/Inspections.

Option ID:121744 QTY:1

Aerial Demonstration, Aerial Ladder, (3) Consecutive Days

AERIAL LADDER DEVICE DEMONSTRATION - (3) DAYS

A factory trained and authorized instructor shall provide three (3) consecutive days of on-site classes after apparatus acceptance.

Topics covered in the class shall include:

- General familiarization and demonstration of aerial device
- Aerial apparatus safety including a review of all safety devices, interlocks, and operational hazards
- Positioning and locating the vehicle for safe operations
- Chassis parking brakes and engagement of hydraulic system
- Deployment of stabilization devices and use of ground pads
- Operation of elevation, extension, and rotation of the aerial device
- Operation of waterway, nozzle, and other firefighting devices of aerial device
- Operation and use of breathing air system
- Specific aerial device maintenance and service areas for operators
- Shutdown and return to service operations
- Operation of tip controls and platform controls if equipped

Classes shall consist of presentations as well as hands-on demonstration.

Option ID:911081 QTY:1

Misc. Equipment Allowance, 2,500 Lb.

MISCELLANEOUS EQUIPMENT ALLOWANCE

The Gross Axle Weight Rating (GAWR) and the Gross Combined Weight Rating (GCWR) or Gross Vehicle Weight Rating (GVWR) of the chassis shall be adequate to carry the weight of the unequipped apparatus with the water tank and other tanks full, specified hose load, unequipped personnel weight, ground ladders, and miscellaneous equipment allowance of 2,500 pounds.

Option ID:901080 QTY:1

Tilt Table Test, Not Required, Chassis ESC

TILT TABLE TESTING NOT REQUIRED

The chassis of the apparatus is equipped with Electronic Stability Control (ESC), which is in accordance with NFPA, current edition. requirement of maintaining a stability of 26.5 degrees in both directions.

VEHICLE STABILITY

The apparatus shall comply with the requirements of NFPA, current edition as it applies to vehicle stability. The particular apparatus as described in the specification provided

within the bid package shall be classified into one of the following categories:

- The apparatus shall go through actual tilt table testing which shall be determined by the apparatus manufacturer.
- The apparatus shall be equipped with a rollover stability control system as defined in section 4.13.1.2 of NFPA, current edition.
- The apparatus shall be deemed a similar apparatus and meeting the intent of section 4.13.1.1.2 of NFPA, current edition.

Option ID:911304 QTY:1

Apparatus Production Photos

ONLINE CUSTOMER INTERACTION

Smeal Holding LLC. shall provide the capability for online access.

The fire department shall be able to view digital photos of their apparatus in the specified phases of construction.

The following phases will be captured and displayed:

- Chassis arrival to the OEM
- Fabrication
- Pump and Plumbing
- Paint
- Assembly
- Completion of production

The photos shall be uploaded to a secure website, only accessible to the customer and representatives of the OEM.

Option ID:911073 QTY:1

Pre-Construction Meeting, OEM Factory

PRE-CONSTRUCTION MEETING

A pre-construction meeting shall be held at the apparatus manufacturer's factory. Fire department personnel, dealer representative(s) and factory representative(s) shall be present during the pre-construction meeting process. The purpose of conducting this meeting at the factory is to allow the fire department personnel to see various features of or similar components on other apparatus that may be found on the production floor. The pre-construction meeting is the most important meeting during the after-sale production process. The purpose of this meeting is to finalize all aspects of the specifications, discuss and clarify all design details of the apparatus, and to share or provide all information so all parties are in agreement on the apparatus being constructed. The ultimate goal of the pre-construction meeting is for the fire department officials, dealer representative(s), and factory representative(s) to discuss and clarify all aspects of the proposed apparatus and to provide all necessary information to the apparatus manufacturer that will ensure the apparatus is built to the satisfaction of all parties involved.

The apparatus manufacturer shall create and forward to the dealer a "Pre-construction" document containing the following items:

- Complete specifications of the apparatus including the chassis
- Detailed amp draw report
- Listing of clarifications or questions from the manufacturer that require attention (shelf locations, lettering details, etc.)
- A pre-construction drawing shall be provided that encompasses all views on a single page

During this pre-construction meeting, any changes or clarifications must be documented on a manufacturer issued change order. The change order shall be signed by the customer and dealership and ultimately by the apparatus manufacturer. The change order becomes an extension of the contract with the official signatures of all three parties. All change order items resulting from the pre-construction meeting shall be implemented into the official shop order document.

Option ID:911074 QTY:1

Final Inspection, OEM Factory, Required

FINAL INSPECTION

The department/dealer representative will inspect the final apparatus prior to it leaving the apparatus body manufacturer's facility. This will allow any changes that may be required, to be done so in a timely manner. After leaving the facility, all repairs or alterations will be performed by either the dealer or an OEM-approved service center.

Option ID:900491 QTY:1

Overall Height, 143" (11'-11")

MAXIMUM OVERALL HEIGHT

The overall height of the apparatus shall not exceed 143" (11'-11") from the ground. This measurement shall be taken with the tires properly inflated and with the apparatus in the unloaded condition to ensure a maximum overall height. In order to provide the maximum overall height, proposed units using calculated weight as a means to achieve a lower overall height shall not be accepted. The measurement shall be taken at the highest point of the apparatus.

Option ID:900251 QTY:1

Overall Length, 496" (41'-4")

MAXIMUM OVERALL LENGTH

The overall length of the apparatus shall not exceed 496" (41'-4").

Option ID:900573 QTY:1

Wheelbase, 225 (18'-9")

WHEELBASE

The wheelbase of the apparatus shall not exceed 225".

Option ID:900653 QTY:1

Angle of Approach, 8 Degrees

ANGLE OF APPROACH

The angle of approach of the apparatus shall be a minimum of 8 degrees.

Option ID:900674 QTY:1

Angle of Departure, 8 Degrees

ANGLE OF DEPARTURE

The angle of departure of the apparatus shall be a minimum of 8 degrees.

Option ID:910013 QTY:1

Custom Chassis, Spartan, Gladiator

SPARTAN GLADIATOR CHASSIS

The chassis shall be a Spartan Gladiator.

Option ID:UPOxxxxxxx QTY:1

Modify Length of Exhaust Termination

MODIFY EXHAUST TERMINATION LENGTH

After the body rub rails have been installed, the exhaust termination shall be cut so that it does not stick out past the edge of the rub rail.

Option ID:111626 QTY:1

Mud Flaps, Front Chassis Provided, Rear Full-Width OEM Provided

FULL-WIDTH MUD FLAP

In addition to the chassis supplied front mud flaps, one (1) full-width mud flap shall be provided rearward of the rear axles on the apparatus. The mud flap shall be made of durable 3/8" thick molded rubber, imbedded with nylon cord and molded-in anti-sail stiffening ribs. The mud flap shall be black.

Shop Note: This will be a full one piece flap and will be attached all the way across the top with metal bracing. Mounting location will be the same as previous apparatus.

Option ID:UPOxxxxxxx QTY:1

Clean Wiring Install W/ Node Pocket Power Lead

CLEAN WIRING INSTALL

The area around the batteries shall be wired in a clean and organized manner. A battery direct power and ground stud shall be added in the node pocket (AMPs to be determined by electrical engineering). All battery direct connections shall be installed there in order

to keep things neat and tidy.

Shop Note: Leave service loops on battery cables.

Option ID:111519 QTY:1

Route Manual Moisture Ejector, Chassis, Outside of Body, Terminate With Turn Valve

EXTEND AIR TANK DRAINS

The chassis air tank drains shall be extended to the outside of the body and terminate with turn valves.

Option ID:UPOxxxxxxx QTY:1

Chaffing Protection, Chassis Supplied Items

CHAFFING PROTECTION FOR CHASSIS SUPPLIED ITEMS

There shall be chaffing protection provided on all power steering lines, coolant lines, and all other lines that the chassis manufacturer misses.

Option ID:UPOxxxxxxx QTY:1

Motion Regulation Straps, Exterior Cab EMS Doors

MOTION REGULATION STRAPS – EXTERNAL CAB EMS DOORS

There shall be straps installed for the external cab EMS doors, to prevent them from opening into the cab grab handles located just rearward of the front cab doors. The straps shall stop the doors 6” short of making contact with the handrails.

Option ID:UPOxxxxxxx QTY:1

Cab EMS Doors, Exterior Brushed SS Trim

BRUSHED SS TRIM – EXTERNAL CAB EMS

There shall be brushed SS trim installed around the exterior EMS doors. It shall be 1/2” wide on the outside and full depth of the lip on the inside.

Option ID:100965 QTY:1

Relocate Cab Tilt Pendant, Special Location

RELOCATE CAB TILT

The cab tilt pendant shall be located:(please add to the clarification note)

Shop Note: Cab tilt will be located in the SR1 compartment on the upper forward bulkhead. A hook will be installed for the cord.

Option ID:UPOxxxxxxx QTY:1

Relocate the Chassis Supplied Hydraulic Retarder Accumulator

RELOCATE HYDRAULIC RETARDER ACCUMULATOR

The chassis supplied and installed hydraulic retarder accumulator that is located behind front driver side tire, shall be relocated to behind the driver side front outrigger, next to the control valves for the outrigger. It shall be tucked up as high as possible.

Option ID:901220 QTY:1
No Front Storage Well Flooring

The OEM will not add any flooring to the front bumper storage well.

Option ID:UPOxxxxxxx QTY:1
Battery Charger, Chassis Supplied, Relocated at Installed by OEM

The chassis supplied battery charger shall be installed by the OEM.

The exact location will be determined by the apparatus manufacturer unless a specific location is clarified in the shop note.

Option ID:000366 QTY:1
Door Open Warning Circuit, Wired to Light in Cab

A hazard warning circuit shall be tied to the circuit for the "open door" warning light in the chassis in addition to the vehicle display to alert the driver of an unsafe condition for moving the apparatus. The vehicle display shall have a specific screen to show the displayed alert. The screen shall show the apparatus in full driver's side, officer's side and rear views. The door, component or device that is not properly closed or stowed will be shown on the screen in the appropriate view. The light shall be illuminated automatically when the parking brake is not fully engaged and any of the following conditions exist:

- Any equipment compartment door that is not closed (excluding compartments with 4 cubic foot (0.1 cubic meter) or less of volume; or have an opening of 144 square inches (92,000 square mm) or less; or doors that do extend sideways beyond the mirrors or up above the top of the fire apparatus);
- Any ladder or equipment rack that is not in the stowed position;
- Any device or component that is permanently attached to the apparatus that is open, extended, or deployed in a manner that is likely to cause damage to the apparatus that has been specified as being tied to the hazard warning circuit.

A warning placard shall be near the warning light that reads "DO NOT Move Apparatus When Light Is On."

Option ID:UPOxxxxxxx QTY:1
Crew Area Options, Webbing and Red LED On Scene Access Lighting

CREW AREA OPTIONS – WEBBING/LED LIGHTING

There shall be a section of black webbing installed on the front of the rear forward facing

crew seat box. This shall be like previous units and shall be permanently attached at the bottom, with "J" hooks and footman's loops at the top.

There shall be two (2) red, LED, 9" On Scene Access lights in chrome housings installed in the rear crew area. One (1) shall be center mounted on the front of the rear forward facing seat box. The other light shall be installed under the shelf on the back of the engine tunnel. There shall be a single toggle switch on the officer side of the crew area that shall activate both lights. The switch shall be located on the forward door jamb trim, on the inner face, and mounted 30" up from the floor.

Option ID:UPOxxxxxxx QTY:1

Flashlight, (4), Streamlight, Ultra-Stinger 77555 LED, With Bases – Shipped Loose for Dealer Install

RECHARGABLE LED STINGERS

There shall be three (3) Streamlight Ultra-Stinger 77555 rechargeable LED flashlights supplied and installed on the apparatus. Each light shall include one (1) Vehicle Mount System, and be wired direct to the chassis batteries.

Shop Note: The lights shall be shipped loose with unit for dealer install.

Option ID:UPOxxxxxxx QTY:1

Flashlights, (4), Streamlight, Survivor LED, Yellow, 90962, with Fast Charger - Shipped Loose for Dealer Install

RECHARGEABLE FLASHLIGHTS

Four (4) Streamlight, model 90962, Survivor X LED rechargeable flashlights shall be supplied and installed on the apparatus. Each flashlight shall be orange in color, include one (1) Fast Charger, and be wired directly to the chassis batteries.

Shop Note: The lights shall be shipped loose with the unit for dealer install.

Option ID:UPOxxxxxxx QTY:1

Flashlights, (2), Streamlight, Fire Vulcan LED, Orange, 44315, Vehicle Mount System - Shipped Loose for Dealer Install

RECHARGEABLE FLASHLIGHTS

Two (2) Streamlight, model 44315, high-intensity rechargeable LED Fire Vulcan flashlights shall be supplied for the apparatus. Each Vulcan shall feature C4 LED technology with a 50,000 hour lifetime and shall include two (2) bright blue LED taillights, utilizing blinking and steady modes. Each Vulcan shall be orange in color, include one (1) Vehicle Mount System (with quick-release strap. The lights shall be shipped loose for the dealer to install.

Shop Note: The lights shall be shipped loose with the unit for dealer install.

Option ID:UPOxxxxxxx QTY:1

Accessory (USB/USB-C) Dual Outlet, Four (4), Kussmaul 091-264, Battery Direct, Mtd on Horizontal Crossbars behind Driver's/Officer's Seats

12V USB DUAL PORT

Four (4) Kussmaul 091-264 USB/USB-C dual outlets will be installed in the chassis cab mounted to the horizontal crossbars behind the driver/officer seats.

Option ID:UPOxxxxxxx QTY:1

Two (2), Dual Outlets, 12V, Kussmaul 091-264 Dual USB/USB-C, Engine Tunnel

12V USB DUAL PORT

Two (2) Kussmaul USB dual port charger (091-264) shall be installed in the chassis cab. The outlet shall be battery direct and have a fuse provided with the power circuit.

Shop Note: Placement will be on the rear of the engine tunnel.

Option ID:UPOxxxxxxx QTY:1

Storage Compartment, Forward Facing, Rear Cab Wall, Center, 36" H x 36" W x 20" D, Webbing, (1) Slide-Out Tray, (1) Shelf

STORAGE COMPARTMENT - FORWARD FACING

A forward-facing compartment shall be installed along the rear interior cab wall on the driver's side of the chassis. The compartment shall be 36" tall, 36" wide, and 20" deep. The compartment shall be constructed of aluminum. One (1) adjustable aluminum shelf shall be provided in the compartment.

One (1) roll out equipment tray shall be installed on the floor of the compartment. The tray shall be equipped with an Austin Hardware drawer slide. The roller assembly shall have a rated capacity of 300 lbs. distributed load and shall have 100% extension capability. The tray shall be constructed of 3/16" aluminum sheet with 3" lips. The tray shall be coated with a bedliner finish and shall be equipped with a locking slide in order to hold the tray in either a fully extended or closed position. The tray shall be equipped with the Austin Hardware front drawer release system which allows for one handed operation of the system.

Aluminum vertical strut channels shall be welded in the compartment. Two (2) struts shall be provided.

One (1) aluminum adjustable full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with Bedliner Coating and shall be designed in such a manner that will allow liquids to readily drain.

The compartment shall have drop-down webbing. There shall be an aluminum bar in the webbing that shall secure into U-shaped saddles to hold the webbing in place.

The compartment shall be furnished with a "ROM" LED compartment light mounted on the front corner of the compartment. An automatic door switch shall activate the compartment light.

Shop Note: The depth of the storage box needs to end at the forward corner of the chamfer on the driver side. (Same as Fresno Co)

Option ID:UPOxxxxxxx QTY:1

Storage Compartment, Rear Facing, Back of Engine Tunnel, Contoured Depth, Hinged Top Lid, No Lighting

STORAGE COMPARTMENT - REAR FACING

A rear-facing storage compartment shall be installed along the rear of the chassis engine tunnel in the center of the cab. The compartment shall be as wide as the two outboard EMS boxes will allow. The rearward face of the compartment shall be even with and equal to the outboard EMS boxes and the forward face shall follow the contour of the engine tunnel. The height of the compartment shall be even with the top of the engine tunnel (Not with the mounting plate). The compartment shall be constructed of aluminum.

The compartment shall have a hinged top lid with gas props and compression latches.

The compartment shall have NO lighting.

Option ID:UPOxxxxxxx QTY:1

Storage Compartment Finish, Multi-Spec to Match Cab Interior/Bed Liner, 2 Storage Compartments

The EMS compartment exterior shall be coated with a Multi-Spec finish to match the color of the interior chassis cab. The interior of the compartments shall be coated with black bed liner. The shelves shall be coated in black bed liner to match the compartment interior.

Option ID:110019 QTY:1

Mounting Plate, On Engine Tunnel, Aluminum, Bedliner Coating, Black

ALUMINUM MOUNTING PLATE ON ENGINE TUNNEL

A 3/16" aluminum mounting plate shall be on the top of the chassis engine tunnel for the mounting of equipment. The plate shall be mounted on 3/4" spacers and will be on the flat portion of the engine tunnel only. The mounting plate shall have a black Bedliner Coating finish.

Option ID:111632 QTY:1

Shelf, Back of Engine Tunnel, Aluminum, Bedliner Coated, Match Chassis (Excluding Red)

ENGINE TUNNEL ALUMINUM SHELF

One (1) aluminum bedliner coated shelf shall be installed on the rear of the engine tunnel. The shelf shall have a mounting surface of approximately 6". The bedliner coating will match the engine tunnel(excluding Red).

Shop Note: Black bed liner.

Option ID:UPOxxxxxxx QTY:1

Mounting Brackets, Two (2) Axes, Black Bed Liner Finish, Ship Loose

CAB AXE MOUNTING BRACKETS

There shall be two (2) aluminum mounting brackets for customer supplied and installed axes. The brackets shall be fabricated from aluminum. They shall be a channel that is 14" long x 2.5" wide. They shall have a black bed liner finish. The brackets shall be shipped loose with the completed apparatus.

Option ID:010221 QTY:1

Power and Ground Lead, 12V Drop, Battery Direct, 30 Amp, 6-Position Distribution Panel

12V POWER LEAD DROP

One (1) 12 volt power lead drop with a 6-position Blue Sea Systems ATO style fuse block with cover shall be provided. The power lead drop shall consist of one (1) hot and one (1) ground wire run from the batteries to the specified location. The power lead drop shall be battery direct and have a minimum of a 30 amp fuse provided with the power circuit. The distribution panel shall be designed with a grounding pad and compact, lightweight construction. The distribution panel shall be capable of using ATC/ATO blade fuses or ATC style DC circuit breakers.

Option ID:910042 QTY:1

Outlet Location, Driver's Seat, Behind

The outlet shall be located inside the chassis cab, behind the driver's seat. The exact location will be determined by the apparatus manufacturer, unless a specific location is clarified in the shop note.

Shop Note: The panel will be mounted to the front face of the EMS box behind this seat, centered side to side, and placed half way up from the floor.

Option ID:010221 QTY:1

Power and Ground Lead, 12V Drop, Battery Direct, 30 Amp, 6-Position Distribution Panel

12V POWER LEAD DROP

One (1) 12 volt power lead drop with a 6-position Blue Sea Systems ATO style fuse block with cover shall be provided. The power lead drop shall consist of one (1) hot and one (1) ground wire run from the batteries to the specified location. The power lead drop shall be battery direct and have a minimum of a 30 amp fuse provided with the power circuit. The distribution panel shall be designed with a grounding pad and compact, lightweight construction. The distribution panel shall be capable of using ATC/ATO blade fuses or ATC style DC circuit breakers.

Option ID:910043 QTY:1

Outlet Location, Officer's Seat, Behind

The outlet shall be located inside the chassis cab, behind the officer's seat.
The exact location will be determined by the apparatus manufacturer, unless a specific location is clarified in the shop note.

Shop Note: The panel will be mounted to the front face of the EMS box behind this seat, centered side to side, and placed half way up from the floor.

Option ID:010220 QTY:1

Power and Ground Lead, 12V Drop, Battery Direct, 20 Amp

12V POWER LEAD DROP

One (1) 12-volt power lead drop shall be provided. The power lead drop shall consist of one (1) hot and one (1) ground wire run from the batteries to the specified location. The power lead drop shall be battery direct and have a minimum of a 20 amp fuse provided with the power circuit.

Option ID:910038 QTY:1

Outlet Location, Dash, Center

The outlet shall be located inside the chassis cab, in the center dash.
The exact location will be determined by the apparatus manufacturer, unless a specific location is clarified in the shop note.

Shop Note: Coil up behind the center dash panel.

Option ID:010220 QTY:1

Power and Ground Lead, 12V Drop, Battery Direct, 20 Amp

12V POWER LEAD DROP

One (1) 12-volt power lead drop shall be provided. The power lead drop shall consist of one (1) hot and one (1) ground wire run from the batteries to the specified location. The power lead drop shall be battery direct and have a minimum of a 20 amp fuse provided with the power circuit.

Option ID:910038 QTY:1

Outlet Location, Dash, Center

The outlet shall be located inside the chassis cab, in the center dash.
The exact location will be determined by the apparatus manufacturer, unless a specific location is clarified in the shop note.

Shop Note: Coil up behind the center dash panel.

Option ID:121630 QTY:1

Body and Forward Body Module, 100" Wide, Rear Mount Aerial, Tandem-Axle, Aluminum, 1/8" (77'/UT 100'/107')

INDEPENDENT ALUMINUM FORWARD BODY MODULE

The forward body module shall be fabricated from 1/8" 5052-H32, smooth aluminum sheet. The module shall be fabricated as an individual unit independent from the body. The module shall be fabricated utilizing the break and bend technique in order to form a strong, yet flexible, structure. The module shall be constructed using precision holding fixtures to ensure proper dimensioning and all attachment points shall be heavily reinforced.

ALUMINUM BODY CONSTRUCTION

The apparatus body shall be fabricated from 1/8" 5052-H32, smooth aluminum sheet. The total outside width of the apparatus body shall not exceed 100 inches. The width measurement of the sidewalls shall be made from the outside wall of the two opposite sides of the body.

The complete apparatus body shall be fabricated utilizing the break and bend techniques in order to form a strong, yet flexible, uni-body structure. The body shall be constructed with holding fixtures to ensure proper dimensioning. Each apparatus body is specific in design in order to meet the unique requirements of the purchasing fire department.

The main body compartments on each side, as well as the rear center compartment if applicable, shall contain a sweep out floor design. Each compartment shall be made to the most practical dimensions in order to provide maximum storage capacity for the fire department's equipment. The door opening threshold shall be positioned lower than the compartment floor permitting easy cleaning of the compartments.

Continuous, solid welded seams shall be located at the upper front and upper rear corners of the apparatus body. The flooring of all lower, main body compartmentation shall also have solid weld seams. All door jams, on both the top and the bottom, shall be solid welded as well. Each main door jam consists of a double jam design; this is comparable to a double struck frame design, which provides superior strength and durability. All double door jams are to be welded together utilizing the plug weld technique. All remaining compartment walls shall be stitch welded.

The compartment floors, specifically L1 and R1, shall have a minimum of two (2) 2" x 2" square tubes welded to the entire width of the compartment floor. The two (2) rear side compartments as well as the rear center compartment, if applicable, shall be welded to the rear deck support structure. This rear deck support structure is specially designed for the galvanized apparatus body substructure. Each lower, rear compartment shall be adequately stitch welded to the cross tubes providing strength and durability to the entire apparatus body.

The body design shall include a "false wall" design in the lower portion of each lower, rear compartment. This "false wall" is required in order to allow for easy accessibility to the rear electrical components found in the rear tail light cluster area.

On the upper area of the apparatus body, directly above the side compartment door openings, a header is to be fabricated from smooth, aluminum sheet. This area shall be free from any body seams and shall be painted the same color as the apparatus body. The height of the header may vary depending on the following factors: apparatus design, lettering requirements, scene lights and warning light requirements as well as various other options. A "J" channel shall be incorporated into the body design in order to provide a rain gutter to further assist in preventing excessive moisture from getting into the compartments.

Option ID:120849 QTY:1

Side Compartment Doors, Roll-Up Doors, ROM, Painted Doors Only (10)

SIDE COMPARTMENT DOORS

ROM roll-up doors shall be installed on each side body compartment, ten (10) total. Each door shall be a shutter type with slats that roll onto a spool at the top of the compartment. Each slat shall be equipped with nylon end shoes to assure operation without the need for constant lubrication. The door slats shall be wet painted by the door manufacturer to match the apparatus body.

Each ROM roll-up door shall be supplied with a full-width lift bar and finger pull handle integrated into the bottom rail for easy one hand operation.

Option ID:120918 QTY:1

Compartment Door Handles, Roll-up Doors, All Locking, Offset Lock (10)

DOOR HANDLES

All ten (10) side compartment roll-up doors shall have locking door handles with offset locks keys provided. Each lock shall match the same key.

Shop Note: With 1250 key.

Option ID:120475 QTY:1

Drip Trays, Roll-up Door, ROM, All Compartments

DRIP TRAYS

Drip trays with drains shall be provided in the upper section of all body compartments with roll-up doors. Each drip tray shall prevent moisture from the roll-up door spool from entering the compartment interior.

Option ID:100868 QTY:1

Vendor Supplied Pull Down Straps, (6) Roll-up Doors

PULL DOWN STRAP

There shall be vendor supplied pull down straps installed on each roll-up door.

Shop Note: Install ROM straps for the PR1, PL1, R1, L1, R2, and L2 compartment doors. The blue pull down straps cannot attach where any roll out trays are mounted, as this can cause damage. When the compartment door is fully open, the loop for the pull down straps will not interfere with the pull out trays.

Option ID:UPOxxxxxxx QTY:1

Rear Compartment Door, (1), Painted Door, Horizontally Hinged, Single Panel, Aluminum, Pull Down Strap

REAR COMPARTMENT DOOR

There shall be one (1) painted horizontally hinged single panel aluminum door with a keyed D-Ring style latch. There shall be two (2) gas filled cylinders to hold the door open. The compartment shall be adequately lit for night time operation. The exterior of the door shall be painted, and the interior shall have an abraded finish.

PULL DOWN STRAP

The lap door shall be equipped with a heavy-duty pull-down strap.

Shop Note: The rear door will open well past 90degrees to allow someone tall to walk under it. This will be maximized, and correct struts will be installed to ensure this movement.

Option ID:120983 QTY:1

Compartment Lighting, ROM, LED (20)

BODY COMPARTMENT LIGHTING

A total of twenty (20) ROM LED compartment lights shall be installed in the body compartments. Each light shall feature solid state construction and be waterproof to IPX7 rating. The LED lights shall offer 250 lumens per 12" of lighting.

Option ID:UPOxxxxxxx QTY:1

Compartment Finish, Bed Liner, Black

COMPARTMENT COATING

The interior of the body compartments shall be coated with black bed liner unless otherwise specified. The coating shall be durable enough to withstand the everyday wear and tear of equipment removal and shifting.

Option ID:120469 QTY:1

Flooring, Black Turtle Tiles, All Interior Body Compartment Floors / Floor Mounted Trays and Shelves / Adjustable Trays

TURTLE TILES

Black Turtle Tile Plastics interlocking squares shall be in all body compartments. The Turtle Tiles shall be applied in all body compartment shelves, adjustable-height trays, floor-mounted trays, and on compartment floors that do not contain floor-mounted trays. No Turtle Tiles shall be applied on compartment floors underneath floor-mounted trays. For maximum slip resistance and drainage each square shall have a grid surface design

Option ID:000474 QTY:1

Air Release and Drain Holes, All Compartments

COMPARTMENT AIR RELEASE

Each compartment shall be vented to help remove trapped air when closing the compartment door. The vent shall be a rubber gasket in the area of the outboard corners of the compartment. Wiring may also be run through these areas.

COMPARTMENT DRAIN HOLES

Each body compartment shall be equipped with drain holes to allow standing water to exit underneath the apparatus.

Option ID:UPOxxxxxxx QTY:1

Sill Protectors, Anodized Aluminum in SL1, SR1, and SS in Torque Box

SILL PROTECTORS

There shall be an anodized aluminum angle sill protector installed on the bottom sill area of the SL1 and SR1 compartments, and a SS protector for the Torque Box area. These shall be installed to aid in reducing paint damage from equipment. The sill protectors shall be attached using permanent-bonding double-sided tape.

Shop Note: SL1 and SR1 sill protectors need to be installed to both front and rear door openings to match the bottom sill guard. The sill guards are to hide behind the door when closed like the bottom sill protector.

Option ID:UPOxxxxxxx QTY:1

Fuel Fills, OEM Stainless Steel Painted Doors, Welded Hinges, No Weather Stripping, Bonded Magnets, Driver's and Officer's Side - Hinged at Front

FUEL FILLS

Two (2) fuel fill pockets shall be located in the rear wheel well area on both the driver's and officer's sides. Each fuel fill shall utilize a stainless-steel OEM door that is painted primary body color. The hinge and frame shall all be constructed out of stainless-steel material and shall be welded to the SS door before it is painted. The magnet that holds the door shut shall be attached utilizing a bonding method. The doors shall both be hinged at the front per their respective side.

Option ID:901150 QTY:1

Wheel Well Storage Design, Tandem Axle, Standard

STANDARD WHEEL WELL STORAGE

The wheel well area of the apparatus shall be designed to additional components.

Option ID:121558 QTY:1

Driver's (Left) Side Body, No Pump, Mid-Size RMA, Tandem Axle, PL1 Full, L1 Full, L2 Upper, L3 Upper, L4 Full

DRIVER'S (LEFT) SIDE BODY COMPARTMENTS

COMPARTMENT PL1

A full height compartment shall be located ahead of the rear wheels on the driver's side of the forward body module. This compartment shall be designated as PL1 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 67"
- Width: 42"
- Depth: 98" Upper and 23" Lower
- Intermediate Divide Height: 30"

COMPARTMENT L1

A full height compartment shall be located ahead of the rear wheels on the driver's side of the apparatus body. This compartment shall be designated as L1 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 61"
- Width: 27"
- Depth: 98" Upper and 23" Lower
- Intermediate Divide Height: 46"

COMPARTMENT L2

A standard height compartment shall be located above the rear wheels on the driver's side of the apparatus body. This compartment shall be designated as L2 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 27"
- Width: 72"
- Depth: 98" Upper and 23" Lower
- Intermediate Divide Height: 12.5"

COMPARTMENT L3

A standard height compartment shall be located above the rear wheels on the driver's side of the apparatus body. This compartment shall be designated as L3 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 16"
- Width: 49"
- Depth: 23" Upper and 23" Lower
- Intermediate Divide Height: 0"

COMPARTMENT L4

A full height compartment shall be located behind the rear wheels on the driver's side of the apparatus body. This compartment shall be designated as L4 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 47"
- Width: 32"
- Depth: 23" Upper and 23" Lower
- Intermediate Divide Height: 0"

Option ID:PL1 QTY:1
PL1 Components

PL1 Components

Option ID:002745 QTY:1

Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating

ADJUSTABLE SHELF

One (1) aluminum adjustable full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with Bedliner Coating and shall be designed in such a manner that will allow liquids to readily drain.

Shop Note: Located in the lower non-transverse portion.

Option ID:002749 QTY:1

Shelf (1), Permanent, Aluminum, Full Depth, Matching Compartment Finish

PERMANENT SHELF

One (1) aluminum permanent full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf finish shall match the compartment interior finish coating and shall be designed in such a manner as to allow liquids to readily drain.

Shop Note: The floor of the transverse area will be extended out to just inside of the door opening. This component will allow that.

Option ID:UPOxxxxxxx QTY:1

Shelf (1), Adjustable, Aluminum, Depth from Center of Transverse to Door Opening (8 Struts), Bed Liner Finish

ADJUSTABLE SHELF

One (1) aluminum adjustable shelf shall be installed in the compartment. This shelf shall have a special depth from the center of the transvers area to the door opening of the compartment. The shelf brackets shall accommodate eight (8) strut channels, four (4) each side. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with bed liner coating and shall be designed in such a manner that will allow liquids to readily drain.

Option ID:002502 QTY:1

Tray (1), Floor-Mounted Roll Out, Austin Hardware, 300#, 100% Extension, Bedliner Coating, With Front Drawer Release

FLOOR MOUNTED ROLL OUT TRAY

One (1) roll out equipment tray shall be installed on the floor of the compartment. The

tray shall be equipped with an Austin Hardware drawer slide. The roller assembly shall have a rated capacity of 300 lbs. distributed load and shall have 100% extension capability. The tray shall be constructed of 3/16" aluminum sheet with 3" lips. The tray shall be coated with a bedliner finish and shall be equipped with a locking slide in order to hold the tray in either a fully extended or closed position. The tray shall be equipped with the Austin Hardware front drawer release system which allows for one handed operation of the system.

Shop Note: Installed on the floor of the compartment.

Option ID:004674 QTY:1

Tray (1), Floor-Mounted Roll Out, On-Scene, 1000#, 100% Extension, Bedliner Coating

FLOOR MOUNTED ROLL OUT TRAY

One (1) roll out tray shall be installed on the floor of the compartment. The tray shall be provided with an On-Scene Cargo Slide roller type assembly. The roller assembly shall have a rated capacity of 1,000 lb. distributed load and shall have 100% extension capabilities. A mechanical lock assembly shall be provided to lock the tray in the extended or retracted position. The tray shall be constructed of 3/16" aluminum sheet with 3" lips and shall be coated with Bedliner Coating. The roller assembly is constructed of anodized aluminum and stainless steel fasteners.

Shop Note: The floor of the transverse area will be extended out to just inside of the door opening so the tray depth can be from the center of the transverse area to the door opening.

Option ID:UPOxxxxxxx QTY:1

Compartment Struts, Vertical, Welded Aluminum, Transverse Compartment

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. Two (2) struts shall be provided on both the forward and rearward bulkheads in the non-transverse portion. Two (2) struts shall be provided on both the forward and rearward bulkheads in the transverse portion as well. This shall give four (4) struts on the forward bulkhead and four (4) struts on the rearward bulkhead.

Option ID:L1 QTY:1

L1 Components

L1 Components

Option ID:002745 QTY:1

Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating

ADJUSTABLE SHELF

One (1) aluminum adjustable full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with Bedliner Coating and shall be designed in such a manner that will

allow liquids to readily drain.

Shop Note: Located in the lower non-transverse portion. The shelf will be cut short so it can be adjusted over the PAC Trac, and narrow enough to miss the axe brackets.

Option ID:004855 QTY:1

Mounting Surface, Back Wall of Compartment, PAC Trac

MOUNTING SURFACE

One (1) PAC TRAC tool mounting section shall be installed on the back wall of the compartment. The PAC TRAC section shall be constructed of 7/8" thick 6063-T5 extruded aluminum.

Shop Note: Installed in the upper portion of the compartment, beginning from the transverse divide height and down 26". Hard mount the PAC Trac to the back wall.

Option ID:UPOxxxxxxx QTY:1

Mounting Brackets, (2) Axes, Bed Liner Coated, Shipped Loose

STOKES STORAGE BRACKETS

There shall be two (2) bolt in bed liner coated angles installed on the floor of the transverse area in L1. A Velcro strap shall be added across the opening with footman's loops. Nylatron floor plates shall be installed across the entire area between the brackets to eliminate friction. The back stop for the stokes shall be black bed liner coated and set so the stokes is even with the beginning of the transverse area that houses it. The stokes that shall be utilized for this area is a CMC Stainless Steel Rescue Litter Split Apart (SKU:726104 P)

Option ID:UPOxxxxxxx QTY:1

Stokes Storage Brackets and Strap

STOKES STORAGE BRACKETS

There shall be two (2) bolt in bed linercoated angles installed on the floor of the transverse area in L1. A Velcro strap shall be added across the opening with footman's loops. Nylatron floor plates shall be installed across the entire area between the brackets to eliminate friction. The back stop for the stokes shall be black bed liner coated and set so the stokes is even with the beginning of the transverse area that houses it. The stokes that shall be utilized for this area is a CMC Stainless Steel Rescue Litter Split Apart (SKU:726104 P)

Option ID:120785 QTY:1

Compartment Struts, Vertical, Welded Aluminum

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. Two (2) struts shall be provided for any full depth portion and one (1) strut shall be provided for any

shallow depth portion.

Shop Note: Installed in the lower non-transverse portion only.

Option ID:L2 QTY:1
L2 Components

L2 Components

Option ID:UPOxxxxxxx QTY:1
Mounting Surface, Forward Wall of Compartment, PAC Trac

MOUNTING SURFACE

PAC TRAC tool mounting sections shall be installed (3) sections tall on the forward wall of the compartment. The PAC TRAC section shall be constructed of 7/8" thick 6063-T5 extruded aluminum.

Option ID:000428 QTY:1
Struts, (2), Horizontal, Back Wall of Compartment, Aluminum

STRUTS

Two (2) aluminum strut channels shall be welded onto the back compartment wall for mounting of air cylinder clips. The struts shall be installed for mounting of the SCBA bottles with the valves in the down position. This shall allow for full movement of the air bottle clips along the entire width of the compartment.

Shop Note: Installed on the back wall in the non-transverse area of the compartment.

Option ID:UPOxxxxxxx QTY:1
Partition, Vertical, Adjustable, Bed Liner Coated, Standard Height Compartment

ADJUSTABLE PARTITION

One (1) adjustable vertical partition shall be installed in the standard height compartment. The partition shall match the bed liner compartment interior.

Shop Note: The partition will be the height of the door opening.

Option ID:L3 QTY:1
L3 Components

L3 Components

Option ID:002745 QTY:1
Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating

ADJUSTABLE SHELF

One (1) aluminum adjustable full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with Bedliner Coating and shall be designed in such a manner that will allow liquids to readily drain.

Option ID:120785 QTY:1

Compartment Struts, Vertical, Welded Aluminum

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. Two (2) struts shall be provided for any full depth portion and one (1) strut shall be provided for any shallow depth portion.

Option ID:L4 QTY:1

L4 Components

L4 Components

Option ID:UPOxxxxxxx QTY:1

Flat Roll-Out Plate, (1) Floor Mounted, Innovative Ind., 300#, Abraded 3/16", 100% Extension

FLAT ROLL-OUT PLATE

There shall be a flat rollout plate installed on the floor of the compartment. The plate shall be provided with a SlideMaster™ model SM2-MP roller type assembly. The roller assembly shall have a rated capacity of 300 lb. distributed load and have 100% extension capability. A mechanical lock assembly shall be provided to lock the plate in the extended or retracted position. The plate shall be constructed of 3/16" aluminum sheet with no lips and shall have an abraded finish. The roller assembly shall have a powder coated finish for added corrosion protection.

Option ID:004855 QTY:1

Mounting Surface, Back Wall of Compartment, PAC Trac

MOUNTING SURFACE

One (1) PAC TRAC tool mounting section shall be installed on the back wall of the compartment. The PAC TRAC section shall be constructed of 7/8" thick 6063-T5 extruded aluminum.

Shop Note: PAC Trac will be two (2) sections tall and full width, beginning at the door plate structure.

Option ID:UPOxxxxxxx QTY:1

Custom Pocket, Rearward Bulkhead

CUSTOM POCKET – REARWARD BULKHEAD

The rear ward bulkhead shall have a 30" tall pocket cut in behind the turn table access steps. The struts will be installed above the pocket only on the rearward wall.

Option ID:120785 QTY:1

Compartment Struts, Vertical, Welded Aluminum

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. Two (2) struts shall be provided for any full depth portion and one (1) strut shall be provided for any shallow depth portion.

Option ID:120648 QTY:1

WL1, Air Bottle Compartment, OEM Brushed SS Door, Single 8"

DRIVER'S SIDE REAR WHEEL WELL POSITION - WL1

A single air bottle compartment shall be installed in the forward portion of the rear wheel well area, on the driver's side. The compartment door, flange, and hinges shall be constructed of stainless steel material. The door shall have a rubber gasket to create a 100% seal to protect the interior of the compartment. The storage compartment shall be a molded component that is assembled to the door and flange. The door shall have a brushed stainless steel finish.

Shop Note: NO labels to be installed on the door.

Option ID:UPOxxxxxxx QTY:1

WL2, Custom Triple Air Bottle Compartment, OEM Brushed SS Drop-Down Door, 8"

DRIVER'S SIDE REAR WHEEL WELL POSITION - WL2

A triple air bottle compartment shall be installed in the rear wheel well area, between the tandem axles. The horizontally hinged drop-down compartment door, flange, and hinges shall be constructed of stainless-steel material. The door shall have a rubber gasket to create a 100% seal to protect the interior of the compartment. The door shall have a brushed stainless-steel finish and a compression latch to hold it in the closed position.

Shop Note: NO labels to be installed on the door.

Option ID:UPOxxxxxxx QTY:1

WL3, Extinguisher/Water Can Compartment, OEM Brushed SS Door, Single Custom

DRIVER'S SIDE REAR WHEEL WELL POSITION - WL3

A single extinguisher/water can compartment shall be installed in the rearward portion of the rear wheel well area, on the driver's side. The compartment shall be created to be 1/2" wider and 1/2" taller than standard to fit the fire department fire extinguisher. The compartment door, flange, and hinges shall be constructed of stainless-steel material. The door shall have a rubber gasket to create a 100% seal to protect the interior of the compartment. The storage compartment shall be a molded component that is assembled

to the door and flange. The door shall have a brushed stainless-steel finish.

Shop Note: NO labels to be installed on the door.

Option ID:121600 QTY:1

Officer's (Right) Side Body, No Pump, Mid-Size RMA, Tandem Axle, PR1 Full, R1 Full, R2 Upper, R3 Upper, R4 Full

OFFICER'S (RIGHT) SIDE BODY COMPARTMENTS

COMPARTMENT PR1

A full height compartment shall be located ahead of the rear wheels on the officer's side of the forward body module. This compartment shall be designated as PR1 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 67"
- Width: 42"
- Depth: 98" Upper and 0" Lower
- Intermediate Divide Height: 30"

COMPARTMENT R1

A full height compartment shall be located ahead of the rear wheels on the officer's side of the apparatus body. This compartment shall be designated as R1 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 61"
- Width: 27"
- Depth: 98" Upper and 0" Lower
- Intermediate Divide Height: 46"

COMPARTMENT R2

A standard height compartment shall be located above the rear wheels on the officer's side of the apparatus body. This compartment shall be designated as R2 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 27"
- Width: 72"
- Depth: 98" Upper and 23" Lower
- Intermediate Divide Height: 12.5"

COMPARTMENT R3

A standard height compartment shall be located above the rear wheels on the officer's side of the apparatus body. This compartment shall be designated as R3 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 16"
- Width: 49"
- Depth: 23" Upper and 0" Lower
- Intermediate Divide Height: 0"

COMPARTMENT R4

A full height compartment shall be located behind the rear wheels on the officer's side of the apparatus body. This compartment shall be designated as R4 within these specifications and any ensuing paperwork or drawings after contract execution.

The dimensions of the compartment shall be:

- Height: 47"
- Width: 32"
- Depth: 23" Upper and 24" Lower
- Intermediate Divide Height: 0"

Option ID:PR1 QTY:1 **PR1 Components**

PR1 Components

Option ID:002749 QTY:1

Shelf (1), Permanent, Aluminum, Full Depth, Matching Compartment Finish

PERMANENT SHELF

One (1) aluminum permanent full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf finish shall match the compartment interior finish coating and shall be designed in such a manner as to allow liquids to readily drain.

Shop Note: The floor of the transverse area will be extended out to just inside of the door opening. This component will allow that.

Option ID:UPOxxxxxxx QTY:1

Shelf (1), Adjustable, Aluminum, Depth from Center of Transverse to Door Opening (8 Struts), Bed Liner

ADJUSTABLE SHELF

One (1) aluminum adjustable shelf shall be installed in the compartment. This shelf shall have a special depth from the center of the transvers area to the door opening of the compartment. The shelf brackets shall accommodate eight (8) strut channels, four (4) each side. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with bed liner finish and shall be designed in such a manner that will allow liquids to readily drain.

Option ID:002500 QTY:1

Tray (1), Adjustable-Height Roll Out, Austin Hardware, 300#, 100% Extension, Bedliner

Coating, With Front Drawer Release

ADJUSTABLE ROLL OUT TRAY

One (1) roll out equipment tray shall be installed in the compartment. The tray shall be equipped with an Austin Hardware drawer slide. The roller assembly shall have a rated capacity of 300 lbs. distributed load and shall have 100% extension capability. The roller assembly shall be bolted to two (2) sets of vertical struts to allow for height adjustment of the tray. The tray shall be constructed of 3/16" aluminum sheet with 3" lips. The tray shall be coated with Bedliner Coating and shall be equipped with a locking slide in order to hold the tray in either a fully extended or closed position. The tray shall be equipped with the Austin Hardware front drawer release system which allows for one handed operation of the system.

Shop Note: Placed in the lower non-transverse area. There are three (3) trays in the compartment. The upper On Scene tray will have the front lip cut off except for the outboard corners, to hold the drip pans.

Option ID:002502 QTY:1

Tray (1), Floor-Mounted Roll Out, Austin Hardware, 300#, 100% Extension, Bedliner Coating, With Front Drawer Release

FLOOR MOUNTED ROLL OUT TRAY

One (1) roll out equipment tray shall be installed on the floor of the compartment. The tray shall be equipped with an Austin Hardware drawer slide. The roller assembly shall have a rated capacity of 300 lbs. distributed load and shall have 100% extension capability. The tray shall be constructed of 3/16" aluminum sheet with 3" lips. The tray shall be coated with a bedliner finish and shall be equipped with a locking slide in order to hold the tray in either a fully extended or closed position. The tray shall be equipped with the Austin Hardware front drawer release system which allows for one handed operation of the system.

Shop Note: Placed on the floor of the non-transverse area.

Option ID:004674 QTY:1

Tray (1), Floor-Mounted Roll Out, On-Scene, 1000#, 100% Extension, Bedliner Coating

FLOOR MOUNTED ROLL OUT TRAY

One (1) roll out tray shall be installed on the floor of the compartment. The tray shall be provided with an On-Scene Cargo Slide roller type assembly. The roller assembly shall have a rated capacity of 1,000 lb. distributed load and shall have 100% extension capabilities. A mechanical lock assembly shall be provided to lock the tray in the extended or retracted position. The tray shall be constructed of 3/16" aluminum sheet with 3" lips and shall be coated with Bedliner Coating. The roller assembly is constructed of anodized aluminum and stainless steel fasteners.

Shop Note: The floor of the transverse area will be extended out to just inside of the door opening so the tray depth can be from the center of the transverse area to the door opening. The tray will have the front lip cut off except for the outboard corners, to allow the tray to hold the drip pans in.

Option ID:UPOxxxxxxx QTY:1
Drip Pans for Roll-Out Trays

DRIP PANS – FOR ROLL-OUT TRAYS

Abraded aluminum drip pans shall be installed in the upper and middle trays in the compartment. The upper tray shall have two pans, consisting of one (1) outboard pan that is 33" deep and full width, and (1) inboard pan that shall be whatever dimensions are left inside the tray. The pan for the middle tray in the compartment shall fit the entire tray. The outer bent lips will be as close to 1/2" as possible.

Option ID:120785 QTY:1
Compartment Struts, Vertical, Welded Aluminum

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. Two (2) struts shall be provided for any full depth portion and one (1) strut shall be provided for any shallow depth portion.

Option ID:R1 QTY:1
R1 Components

R1 Components

Option ID:002745 QTY:1
Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating

ADJUSTABLE SHELF

One (1) aluminum adjustable full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with Bedliner Coating and shall be designed in such a manner that will allow liquids to readily drain.

Shop Note: Located in the lower non-transverse portion. The shelf will be cut short so it can be adjusted over the PAC Trac, and narrow enough to miss the axe brackets.

Option ID:004855 QTY:1
Mounting Surface, Back Wall of Compartment, PAC Trac

MOUNTING SURFACE

One (1) PAC TRAC tool mounting section shall be installed on the back wall of the compartment. The PAC TRAC section shall be constructed of 7/8" thick 6063-T5 extruded aluminum.

Shop Note: Installed in the upper, 26" from the transverse divide height and 26" down. Hard mount the PAC Trac to the back wall.

Option ID:UPOxxxxxxx QTY:1

Mounting Brackets, (2) Axes, Bed Liner Coated, Shipped Loose

COMPARTMENT AXE MOUNTING BRACKETS

There shall be two (2) aluminum mounting brackets for customer supplied and installed axes. The brackets shall be fabricated from aluminum. They shall be a one-piece plate (6" tall) with a bent lower channel that is 12.5" wide x 1.75" deep. They shall have Line-x finish to match the compartment interior. The brackets shall be shipped loose with the completed apparatus.

Shop Note: Same as previous S5275.

Option ID:120785 QTY:1

Compartment Struts, Vertical, Welded Aluminum

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. Two (2) struts shall be provided for any full depth portion and one (1) strut shall be provided for any shallow depth portion.

Shop Note: Installed in the lower non-transverse portion only.

Option ID:R2 QTY:1

R2 Components

R2 Components

Option ID:002745 QTY:1

Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating

ADJUSTABLE SHELF

One (1) aluminum adjustable full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with Bedliner Coating and shall be designed in such a manner that will allow liquids to readily drain.

Shop Note: The shelf will be in the rearward, non-transverse portion of the compartment only. The shelf will be 32" wide. The shelf shall be bed liner coated black.

Option ID:000428 QTY:1

Struts, (2), Horizontal, Back Wall of Compartment, Aluminum

STRUTS

Two (2) aluminum strut channels shall be welded onto the back compartment wall for mounting of air cylinder clips. The struts shall be installed for mounting of the SCBA bottles with the valves in the down position. This shall allow for full movement of the air

bottle clips along the entire width of the compartment.

Shop Note: Installed on the back wall in the non-transverse area of the compartment, in just the area below the transverse portion.

Option ID:UPOxxxxxxx QTY:1

Compartment Struts, (4) Vertical, Welded Aluminum

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. The struts shall be attached to the rearward bulkhead (2), and the back wall (2), and will be full height.

Option ID:UPOxxxxxxx QTY:1

Partition, Vertical, Bolt-In, Standard Height Compartment, (2) additional Struts Rearward Face, Bed liner

ADJUSTABLE PARTITION

One (1) adjustable vertical partition shall be installed in the standard height compartment. The partition shall match the bed liner compartment interior.

Option ID:R3 QTY:1

R3 Components

R3 Components

Option ID:002745 QTY:1

Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating

ADJUSTABLE SHELF

One (1) aluminum adjustable full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with Bedliner Coating and shall be designed in such a manner that will allow liquids to readily drain.

Option ID:120785 QTY:1

Compartment Struts, Vertical, Welded Aluminum

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. Two (2) struts shall be provided for any full depth portion and one (1) strut shall be provided for any shallow depth portion.

Option ID:R4 QTY:1

R4 Components

R4 Components

Option ID:002745 QTY:1

Shelf (1), Adjustable, Aluminum, Full Depth (4 Struts), Bedliner Coating

ADJUSTABLE SHELF

One (1) aluminum adjustable full-depth shelf shall be installed in the compartment. The shelf shall be constructed of 3/16" aluminum sheet with a minimum of 2" lips. The shelf shall be coated with Bedliner Coating and shall be designed in such a manner that will allow liquids to readily drain.

Shop Note: The shelf will be in the upper portion only. The R4 compartment will be as deep as practical and will be determined by Smeal engineering.

Option ID:120785 QTY:1

Compartment Struts, Vertical, Welded Aluminum

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. Two (2) struts shall be provided for any full depth portion and one (1) strut shall be provided for any shallow depth portion.

Shop Note: The struts will be in the upper portion of the compartment. They will not be mounted in the bottom 30" of the compartment.

Option ID:120657 QTY:1

WR1, Air Bottle Compartment, OEM Brushed SS Door, Single 8"

OFFICER'S SIDE REAR WHEEL WELL POSITION - WR1

A single air bottle compartment shall be installed in the forward portion of the rear wheel well area, on the officer's side. The compartment door, flange, and hinges shall be constructed of stainless steel material. The door shall have a rubber gasket to create a 100% seal to protect the interior of the compartment. The storage compartment shall be a molded component that is assembled to the door and flange. The door shall have a brushed stainless steel finish.

Shop Note: NO labels to be installed on the door.

Option ID:UPOxxxxxxx QTY:1

WR2, Custom Triple Air Bottle Compartment, OEM Brushed SS Drop-Down Door, 8"

OFFICER'S SIDE REAR WHEEL WELL POSITION - WR2

A triple air bottle compartment shall be installed in the rear wheel well area, between the tandem axles. The horizontally hinged drop-down compartment door, flange, and hinges shall be constructed of stainless-steel material. The door shall have a rubber gasket to create a 100% seal to protect the interior of the compartment. The door shall have a brushed stainless-steel finish and a compression latch to hold it in the closed position.

Shop Note: NO labels to be installed on the door.

Option ID:UPOxxxxxxx QTY:1

WR3, Extinguisher/Water Can Compartment, OEM Brushed SS Door, Single Custom

DRIVER'S SIDE REAR WHEEL WELL POSITION - WL3

A single extinguisher/water can compartment shall be installed in the rearward portion of the rear wheel well area, on the driver's side. The compartment shall be created to be 1/2" wider and 1/2" taller than standard to fit the fire department fire extinguisher. The compartment door, flange, and hinges shall be constructed of stainless-steel material. The door shall have a rubber gasket to create a 100% seal to protect the interior of the compartment. The storage compartment shall be a molded component that is assembled to the door and flange. The door shall have a brushed stainless-steel finish.

Shop Note: NO labels to be installed on the door.

Option ID:901045 QTY:1

Rear Side Body, Rear Mounts, Torque Box Compartment

REAR BODY COMPARTMENT

A compartment shall be located at the rear of the apparatus that extends into the apparatus torque box.

Shop Note: Same lighting to be used as previous Trucks.

Option ID:008773 QTY:1

Sub Frame Body Mounts, GS-36, Hot-Dip Galvanized Steel, Aerial (107')

HOT-DIP GALVANIZED STEEL BODY MOUNT SUB FRAME

The main body mount sub frame shall be constructed from formed steel channel bolted and welded to the torque box. The sub frame shall be located at the front and rear of the body and in front of, above, and rear of the wheel well opening.

The compartment area behind the rear axle shall be supported by a drop frame fabricated of steel tube and angles. All drop frame structures shall be welded directly to the torque box to allow the body to be a completely separate structure from the chassis.

Option ID:UPOxxxxxxx QTY:1

Front Stabilizer Compartments, Lap Doors, Locking

FRONT STABILIZER COMPARTMENTS

There shall be an upper compartment located above the front stabilizers on both sides of the apparatus. The compartments shall be designated as SL1 (driver's side) and SR1 (officer's side) within these specifications and any ensuing paperwork or drawings after contract execution. Each compartment shall be complete with a double-pan lap door and a chrome locking D-Ring door handle.

Shop Note: Doors to be hinged at top to allow cord reel to be pulled in either direction.

There will be a Smeal type pull down strap installed on each door due to the height of them when in the open position.

Option ID:901193 QTY:1

Inner Door Face, Front Stabilizer Doors, Painted Main Body Color

The inner door face shall be painted the primary body color. The panels shall have a grade "B" paint finish, therefore it will not be buffed and may be subject to imperfections.

Option ID:UPOxxxxxxx QTY:1

Front Stabilizer Compartments Depth, Fully Transverse

Front Stabilizer Compartments Depth, Fully Transverse, Storage Partition for Long Tools

Option ID:121647 QTY:1

Front Stabilizer Compartments Lighting, ROM LED Lighting (2 Lights Total)

COMPARTMENT LIGHTING

One (1) ROM Series LED light shall be installed in each compartment. Each light shall feature solid state construction and be waterproof to IPX7 rating. Each LED light shall offer 250 lumens per 12" of lighting.

Option ID:UPOxxxxxxx QTY:1

Front Stabilizer Compartments Option - Pike Pole Storage (4) Each Side

SL1/SR1 PIKE POLE STORAGE

There shall be storage slots/tubes for two (2) RH-6 poles and one (2) RH-6DA in the SL1 compartment.

There shall be storage slots/tubes for two (2) RH-6 poles and one (2) RH-6DA in the SR1 compartment.

Shop Note: Pike poles are listed out in the loose equipment portion of the specs.

Option ID:UPOxxxxxxx QTY:1

Gate Valve Storage, SL1/SR1

GATE VALVE STORAGE

There shall be an abraded gate valve storage installed in the transverse portion of the SL1/SR1 compartments. The storage shall be a 4" x 4" square aluminum tube and a 2" x 2" square aluminum tube combination item. It shall deploy from SR1 only. This shall be angled to help retain the gate valve.

Shop Note: Gate valve storage mounts to be fabricated the same as previous existing trucks.

Option ID:UPOxxxxxxx QTY:1

Pike Pole Package, SL1/SR1 – Fire Hooks (4) RH-6DA, and (4) RH-6

The following Fire Hooks brand pike poles shall be supplied and installed by the OEM. These shall include:

Accessible from SL1: (2) RH-6DA, and (2) RH-6

Accessible from SR1: (2) RH-6DA, and (2) RH-6

Shop Note: Pike pole storage mounts to be fabricated the same as previous apparatus.

Option ID:005118 QTY:1

Rub Rails, "C" Channel Design (No Rubber Inserts)

BODY RUB RAILS

Rub rails shall be installed beneath the compartment doors to protect the apparatus body from damage should the body be brushed or rubbed against another object. The rub rails shall be 2-1/2" x 1" , 3/16" aluminum channel. The rub rails shall be highly polished and then bright dip anodized.

The rub rails shall be installed on the body utilizing non-corrosive nylon spacers and secured with stainless steel bolts. The outside edge of the rub rails shall be even with the fenderettes and bolt-on steps to prevent snagging.

Option ID:000516 QTY:1

Tow Option, Rear, Tow Eye, Two (2), Chrome

TWO REAR TOW EYES

Two (2) chrome plated tow eyes shall be installed at the rear of the apparatus above the rear step area. The tow eyes shall be bolted to a heavy-duty assembly that is welded to the torque box. The tow eyes shall have a 2-1/2" ID hole.

Option ID:UPOxxxxxxx QTY:1

Access Panel, Bolt-On, Painted, Front of Forward Body Module

REMOVABLE ACCESS PANEL – FRONT OF FORWARD BODY MODULE

There shall be a removable, painted, bolt on cover added to the front of the forward body module.

Option ID:UPOxxxxxxx QTY:1

Compartment Struts, Dual Vertical, Welded Aluminum, SL1 /SR1

COMPARTMENT STRUTS

Aluminum vertical strut channels shall be welded in the compartment. Two (2) sets struts shall be provided in each of the SL1 And SR1 compartments.

Option ID:002187 QTY:1

Wheel Wells, Rear, Tandem Axle

REAR WHEEL WELLS

The fenders shall be integral with the body sides and compartments with a seamless appearance. The fenders shall be fitted with bolt-in removable full circular inner liners in the wheel well area for ease of cleaning and maintenance. The liners shall match the material used to build the body. Sufficient clearance shall be provided in the wheel well to allow the use of tire chains when the apparatus is fully loaded.

Option ID:003560 QTY:1

Fenderettes, (4), Tandem Axle, Stainless Steel

STAINLESS STEEL FENDERETTES

Four (4) stainless steel fenderettes shall be installed at the outboard edge of the rear wheel well area, two (2) on each side. The fenderettes shall be bolted to the apparatus body using nylon washers to space them slightly away from the body to reduce the build-up of road grime. The fenderettes shall be constructed of stainless steel that has been polished to a high-quality finish.

Option ID:UPOxxxxxxx QTY:1

Backboard Storage, Torque Box Ladder Storage Area

BACKBOARD STORAGE

There shall be storage for (1) backboard in the torque box ladder storage area. There shall be a horizontal Velcro retention strap installed.

Option ID:120489 QTY:1

Exhaust Heat Deflector Shield, 4"

EXHAUST HEAT DEFLECTOR SHIELD

A 4" heat deflector shield shall be installed over the exhaust to aid in dissipating the heat to prevent exhaust heat from adversely affecting contents stored in the body.

Option ID:UPOxxxxxxx QTY:1

Access Panel for Fuel Tank Gauge, 8" Diameter With Cover, Aerials

FUEL TANK GAUGE ACCESS PANEL WITH COVER

Access shall be provided in the torque box for service of the fuel tank gauge without removing the fuel tank. The access hole shall be 8" in diameter and shall have a painted black cover installed over it to keep debris out of the torque box.

Option ID:UPOxxxxxxx QTY:1

License Plate Bracket, Cast Products, LED Lit, Special Location

LICENSE PLATE BRACKET

A license plate bracket shall be mounted on the ground control station door at the rear of the apparatus. The compression latches on the door will be installed in a manner that will allow this. A clear LED light shall be incorporated into the bracket. The light wiring shall run from inside the ground control station compartment in the center, jump across hinge in a protected loom, then through a hole in the door to the outside of the door behind license plate.

Option ID:006375 QTY:1
Stainless Steel Screws, Aerial

TRIMRITE STAINLESS STEEL FASTENERS

TrimRite stainless steel fasteners shall be provided for all exposed and unpainted fasteners throughout the body in locations such as overlays, pump panels, and other numerous hardware mounting locations. TrimRite stainless is a hardenable martensitic stainless steel that provides a high level of corrosion resistance, hardness up to Rockwell C 51, good cold formability and ease of heat treatment, all of which combine to provide an alloy which has been used for many applications. TrimRite stainless is tested to salt spray standard ASTM B117, which is a 200-hour salt spray test. The OEM shall use TrimRite stainless with an added blue patch which provides improved vibration resistance for the fasteners.

Option ID:900963 QTY:1
Walkways/Overlays/Stepping Surfaces, Tread Plate, NFPA

WALKWAYS AND OVERLAYS

All exterior surfaces designated by the manufacturer as stepping, standing, or walking areas shall be overlaid with 3003 H22 bright tread plate to provide a slip resistant surface, even when the surface is wet. All interior surfaces designated by the manufacturer as stepping, standing, or walking areas shall be slip resistant when the surface is dry. The degree of slip resistance shall be in accordance with NFPA, current edition.

Horizontal walkways shall have .080" aluminum tread plate overlays installed and vertical surfaces shall have .125" aluminum tread plate overlays. Overlays shall be installed that are totally insulated from the apparatus with nylon shoulder washers that extend into holes in the body. Stainless steel cap nuts shall be employed where bolt ends may damage equipment or cause injury. After the apparatus is painted and the overlays are reinstalled, they shall be additionally sealed at the edges with a caulking compound. The exterior top tread plate overlay shall be mounted flush with the outer edges of the apparatus body.

Any designated horizontal standing or walking surface higher than 48" from the ground and not guarded by a railing, or structure at least 12" high shall have a "safety yellow line" marking the outside perimeter of the designated standing or walking surface area. Yellow reflective SCENE dots shall be used to create the line along the outside edges of standing and walking surfaces. Steps and ladders shall not be required to have the yellow line.

STEPPING SURFACES

All steps shall have a surface area of at least 35 square inches and shall be able to withstand a load of at least 500 pounds. Steps shall be provided at any area that personnel may need to climb and shall be adequately lit.

Option ID:UPOxxxxxxx QTY:1

Turntable Access Ladder- 35 degree Angled, Driver's Side, Grote LED Light, Knurled Aluminum Handrails, Rear Mounts - Brushed SS Overlays

TURNTABLE ACCESS LADDER - DRIVER'S SIDE ANGLED

For access to the turntable, a turntable access ladder shall be furnished on the driver's side rear corner of the apparatus angled at 35 degrees. The ladder design shall utilize two (2) air cylinders to aid in the deployment of the ladder into the climbing position and a positively locking mechanism to lock the ladder assembly into the travel position. The main structural members of the assembly shall be fabricated from 12-gauge 304 stainless steel with aluminum tread plate overlays on the step area. The degree of slip resistance shall be in accordance with NFPA 1901, current edition.

The access ladder shall be designed as a two (2) part assembly. The lower ladder assembly shall swing out and down and the upper ladder assembly will angle when the lower assembly is in the down position to an approximate slope of 81 degrees to provide ease of access from the ground to the first step and allow for the maximum angle of departure of the apparatus. When the access ladder is in the down position, the maximum height from the ground to the first step shall not exceed 24". All remaining steps shall have a maximum stepping height that shall not exceed 18".

The access ladder shall be connected to the door open warning circuit to warn the driver it is not in the stored position. The access ladder shall be illuminated for night time operation with Grote LED lighting. The lights shall be activated by the parking brake. To aid in ascending and descending the access steps, knurled aluminum handrails shall be provided on each side of the steps.

OVERLAYS

The overlays behind the turn table access steps shall be brushed SS. The rear horizontal edge piece shall have a 90 bent lip and shall also be brushed SS.

Shop Note: The aerial turntable steps will line up with the gaps in the aerial turntable handrails. The proximity switch box shall be made of stainless steel material NOT treadplate.

Option ID:UPOxxxxxxx QTY:1

Turntable Access Ladder- 35 degree Angled, Officer's Side, Grote LED Light, Knurled Aluminum Handrails, Rear Mounts - Brushed SS Overlays

TURNTABLE ACCESS LADDER - OFFICER'S SIDE ANGLED

For access to the turntable, a turntable access ladder shall be furnished on the officer's side rear corner of the apparatus angled at 35 degrees. The ladder design shall utilize two (2) air cylinders to aid in the deployment of the ladder into the climbing position and

a positively locking mechanism to lock the ladder assembly into the travel position. The main structural members of the assembly shall be fabricated from 12-gauge 304 stainless steel with aluminum tread plate overlays on the step area. The degree of slip resistance shall be in accordance with NFPA 1901, current edition.

The access ladder shall be designed as a two (2) part assembly. The lower ladder assembly shall swing out and down and the upper ladder assembly will angle when the lower assembly is in the down position to an approximate slope of 81 degrees to provide ease of access from the ground to the first step and allow for the maximum angle of departure of the apparatus. When the access ladder is in the down position, the maximum height from the ground to the first step shall not exceed 24". All remaining steps shall have a maximum stepping height that shall not exceed 18".

Shop Note: The aerial turntable steps will line up with the gaps in the aerial turntable handrails. The proximity switch box shall be made of stainless steel material NOT treadplate.

Option ID:UPOxxxxxxx QTY:1

Vertical Area Ahead of Turn Table, Painted and NO Overlay

AREA AHEAD OF TURN TABLE, PAINTED

The rear vertical face of the body located just ahead of the turn table steps shall NOT have a treadbrite overlay. Instead, it shall be painted job color and buffed as a primary painted surface.

Option ID:UPOxxxxxxx QTY:1

Pull-Out Platforms (2), Below PR1 and PL1, Innovative Industries, NO TREADBRITE

PULL-OUT PLATFORMS

A total of two (2) Innovative Industries pull-out platforms shall be provided, one (1) located on each side of the unit, one (1) below PL1 and one (1) below PR1. The top surface of each platform shall be constructed of aluminum serrated bar grating for ease of maintenance and to provide a slip resistant surface. There shall be NO TREADBRITE used on any of the outboard vertical surfaces. These areas shall have an abraded finish. Each platform shall lock in both the retracted and the extended position. Each pull-out platform shall be capable of supporting a maximum of 500 pounds and shall be wired to the door-ajar circuit.

Each pull-out platform's roller assembly shall have a powder coat finish for added corrosion protection.

Shop Note: The mounting for the platforms will be reinforced to prevent cracking, or thicker material will be used.

Option ID:900960 QTY:1

Handrail Material, Knurled Aluminum

HANDRAILS

All handrails, unless otherwise stated, shall be constructed of knurled aluminum of not less than 1-1/4" in diameter. All railing shields and brackets shall be chrome plate and bolted to the body with stainless steel bolts. The lower bracket on all vertical handrails shall have a drain hole at the lowest point.

The following handrails shall be provided on the apparatus:

Option ID:001287 QTY:1

Ladder Storage, In Torque Box, Rear Mounts

GROUND LADDER STORAGE

The ground ladders shall be stored within the torque box and shall be removable from the rear of the apparatus. The ladders shall be fully enclosed so road dirt and debris cannot foul or damage the ladders. The ladders shall be stored in individual full-length slides so they can be removed individually.

The following ground ladders shall be supplied with the apparatus:

Option ID:UPOxxxxxxx QTY:1

Ground Ladder Package, Duo-Safety, (1) 10' "Fresno" Attic 701, (2) 16' Roof 875-DR, (1) 20' Roof Ladder 875-A, (1) 24' Two-Section 900-A, (1) 28' Two-Section 1200-A, (1) 35' Two-Section 1200-A

GROUND LADDERS

The ground ladder package in the torque box shall consist of the following ladders:

One (1) 10' "Fresno" Attic 701

Two (2) 16' Roof 875-DR (Hooks Both Ends)

One (1) 20' Roof Ladder 875-A

One (1) 24' Two-Section 900-A

One (1) 28' Two-Section 1200-A

One (1) 35' Two-Section 1200-A

Option ID:UPOxxxxxxx QTY:1

Little Giant Ladder Storage, L2/R2 Transverse Area W/ Straps

LITTLE GIANT LADDER STORAGE – L2/R2

Storage shall be in the upper forward transverse portion of the L2/R2 compartments for the Little Giant ladder. The Little Giant shall be accessible from either side and there shall be a Velcro retention strap on each side as well.

Shop Note: The straps will be installed horizontally not vertically.

Option ID:121815 QTY:1

Ladder (1), Wing Enterprises, 17' Aluminum Little Giant Defender (15187-882)

One (1) Wing Enterprises, model 15187-882, 17' aluminum Little Giant Defender NFPA compliant ladder shall be provided.

Option ID:121684 QTY:1

Pike Pole Storage, In Upper Portion of Torque Box, (4) Tubes

PIKE POLE STORAGE

Four (4) aluminum tubes for the storage of pike poles shall be installed inside the upper portion of the torque box.

The following pike poles shall be supplied with this location on the apparatus:

Shop Note: The labels for these pike poles will be shipped loose, and there will be no hang down bracket for these.

Option ID:UPOxxxxxxx QTY:1

Pike Pole Package, Torque Box, Nupla I-Beam, Fiberglass, Standard Hooks, (2) 8' Pole (SPD-8), (2) 12' Pole (SPD-12)

Pike Pole Package, Torque Box, Nupla I-Beam, Fiberglass, Standard Hooks:

(2) 8' Pole (SPD-8)

(2) 12' Pole (SPD-12)

Shop Note: The labels for the tubes will be shipped loose, and there will be no special hang down bracket for these.

Option ID:UPOxxxxxxx QTY:1

Pike Pole/Tool Storage, For Customer Supplied/Installed Items, Officer Side of Torque Box

PIKE POLE/TOOL STORAGE - TORQUE BOX

The following storage slots shall be added to the officer side of the torque box ladder rack to accommodate customer supplied and installed items:

(4) Pike Pole Tubes

(4) Pry Bar Tubes

(1) Upper Storage Tray with horizontal Velcro strap for a Squeegee.

Option ID:UPOxxxxxxx QTY:1

Animal Snare Storage Tube, 86" Deep

ANIMAL SNARE STORAGE

There shall be an animal snare storage tube installed in the torque box ladder compartment. The tube shall be 86" deep with a stop at the back. The tube shall be installed offset 7" forward of the other pike poles.

Option ID:900956 QTY:1
Wheel Chock Storage, Shipped Loose

WHEEL CHOCK STORAGE

The wheel chocks and mounting brackets shall be shipped loose.

Option ID:002415 QTY:1
Chocks, (1) Pair, Cast Products, TMC1008-4 and Bracket

WHEEL CHOCKS

One (1) pair of Cast Products, model TMC1008-4, wheel chocks and mounting brackets shall be provided and shipped loose with the apparatus.

Option ID:900956 QTY:1
Wheel Chock Storage, Shipped Loose

WHEEL CHOCK STORAGE

The wheel chocks and mounting brackets shall be shipped loose.

Option ID:002415 QTY:1
Chocks, (1) Pair, Cast Products, TMC1008-4 and Bracket

WHEEL CHOCKS

One (1) pair of Cast Products, model TMC1008-4, wheel chocks and mounting brackets shall be provided and shipped loose with the apparatus.

Option ID:002956 QTY:1
Electrical System, Aerial, FRC ControlMaxx Multiplex, QL-12 Harnesses, Sealed Switches

ELECTRICAL SYSTEM

Wiring harnesses shall be the automotive type, engineered specifically for the builder's apparatus, and shall meet the following criteria. Under no circumstances shall diodes, resistors, or fusible links be located within the wiring harness. All such components shall be located in an easy to access wiring junction box or the main circuit breaker area. All wire shall meet white book, baseline advanced design transit coach specification and Society of Automotive Engineers recommended practices. It shall be stranded copper wire core with cross-linked polyethylene insulation complying with SAE specification J1128. Each wire shall be hot stamp function coded every three inches starting one inch

from the end and continuing throughout the entire harness. In addition to function coding, each wire shall be numbered, colored, and gauge coded.

Wire harnesses shall be protected by 275 degree Fahrenheit minimum high temperature flame retardant loom. All nodes and sealed Deutsch connectors shall be waterproof.

Harnesses shall be modular in design; main harness system subdivided into several smaller sub-harnesses. The harness subsections shall be connected using Deutsch branded, heavy duty, environmentally sealed, connectors with silicone seals and a rear insertion/removal contact system. For isolation of electrical "zones" the harness subsections shall consist of a main harness, a pump harness with a separate pump gauge panel harness, a left body harness with a separate left compartment harness, a right body harness with a separate right compartment harness, and a rear body harness with two separate rear compartment harnesses.

The main harness and three body harnesses shall interconnect at a central, easy to reach location and their connectors shall not be obstructed by other harnesses or fuel/air lines. In addition, the main and body harness connectors shall be color-coded for ease of identification with their respective colors noted on the accompanying electrical diagrams.

Where connectors are not provided by the electrical component manufacturer, all 12-volt lights and other electrical components (excluding rocker and toggle switches) shall connect to the harnesses using Deutsch brand connectors; butt connectors are considered unacceptable.

All Deutsch connectors shall meet the following criteria:

- All connectors shall be rated for three feet submersion in water.
- Temperature range from -67° F to 257° F continuous at rated current.
- All contacts shall be soldered unless a crimping tool or machine is used that gives an even and precise pressure for the terminal being used.
- All contacts shall be pull-tested to ensure their integrity.

WEATHERPROOF DOOR SWITCHES

Because of the harsh environment and susceptibility to moisture on the fire ground, the fire apparatus compartment doors shall utilize weatherproof switches. No Exceptions.

The switches shall be used for activation of the compartment lights and to provide a signal to the door open circuit in the cab.

V-MUX ELECTRICAL MANAGEMENT SYSTEM

The apparatus shall be equipped with a V-MUX Multiplex System. There are several key benefits to multiplexing, one is to reduce the number of connections in a vehicle's electrical system, because of this it is important to limit the amount of modules that control certain functions of the vehicle.

Outputs:

The outputs shall perform all the following items without added modules to perform any of the tasks:

- **Load Shedding:** The System shall have the capability to Load Shed with 8 levels any output. This means you can specify which outputs (barring NFPA restrictions) you would like Load Shed. Level 1 - 12.9v, Level 2 - 12.5V, Level 3 - 12.1V, Level 4 - 11.7V, Level 5 - 11.3V, Level 6 - 10.9V, Level 7 - 10.5, Level 8 - 10.1. Unlike conventional load shedding devices you can assign a level to any or all outputs. No add-on modules shall be acceptable; the module with the outputs must perform this function.
- **Load Sequencing:** The System shall be able to sequence from 0 8 levels any output. With 0 being no delay and 1 being a 1-second delay, 2 being a 2-second delay and so on. Sequencing reduces the amount of voltage spikes and drops on your vehicle, and can help limit damage to your charging system. No add-on modules shall be acceptable; the module with the outputs must perform this function.
- **Output Device:** The System shall have solid-state output devices. Each solid-state output shall be a MOS-FET (Metal Oxide Semiconductor - Field Effect Transistors); MOS-FETs are solid-state devices with no moving parts to wear out. A typical relay, when loaded to spec, has a life of 100,000 cycles. The life of a FET is more than 100 times that of a relay. No add-on modules shall be acceptable; the module with the outputs must perform this function.
- **Flashing Outputs:** The System shall be able to flash any output in either A or B phase, and logic is used to shut down needed outputs in park, or any one of several combined interlocks. The flash rate can be selected at either 80, or 160 FPM. This means any light can be specified with a multiplex truck with no need to add flashers. Flashing outputs can also be used to warn of problems. No add-on modules shall be acceptable; the module with the outputs must perform this function.
- **PWM:** The modules shall have the ability to PWM at some outputs so that a Headlight PWM module is not needed. No add-on modules shall be acceptable; the module with the outputs must perform this function.
- **Diagnostics:** An output shall be able to detect either a short or open circuit.

Inputs:

The inputs shall have the ability to be switched by a ground or battery signal.

The inputs shall be filtered for noise suppression via hardware and software so that RF or dirty power will not trick an input into changing its status.

System Network:

The Multiplex system shall contain a Peer-to-Peer network. A Master-Slave Type network is not suitable for the Fire/Rescue industry. A Peer-to-Peer network means that all the modules are equal on the network; a Master is not needed to tell other nodes when to talk.

System Reliability:

The Multiplex system shall be able to perform in extreme temperature conditions, from -40° to +85° C (-40 degree to +185 degree Fahrenheit) The system shall be sealed against the environment, moisture, humidity, salt or fluids such as diesel fuel, motor oil or brake fluid. The enclosures shall be rugged to withstand being mounted in various locations or compartments around the vehicle. The modules shall be protected from over voltage and reverse polarity.

Electrical System Test, 12 Volt

12-VOLT SYSTEMS TEST

After completion of the unit, the 12-volt electrical system shall undergo a battery of tests as listed in NFPA, current edition. These tests shall include, but not be limited to:

- Reserve capacity test
- Alternator performance test at idle
- Alternator performance test at full load
- Low voltage alarm test

Certification of the results shall be supplied with the apparatus at the time of delivery.

Option ID:000842 QTY:1

Tail Lights, LED, Whelen, M6 Series, Stop-Tail (Combination) (M62BTT)/Turn (M62T)/Backup (M62BU), 3-Light Vertical Casting

TAIL LIGHTS

A Whelen M6 series LED tail light assembly shall be installed on each side of the rear of the apparatus. Each assembly shall include the following:

- One (1) red LED stop/tail combination light
- One (1) amber LED turn light with arrow
- One (1) clear LED backup light

The lights shall be mounted in a three (3) light chrome plated composite housing.

Option ID:UPOxxxxxxx QTY:1

Switch, Rear Work Light, Inside Stabilizer Control Box

REAR WORK LIGHT SWITCH

A switch shall be installed inside the drivers side stabilizer control box on the rear of the apparatus. The switch shall be wired to the backup lights to provide additional work lighting. The rear work light circuit shall be deactivated when the park brake is disengaged. In addition to the lights being activated by the above switch, the lights shall also come on when the transmission is placed in reverse.

Shop Note: Make sure a hole is NOT torched in the rear of the body for the rear work light switch.

Option ID:008730 QTY:1

Turn Signals, (2) in Rub Rail, LED, Truck-Lite, Model 21

MIDSHIP TURN SIGNALS

Two (2) Truck-Lite model 21 LED midship auxiliary/turn signal lights shall be installed in the rub rail, one (1) on each side of the body.

Option ID:UPOxxxxxxx QTY:1

Ground Lights, LED, T44, Tecniq, Activation by Park Brake, V-Mux Switch, and Reverse

PERIMETER GROUND LIGHTING

Tecniq, model T44-WD0B-1, 4" round LED lights shall be installed beneath the apparatus in areas where personnel may be expected to climb on and off the apparatus. The lights shall illuminate the ground within 30" of the apparatus to provide visibility of any obstructions or hazards. These areas shall include, but not be limited to, side running boards and the rear step area.

The lights shall be activated when the parking brake is engaged, with a switch in the V-Mux, or when the transmission is placed in reverse.

Shop Note: The ground light brackets will be painted black.

Option ID:007397 QTY:1

Clearance Lights, With Rubber Extension Arms, LED, Grote (65282) and Truck-Lite (35741R ID), Red

CLEARANCE LIGHTS

Grote red LED clearance lights shall be installed in the outside corners of the rear bumper and a Truck-Lite bar cluster located in the lower middle portion of the rear of the apparatus. Clearance reflectors shall be placed on the apparatus to be in full compliance with applicable ICC and DOT codes and regulations.

Two (2) extension marker lights (rubber arm style) shall be installed at the rear portion of the body. The lights shall be attached to the back wall of the rear flex joint area. These lights shall aid the driver as to the location of the rear of the body during driving operations. The lights shall have forward facing amber bulbs and rearward-facing red bulbs.

Option ID:UPOxxxxxxx QTY:1

Camera System, Back-Up, Chassis Supplied, OEM Installed Recessed in TA Pocket

CHASSIS SUPPLIED BACK UP CAMERA SYSTEM

A backup camera system shall be installed in the cab with the chassis. The camera shall be installed recessed in the same pocket as the traffic advisor. The floor of the pocket shall be sloped to allow drainage.

Option ID:000621 QTY:1

Alarm, Door Open Warning Circuit

DOOR OPEN AUDIBLE ALARM

An audible alarm shall be provided and connected to the door open circuitry.

Option ID:100042 QTY:1

Intercom System, Sigtronics US67S, 6 Cab Position, Wired Driver/Officer (SE-8), 4 Wired Crew (SE-2)

SIGTRONICS INTERCOM SYSTEM

A Sigtronics model US-67S intercom system shall be provided on the apparatus. The system shall be a voice activated system and have the capability of interfacing with a mobile radio. The mobile radio-transmit shall be accomplished by way of the headset microphone and a push-to-talk switch. The model US-67S intercom shall accept up to six headsets, three positions can have radio transmit capability. The intercom control head shall be located in the optimal position by the apparatus manufacturer unless a specific location is clarified in the shop note. The system shall carry a two (2) year parts and labor warranty from the intercom manufacturer.

CAB POSITIONS

The Sigtronics intercom system shall accommodate one (1) wired driver position, one (1) wired officer position, and four (4) wired crew positions in the chassis cab.

Six (6) Sigtronics, model 800120, headset plug-in module shall be installed, one (1) for each wired position. Each module shall be designed for interior mounting and shall accommodate a Sigtronics single plug headset. The exact location shall be determined by the apparatus manufacturer unless a specific location is clarified in the shop note.

Two (2) Sigtronics, model SE-8, under the helmet, radio transmit headset shall be provided, one (1) each for the driver and officer. Each headset shall include, volume control, a noise-canceling microphone, adjustable head strap, flex boom microphone that rotates 180 degrees, and high impact ABS plastic earcups. One (1) Sigtronics, model 800122, push-to-talk switch shall be provided in each of position. The switch shall allow for mobile radio transmission through the Sigtronics intercom system with the use of a Sigtronics headset.

Four (4) Sigtronics, model SE-2, under the helmet, intercom only headsets shall be provided, one (1) for each of the crew positions. The headsets shall include, volume control, a noise-canceling microphone, adjustable head strap, flex boom microphone that rotates 180 degrees, and high impact ABS plastic earcups.

Each headset shall be complete with a hanger to hold the headset when not in use. The driver's and officer's hangers shall be mounted inboard of each position, and all hangers shall be located in the optimal position based on cab and seat configuration by the apparatus manufacturer unless a specific location is clarified in the shop note.

Option ID:UPOxxxxxxx QTY:1

Dealer Supplied and Installed Radio Interface Cable

The interface cable shall not be ordered by the OEM. It will be supplied and installed by the dealer.

Option ID:911317 QTY:1

Upper Zone A, Chassis Supplied and Installed

UPPER ZONE A

The upper zone A warning lights shall be supplied and installed by the chassis manufacturer.

Option ID:UPOxxxxxxx QTY:1

Warning Lights, (2), Upper Zone C, Whelen, LED, 600 Series ROTABEAM

UPPER ZONE C WARNING LIGHTS

Two (2) Whelen 600 Series ROTA-BEAM Super-LED lights with chrome-plated flanges shall be installed in Upper Zone C. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses.

The conformal coated PC board and sealed lens/reflector assembly shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant.

Option ID:Upper Zone C Light/Lens Color QTY:1

Light/Lens Color - Red in color.

Red in color.

Option ID:UPOxxxxxxx QTY:1

Upper Zone B/D, Warning Lights (6), Whelen, LED, ION Wide Angle WIONSMCR, Chrome Housings, Red with Clear Lenses

UPPER ZONE B/D SIDE WARNING LIGHTS

Six (6) Whelen ION Series Super-LED lights, WIONSMCR, with chrome housings shall be installed, three (3) each side of the body in Upper Zone B and Upper Zone D. The wide angle warning lights shall incorporate six Super-LEDs, a clear optic hard coated polycarbonate lens, and utilize a TIR reflector for maximum output. The lights shall be compliant with NFPA KKK1822F requirements. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The conformal coated PC board and liquid injection molded lens/gasket assembly shall provide additional protection against environmental elements. The solid state warning lights shall be vibration resistant.

Option ID:Upper Zone B/D Light/Lens Color QTY:1

Light/Lens Color - Red in color with clear lenses.

Red in color with clear lenses.

Option ID:UPOxxxxxxx QTY:1

Lower Zone Warning Light Package, (4) OEM Supplied Whelen, LED - (2) ION Series WIONSMCR & (2) M6V2R Series (Warning/Perimeter)

LOWER ZONE WARNING LIGHT PACKAGE

There shall be two (2) Whelen ION Series Linear Super-LED® lights, WIONSMCR, with chrome housings installed in the lower zone C of the apparatus to meet NFPA compliance. The wide-angle warning lights shall incorporate six Super-LEDs, a clear optic hard coated polycarbonate lens, and utilize a TIR reflector for maximum output. The lights shall be compliant with NFPA KKK1822F requirements. The hard-coated lens

shall provide extended life/luster protection against UV and chemical stresses. The conformal coated PC board and liquid injection molded lens/gasket assembly shall provide additional protection against environmental elements. The solid-state warning lights shall be vibration resistant.

There shall be two (2) Whelen M6V2R Series Super-LED® lights with chrome flange installed (1) each in the lower zone B & D of the apparatus to meet NFPA compliance. The M6V2 shall incorporate Linear Super-LED® and Smart LED® technology. The configuration of the M6V2 lights shall be a M6 V-series warning light and a perimeter light with a split non-optic polycarbonate lens. The warning lights shall consist of two V-series PC boards containing six (6) Super-LEDs on each PC board. Clear optic collimators and reflectors will be installed with each PC board for maximum illumination. The perimeter lights shall consist of six white Super-LEDs installed on the scene light PC board. The perimeter lights shall be installed at 45° angle with a TIR reflector for supreme radiance. The warning light assembly and the perimeter light assembly are installed on a main PC board.

The warning lights shall include an internal flasher with 25 Scan-Lock™ flash patterns including low power and steady burn. The M6V2 shall also be provided with a synchronize feature. The M6V2 warning lights shall meet KKK 1822F, NFPA 1901, and NFPA 1917 specifications. The M6V2 perimeter lights shall meet AMD 024 with two (2) M6V2 on each side of the vehicle and NFPA 13.10.1.2 for one M6V2 up to six feet.

The lens/reflector assembly shall be sealed and resistant to water, moisture, dust, and other environmental conditions. The hard-coated lens shall provide extended life/luster protection against UV and chemical stresses. The light engine shall be installed at the rear of the unit and be vacuum tested to ensure proper sealing.

Option ID:Lower Zone Light/Lens Color **QTY:**1

Light/Lens Color - M6V2R - Top lens Red in color, and Bottom lens Clear ION - Red in color with clear lenses.

M6V2R - Top lens Red in color, and Bottom lens Clear ION - Red in color with clear lenses.

Option ID:101263 **QTY:**1

Chassis Supplied/OEM Installed Traffic Advisor, Chassis Supplied and Installed Controller

INSTALL CHASSIS SUPPLIED TA

The chassis supplied traffic directional light and controller shall be installed by the OEM.

If you have selected the dimming feature, only Whelen traffic advisors with a TACTL5 control head will be programmed to be dimmable. All other traffic advisors will be omitted.

Option ID:910738 **QTY:**1

Traffic Directional Light Location, Rear Body Face, Recess Mounted

The traffic directional light shall be recess mounted in the rear of the body.

Shop Note: Recessed area for the traffic advisor will be a sloped floor to allow water to drain.

Option ID:000896 QTY:1

Siren Head, 100W/200W, Whelen, 295HFSA7, Remote Siren Head

ELECTRONIC SIREN

One (1) Whelen model 295HFSA7, 100/200-watt selectable dual output electronic siren shall be mounted in the cab. The siren shall have a flush mounted control head and a remote amplifier. Full features of the siren shall include Air Horn, Wail, Yelp, Piercer, and a removable microphone.

Shop Note: The PA for the electric siren will be active with ignition power and not E-Master.

Option ID:UPOxxxxxxx QTY:1

Forward of Shift Pad

The siren head will be located in the center pad forward of the shift pad housing.

Option ID:UPOxxxxxxx QTY:1

Speakers, Chassis Supplied and Installed

Speakers, Chassis Supplied and Installed

Option ID:UPO0052344 QTY:1

None

None

Option ID:010221 QTY:1

Power and Ground Lead, 12V Drop, Battery Direct, 30 Amp, 6-Position Distribution Panel

12V POWER LEAD DROP

One (1) 12 volt power lead drop with a 6-position Blue Sea Systems ATO style fuse block with cover shall be provided. The power lead drop shall consist of one (1) hot and one (1) ground wire run from the batteries to the specified location. The power lead drop shall be battery direct and have a minimum of a 30 amp fuse provided with the power circuit. The distribution panel shall be designed with a grounding pad and compact, lightweight construction. The distribution panel shall be capable of using ATC/ATO blade fuses or ATC style DC circuit breakers.

Option ID:900014 QTY:1

Power Lead Location, In L1 Cmpt

The power lead shall be located in the L1 compartment.
The exact location will be determined by the apparatus manufacturer, unless a specific

location is clarified in the shop note.

Shop Note: Install as high up as possible on the forward bulkhead by the rollup door.

Option ID:010221 QTY:1

Power and Ground Lead, 12V Drop, Battery Direct, 30 Amp, 6-Position Distribution Panel

12V POWER LEAD DROP

One (1) 12 volt power lead drop with a 6-position Blue Sea Systems ATO style fuse block with cover shall be provided. The power lead drop shall consist of one (1) hot and one (1) ground wire run from the batteries to the specified location. The power lead drop shall be battery direct and have a minimum of a 30 amp fuse provided with the power circuit. The distribution panel shall be designed with a grounding pad and compact, lightweight construction. The distribution panel shall be capable of using ATC/ATO blade fuses or ATC style DC circuit breakers.

Option ID:900019 QTY:1

Power Lead Location, In R1 Cmpt

The power lead shall be located in the R1 compartment.
The exact location will be determined by the apparatus manufacturer, unless a specific location is clarified in the shop note.

Shop Note: Install as high up as possible on the forward bulkhead by the rollup door.

Option ID:110980 QTY:1

Power and Ground Lead, 12V Drop, Ignition, 40 Amp, 12-Position Distribution Panel

12V POWER LEAD DROP

One (1) 12-volt power lead drop with a 12-position distribution panel shall be provided. The power lead drop shall consist of one (1) hot and one (1) ground wire run from the batteries to the specified location. The power lead drop shall be activated by the chassis ignition switch and have a minimum of a 40 amp fuse provided with the power circuit. The distribution panel shall be designed with a grounding pad and compact, lightweight construction. The distribution panel shall be capable of using ATC/ATO blade fuses or ATC style DC circuit breakers.

Option ID:UPOxxxxxxx QTY:1

Power Lead Location, Inside Pump Module

The power lead shall be installed inside the pump module on either the forward or rearward bulkhead. This shall be utilized in place of in line fuses for items like the tank level gauges. The exact location will be determined by the apparatus manufacturer.

Option ID:110632 QTY:1

Scene Lights, Pair, 12V, Whelen, Surface Mount, LED M6 Series Gradient Scene

WHELEN 12V SURFACE-MOUNT SCENE LIGHTS

Two (2) Whelen M6 Series, model M6ZC, scene lights shall be installed on the apparatus. Each steady burn scene light shall incorporate Linear Super-LED and Smart LED technology. Each light configuration shall consist of 12 clear gradient Super-LED's and a clear optic polycarbonate lens. Each scene light, with the aid of two screws, shall have the ability to be installed as a surface mount scene light. Each light shall meet KKK 1822F and AMD024 specifications.

Each lens/reflector assembly shall be sealed and resistant to water, moisture, dust, and other environmental conditions. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. Each light engine shall be installed at the rear of the unit and be vacuum tested to ensure proper sealing. Each light's PC board shall be conformally coated for additional protection.

Option ID:910851 QTY:1

Lighting Location, Rear Face of Body, Both Sides

The two (2) lights shall be installed on the rear face of the body, one (1) on each side.

Option ID:UPOxxxxxxx QTY:1

Lighting Activation, On V-Mux Screen and Rear Body, 'REAR SCENE', Wired to Rear Work Light Switch, Reverse, "ALL SCENE" Function

The 12 volt rear scene lights shall be controlled by a switch located on the V-Mux display in the chassis cab. The lights shall be controlled by one (1) switch. The switch shall be labeled "REAR SCENE."

In addition to the switch located in the cab, the 12 volt rear scene lights shall be activated by the rear work light switch and when the apparatus is placed in reverse.

Shop Note: There will be a button on the V-Mux for "ALL SCENE", which will activate all scene lights around the unit at the same time.

Option ID:UPOxxxxxxx QTY:1

Lighting Activation, On V-Mux Screen, One Single Switch for all 12 Volt Scene Lights On Apparatus

12 VOLT LIGHTING ACTIVATION

All 12 volt scene lights shall be controlled by one single switch located in the V-Mux display that will activate all 12 volt scene light at once.

However, each pair of scene lights shall still have individual virtual switches within the VMUX. This will be an additional switch.

Option ID:UPOxxxxxxx QTY:1

Generator, Hydraulic, Harrison, 10kW, MCR, Meter Display, Cover

GENERATOR

A Harrison hydraulic driven generator shall be installed on the apparatus. The continuous duty rating of the generator shall be 10,000 watts, 42/83 amps, 120/240VAC volts. Current frequency shall be stable at 60 hertz.

The system shall be designed and assembled by a company with no less than 10 years experience in the manufacture of hydraulic driven generators. The system shall be tested prior to shipping and shall be accompanied with a test report. The generator shall be tested at various loads from no load to full load to ensure reliable power delivery at various loads.

The motor/generator shall be placed in a frame, which affords protection to the components and provides a unitized mounting module containing the motor/generator, reservoir, oil cooler, filtration, and an on/off manifold containing a cross port check valve allowing the unit to be started and shut down remotely. The generator shall be a commercial type with a heavy duty bearing and of brushless design to ensure low maintenance. No brushes or slip rings shall be allowed. The reservoir shall include an oil level sight gauge, oil temperature gauge, fill cap, oil filter, and a venturi boost unit to provide positive pressure to the pump suction port. The generator and motor shall be close coupled and aligned using a Morse taper with a through bolt to secure the motor to the generator. No two (2) bearing generators shall be used.

The system must be capable of producing the rated full power when driven from the vehicle PTO from idle to maximum engine speed.

The hydraulic motor and pump shall be of axial piston design to provide low internal leakage and a high degree of frequency stability. No gear pumps or motors shall be used. The pump shall match the system with the proper orifice, pressure compensator, and load sense settings to provide stable output regardless of engine rpm or electrical load demands.

The system shall be capable of normal operations using a commonly available ISO 46 fluid. All fluid service points shall be in close proximity to the reservoir for ease of scheduled maintenance.

The system shall be warranted for a period of not less than two (2) years or 2000 hours, whichever should come first.

GENERATOR DISPLAY

A Harrison metering display shall be provided with the generator. The display shall automatically sense a generator signal and begin displaying information. The digital meter display shall constantly monitor and display voltage, frequency (accurate to within 1 decimal point), and current draw on two separate lines. The display shall be capable of displaying total accumulated run time hours when the MODE button is pressed. This information shall be stored in a non-erasable memory.

GENERATOR COVER, BAR-GRATE

There shall be a bar-grate cover above the generator. This cover shall be hinged with compression latches.

Shop Note: The display will be installed outboard of the load center. The generator switch on the V-Mux will be a single button activation. The cover will be designed to

include the coverage of the hydraulic oil tank which is forward of the generator location. It shall also have "Flush Style" latches.

Option ID:007539 QTY:1

Generator Start, Hydraulic Gen., In Cab

A remote start switch shall be installed in the chassis cab for the generator.

Option ID:000859 QTY:1

Transfer Switch, Generator-to-Shoreline

TRANSFER SWITCH

A transfer switch shall be installed that will automatically switch from the 120-volt shoreline power to 120-Volt generator power when required. The transfer switch shall be in close proximity to the load center.

Option ID:901012 QTY:1

Generator PTO, Standard Hot Shift, PTO

GENERATOR PTO CONNECTION

The hydraulic pump for the generator system shall be connected to the chassis transmission through a "Hot Shift", electrically engaged power-takeoff system. The control to engage and disengage the power-takeoff system shall be installed in the chassis cab.

Option ID:002786 QTY:1

Generator Location, Ahead of Turntable, Harrison

The Harrison generator shall be located ahead of the turntable.

Option ID:007409 QTY:1

Generator Load Center, 12-Circuit, Non-GFI Breaker Box

12 CIRCUIT NON-GFI LOAD CENTER

A 120/240-volt load center shall be incorporated into the 120/240-volt wiring system. The load center shall include adequate circuit breakers to protect the loads specified on the apparatus. The entire 120/240-volt electrical system shall be installed in accordance with NFPA, current edition. This shall include all testing, labeling, wiring methodology, and dimensional requirements. Certification of compliance shall accompany the apparatus at the time of delivery. All 120/240-volt A.C. wiring shall be done in accordance with NFPA, current edition, as well as nationally accepted electrical codes.

BRANCH CIRCUIT OVERCURRENT PROTECTION

Over current protection devices shall be provided for circuits in accordance with NFPA, current edition. The load center shall be equipped with a non-GFI two pole main breaker

when the six or more individual branch circuits are present. Over current protection devices shall be marked with labels to identify the function of the circuit they protect.

Option ID:UPOxxxxxxx QTY:1

Generator Load Center Location, SL1, Forward Wall

The generator load center shall be located on the forward wall of the SL1 compartment.

Shop Note: Generator load center will be installed on the forward wall of SL1, hinge the load center door inboard. The node box will be installed on the front wall of SR1.

Option ID:110052 QTY:1

Receptacle, 120V, 5-20R Straight Blade, Duplex, Wired to Transfer Switch

120V RECEPTACLE

One (1) NEMA 5-20R, 120-volt, duplex, 3-wire, straight blade (household type) receptacle shall be installed on the apparatus. The receptacle shall have a 20-amp rating and include a spring-loaded weather resistant cover if mounted in an exterior location. The receptacle shall be wired to the transfer switch.

Option ID:910914 QTY:1

Receptacle Location, In L3 Cmpt

The receptacle shall be located in the L3 compartment.

The exact location will be determined by the apparatus manufacturer, unless a specific location is clarified in the shop note.

Shop Note: Will be located on the L3 rear wall towards the rear in the upper corner.

Option ID:110052 QTY:1

Receptacle, 120V, 5-20R Straight Blade, Duplex, Wired to Transfer Switch

120V RECEPTACLE

One (1) NEMA 5-20R, 120-volt, duplex, 3-wire, straight blade (household type) receptacle shall be installed on the apparatus. The receptacle shall have a 20-amp rating and include a spring-loaded weather resistant cover if mounted in an exterior location. The receptacle shall be wired to the transfer switch.

Option ID:910919 QTY:1

Receptacle Location, In R3 Cmpt

The receptacle shall be located in the R3 compartment.

The exact location will be determined by the apparatus manufacturer, unless a specific location is clarified in the shop note.

Shop Note: Located in the upper corner on rearward back wall of R3.

Option ID:110052 QTY:1

Receptacle, 120V, 5-20R Straight Blade, Duplex, Wired to Transfer Switch

120V RECEPTACLE

One (1) NEMA 5-20R, 120-volt, duplex, 3-wire, straight blade (household type) receptacle shall be installed on the apparatus. The receptacle shall have a 20-amp rating and include a spring-loaded weather resistant cover if mounted in an exterior location. The receptacle shall be wired to the transfer switch.

Option ID:910920 QTY:1

Receptacle Location, In R4 Cmpt

The receptacle shall be located in the R4 compartment.
The exact location will be determined by the apparatus manufacturer, unless a specific location is clarified in the shop note.

Shop Note: Locate on the Pac Trac in the upper portion of the compartment on the back wall, forward upper area.

Option ID:110052 QTY:1

Receptacle, 120V, 5-20R Straight Blade, Duplex, Wired to Transfer Switch

120V RECEPTACLE

One (1) NEMA 5-20R, 120-volt, duplex, 3-wire, straight blade (household type) receptacle shall be installed on the apparatus. The receptacle shall have a 20-amp rating and include a spring-loaded weather resistant cover if mounted in an exterior location. The receptacle shall be wired to the transfer switch.

Option ID:910915 QTY:1

Receptacle Location, In L4 Cmpt

The receptacle shall be located in the L4 compartment.
The exact location will be determined by the apparatus manufacturer, unless a specific location is clarified in the shop note.

Shop Note: Will be located in the L4 upper forward corner.

Option ID:110886 QTY:1

Cord Reel, Hannay, 120V, 200' 10/3 Yellow Cord, Terminate L5-20 Receptacle, Junction Box with Pigtail, Extenda-Lite

ELECTRIC CORD REEL

A Hannay 120 volt electric rewind cord reel shall be installed on the apparatus. A push button labeled "REEL REWIND" shall be installed for 12-volt rewinding of the cord reel.

Rollers shall be supplied to prevent damage to the electrical cable if pulled in any direction.

The cord reel shall be equipped with 200' of yellow STW Seoprene 10/3 wire installed

with a cable stop to prevent damage to cable fittings. The cord shall terminate in a single L5-20 twist lock receptacle.

JUNCTION BOX

An Akron Brass Extenda-Lite, model EJBX, backlighted electrical junction box equipped with four (4) electrical receptacles, two (2) per side, shall be provided. Each receptacle shall be equipped with a spring loaded snap cover. The cord reel shall be connected to the cast aluminum junction box through a 12" pigtail with heavy duty water resistant strain relief and flexible extender. The pigtail shall utilize an L5-20 twist lock plug and connector to supply power to the receptacles. Each side of the junction box shall be fitted with polypropylene faceplates, which are backlighted, so that plug orientation to the receptacles is quick and easy to align.

The junction box shall be equipped with an Akron Brass, model CS, cord stop.

Option ID:901148 QTY:1

Junction Box Option, Powder Coat Gray

The junction box shall have a gray powder-coat finish.

Option ID:910861 QTY:1

Junction Box Receptacle, 120V, 5-20R Straight-Blade, Duplex

One (1) NEMA 5-20R, 120 volt, duplex, 3-wire, straight blade (household type) receptacle shall be installed on the junction box.

Option ID:910863 QTY:1

Junction Box Receptacle, 120V, L5-20R Twistlock, Single

One (1) NEMA L5-20R, 120 volt, single, 3-wire, twistlock receptacle shall be installed on the junction box.

Option ID:910863 QTY:1

Junction Box Receptacle, 120V, L5-20R Twistlock, Single

One (1) NEMA L5-20R, 120 volt, single, 3-wire, twistlock receptacle shall be installed on the junction box.

Option ID:910863 QTY:1

Junction Box Receptacle, 120V, L5-20R Twistlock, Single

One (1) NEMA L5-20R, 120 volt, single, 3-wire, twistlock receptacle shall be installed on the junction box.

Option ID:901023 QTY:1

Cord Reel Location, In SL1 Cmpt

The cord reel shall be located in the SL1 compartment.

Shop Note: Cord reel shall be mounted as high as possible. Cord reel guide rollers shall be installed on the cord reels.

Option ID:110886 QTY:1

Cord Reel, Hannay, 120V, 200' 10/3 Yellow Cord, Terminate L5-20 Receptacle, Junction Box with Pigtail, Extenda-Lite

ELECTRIC CORD REEL

A Hannay 120 volt electric rewind cord reel shall be installed on the apparatus. A push button labeled "REEL REWIND" shall be installed for 12-volt rewinding of the cord reel.

Rollers shall be supplied to prevent damage to the electrical cable if pulled in any direction.

The cord reel shall be equipped with 200' of yellow STW Seoprene 10/3 wire installed with a cable stop to prevent damage to cable fittings. The cord shall terminate in a single L5-20 twist lock receptacle.

JUNCTION BOX

An Akron Brass Extenda-Lite, model EJBX, backlighted electrical junction box equipped with four (4) electrical receptacles, two (2) per side, shall be provided. Each receptacle shall be equipped with a spring loaded snap cover. The cord reel shall be connected to the cast aluminum junction box through a 12" pigtail with heavy duty water resistant strain relief and flexible extender. The pigtail shall utilize an L5-20 twist lock plug and connector to supply power to the receptacles. Each side of the junction box shall be fitted with polypropylene faceplates, which are backlighted, so that plug orientation to the receptacles is quick and easy to align.

The junction box shall be equipped with an Akron Brass, model CS, cord stop.

Option ID:901148 QTY:1

Junction Box Option, Powder Coat Gray

The junction box shall have a gray powder-coat finish.

Option ID:910861 QTY:1

Junction Box Receptacle, 120V, 5-20R Straight-Blade, Duplex

One (1) NEMA 5-20R, 120 volt, duplex, 3-wire, straight blade (household type) receptacle shall be installed on the junction box.

Option ID:910863 QTY:1

Junction Box Receptacle, 120V, L5-20R Twistlock, Single

One (1) NEMA L5-20R, 120 volt, single, 3-wire, twistlock receptacle shall be installed on the junction box.

Option ID:910863 QTY:1

Junction Box Receptacle, 120V, L5-20R Twistlock, Single

One (1) NEMA L5-20R, 120 volt, single, 3-wire, twistlock receptacle shall be installed on the junction box.

Option ID:910863 QTY:1

Junction Box Receptacle, 120V, L5-20R Twistlock, Single

One (1) NEMA L5-20R, 120 volt, single, 3-wire, twistlock receptacle shall be installed on the junction box.

Option ID:901025 QTY:1

Cord Reel Location, In SR1 Cmpt

The cord reel shall be located in the SR1 compartment.

Shop Note: Cord reel shall be mounted as high as possible. Cord reel guide rollers shall be installed on the cord reels.

Option ID:UPOxxxxxxx QTY:1

Scene Lights (2), 120V, FRC, Surface Mounted, LED Spectra Max 20,000 Lumen, Model SPA260-K20

FIRE RESEARCH 120V SURFACE MOUNTED LIGHTS

Two (2) Fire Research, model SPA260-K20, Spectra Max surface mounted lights shall be installed on the apparatus.

Each lamphead shall generate 22,000 lumens. The lampheads and housings shall be chrome. The floodlights shall be UL listed as a scene light for fire service use.

Option ID:910853 QTY:1

Lighting Location, Side Face of Body, Rearward, Both Sides

The two (2) lights shall be installed on the rear side face of the body, one (1) on each side.

Option ID:110849 QTY:1

Lighting Activation, Pair, In Cab, 'LEFT SCENE' and 'RIGHT SCENE', Rocker Switches

The driver's side and officer's side scene light(s) shall each be controlled by a rocker switch located in the chassis cab, for a total of two (2). The activation for the driver's side scene lights shall be labeled "LEFT SCENE" and the officer's side shall be labeled "RIGHT SCENE."

Option ID:UPOxxxxxxx QTY:1

Scene Lights (2), 120V, FRC, Surface Mounted, LED Spectra Max 20,000 Lumen, Model SPA260-K20

FIRE RESEARCH 120V SURFACE MOUNTED LIGHTS

Two (2) Fire Research, model SPA260-K20, Spectra Max surface mounted lights shall be installed on the apparatus.

Each lamphead shall generate 22,000 lumens. The lampheads and housings shall be powder coated white. The floodlights shall be UL listed as a scene light for fire service use.

Option ID:UPOxxxxxxx QTY:1

Lighting Location, Side Face of Body, Forward, Both Sides of Body

The two (2) lights shall be installed on the forward side face of the body, one (1) on each side.

Option ID:110849 QTY:1

Lighting Activation, Pair, In Cab, 'LEFT SCENE' and 'RIGHT SCENE', Rocker Switches

The driver's side and officer's side scene light(s) shall each be controlled by a rocker switch located in the chassis cab, for a total of two (2). The activation for the driver's side scene lights shall be labeled "LEFT SCENE" and the officer's side shall be labeled "RIGHT SCENE."

Option ID:001481 QTY:1

Construction and Dimensions, Rear Mount Ladder Structure (107')

107 AERIAL LADDER CONSTRUCTION STANDARDS

The aerial ladder shall be a rear mount design with the ladder extending toward the front of the apparatus when stowed. The aerial ladder shall be comprised of four sections and shall extend to a nominal height of 107 feet at 72 degrees, measured in a vertical plane from the top rung to the ground. To maintain a maximum level of safety, units exceeding a 76 degree angle of inclination, in accordance with NFPA, current edition, shall not be acceptable.

OPERATIONAL ENVELOPE/REACH

The aerial ladder shall have an operations range of negative 8 degrees elevation to positive 72 degrees elevation.

A minimum horizontal reach of 101'-5" shall be measured from the turntable centerline to the outermost rung on the outermost fly section, with the aerial at full extension and at 0 degrees elevation.

STRUCTURAL MATERIAL

The primary load support members of the ladder shall be constructed of certified 100,000 PSI yield strength (minimum) steel tubing, with full traceability on all structural materials. Each section shall be trussed diagonally, vertically, and horizontally using welded steel tubing. All critical points shall be reinforced for extra rigidity and to provide a high strength to weight ratio.

All ladder rungs shall be constructed of A606 Type 4 certified steel tested per ASTM A370 standards. A606 Type 4 exhibits superior corrosion resistance over regular carbon steel as a result of the development of a protective oxide film on the surface. A606 Type 4 shall meet a minimum 6.0 Atmospheric Corrosion Factor. The ladder rungs shall be round and welded to each section utilizing "K" bracing for torsional rigidity.

All welding of structural components, including the aerial ladder sections, turntable, pedestal, and outriggers, will be in compliance with the American Welding Society standards. All welding personnel will be certified, as qualified under AWS welding codes. Materials used to manufacture the structural components are to be certified by the mill that manufactured the materials. Certifications or re-certifications of structural materials by vendors other than the mill they were manufactured at will not be acceptable. Any material testing that is performed after the mill test will be for verification only and not completed with the intent of changing the classification. Any welded structural component for the ladder will be traceable to their mill lots.

PRIMARY DIMENSIONS

The inside dimensions of the ladder shall be as follows:

- Base Section - 40.250"
- First Fly Section - 33.500"
- Second Fly Section - 27.750"
- Last Fly Section - 22.500"

The height of the handrails above the center line of the rungs shall be as follows:

- Base Section - 28.875"
- First Fly Section - 24.875"
- Second Fly Section - 21.375"
- Last Fly Section - 17.375"

Option ID:911154 QTY:1
Ladder Specifications (107')

NFPA SAFETY FACTOR AND RATED CAPACITIES

The methodology, definitions, testing, and criteria used by the aerial manufacturer to determine the preceding and following Safety Factor and Rated Capacity of the aerial device shall be in strict compliance with the definitions of such, in accordance with NFPA, current edition., and these specifications. Any apparatus claiming to exceed the testing requirements of NFPA, current edition shall provide certified documentation of the tests.

AERIAL DEVICE SAFETY FACTOR AND RATED CAPACITY

The purchaser desires to purchase with these specifications, an aerial device with a minimum 2.0:1 safety factor as required and in accordance with NFPA, current edition. Therefore, the aerial manufacturer shall hereby certify, by submitting a bid for these specifications; that the aerial device meets or exceeds the following requirements.

The design stress or primary stress within all structural load supporting members of the aerial device shall not exceed 50% of the minimum as welded yield strength of the material based on the combination of the dead load of the aerial plus the rated capacity

of 750 lbs. at the tip of the aerial; while flowing 1500 GPM, at a 90 degree angle to ladder centerline; with the structural load supporting members of the aerial device at either; an ambient temperature of 75 degrees F or an elevated temperature of 350 degrees F- thereby exhibiting a minimum 2.0:1 safety factor in all feasible operational conditions.

These capabilities shall be valid and true when the apparatus is deployed in the unsupported configuration, while flowing 1500 GPM, based upon 360-degree rotation, from full retraction to full extension, and at any degree of elevation (-8 to +72). In order to provide a clear picture of apparatus capabilities, any manufacturer with any restrictions to any of these capabilities shall provide the lowest ratings of tip load and water flow.

AERIAL DEVICE SAFETY FACTOR SERVICE LIFE

The purchaser desires to purchase an aerial device with a safety factor that remains NFPA compliant and constant throughout the life of the aerial device. The safety factor of every structural load bearing member in the aerial device shall remain above 2.0:1 for a "Safety Factor Service Life" of up to 20 years minimum. Any apparatus claiming to exceed the guidelines of NFPA, current edition shall provide certified documentation.

Option ID:001837 QTY:1

Aerial Information Specification Plate

AERIAL SPECIAL LABELS

Legible, permanent signs shall be installed in positions readily visible to the operator to provide operational directions, warnings, and cautions. The signs shall describe the function of each control and provide operating instructions.

Warning and caution signs shall indicate hazards inherent in the operation of the aerial device. These hazards shall include, but shall not be limited to:

Electrical hazards involved where the aerial device does not provide protection to the personnel from contact with, or near proximity to, an electrically charged conductor.

Electrical hazards involved where the aerial device does not provide protection to ground personnel who might contact the vehicle when in contact with energized electrically charged conductors.

Hazards from stabilizer motion.

Hazards that can result from failure to follow the manufacturer's operating instructions.

AERIAL DEVICE SERIAL NUMBER PLATE

A permanent label shall disclose the following information relative to the aerial device (See turntable console lid):

Model

Serial number

Shop Order Number

OTHER LABELS

Maximum hydraulic system pressure

Hydraulic oil type

All other appropriate labels to ensure safe operation of the aerial device shall be supplied in conspicuous locations.

Option ID:121500 QTY:1

Aerial Test, Non-Destructive Testing (NDT), Independent Third Party Certification

THIRD PARTY NON-DESTRUCTIVE TESTING

Welds shall be tested using two (2) non-destructive methods by an independent third party. Devices that have not been certified by an engineer that is independent of the manufacturer shall not be acceptable. Welds shall be tested using two-(2) non-destructive methods by an independent third party inspection firm. Steel and aluminum ladders shall, at a minimum, have all welds tested using two-(2) separate NDT methods.

Aerial structures shall have 100 % of all structural welds tested using both magnetic particle method and visual testing method. Aerials that are fabricated of aluminum shall have 100% of all structural welds tested using dye penetrate method and visual method. Manufacturers who rely only on visual inspection, performed in-house or by a third party, as a primary method of testing shall not be considered, and their bid shall be rejected.

Option ID:901000 QTY:1

Aerial Test, Structural Safety Factor, Stability Factor and Testing

STRUCTURAL SAFETY FACTOR

The purchaser desires a device that has been tested by a third party for compliance with the 2 to 1 safety factor specified by NFPA, current edition. Devices that have not been certified by an engineer that is independent of the manufacturer shall not be acceptable.

NFPA AERIAL STABILITY FACTOR AND TESTING

A one and one-half to one (1.5:1) stability factor shall be provided. These capabilities shall be established in an unsupported configuration. Since the device is rated while flowing water, stability testing shall account for the distributed weight of water in a full waterway and water reactionary force as required by NFPA, current edition.

The following are specific descriptions of what tests are to be performed, and conditions they shall be performed under, and strictly adhered to by the aerial manufacture set forth in these specifications and the current edition of NFPA, current edition.

For both of the following tests, the only obstructions to a full 360-degree rotation with the aerial at 0 degrees elevation and full extension; shall be presented by the apparatus itself, and not external obstructions at the manufacturer's test location. This means that the aerial device manufacturer shall ensure that the testing grounds present no

obstruction (trees, buildings, etc.) to the full 360-degree rotation at 0 degrees elevation and full extension, which may cause the need to raise the aerial to clear the obstruction.

Additionally, the apparatus shall be tested for stability only after the entire apparatus is complete. Manufacturers using a third-party to manufacture the aerial device must provide certified documentation the unit was tested by the manufacturer of the aerial and the final OEM manufacturer. This requirement is specified in NFPA, current edition as the apparatus being in "service-ready condition". There shall be no exception to this requirement due to the fact that it would be unlikely that actual weight distribution could be accurately simulated for the stability testing.

TEST 1

After the above conditions have been satisfied, the aerial shall be subjected to the following test in the presence of the third party testing company that is in compliance with these specifications. Specifically, the aerial device shall be placed on level ground with the stabilizers deployed per manufacturer recommendations. The aerial device then shall have 1.5 times the rated capacity placed at the tip of the aerial, with the device at full extension and at 0 degrees elevation, which is the most stringent configuration. The device shall be rotated 360 degrees raising and lowering the aerial as needed to clear the cab of the apparatus. The aerial shall prove to be stable during the entire test and no component of the aerial shall permanently deform.

TEST 2

After the above conditions have been satisfied, the aerial shall be subjected to the following test in the presence of the third party testing company that complies with these specifications. Specifically, the aerial device shall be placed on a 5-degree downward slope with the stabilizers deployed per manufacturer's recommendations. The aerial device then shall have 1.33 times the rated capacity placed at the tip of the aerial, with the device at full extension and at 0 degrees elevation, which is the most stringent configuration. The device shall be rotated 360 degrees raising and lowering the aerial as needed to clear the cab of the apparatus. The aerial shall prove to be stable during the entire test and no component of the aerial permanently deform.

Option ID:911156 QTY:1

Rung Covers

RUNG COVERS

Each rung shall be covered with secure, heavy duty, deeply serrated rubber sheathing. The rung cover shall be installed on a minimum of sixty percent (60%) of each ladder rung. Attachment of the sheathing to the rung shall be by mechanical means and an adhesive application. Under no circumstance shall the rung covers turn when a rung is at ambient temperature (75 degrees F) or at an elevated temperature (350 degrees F); there shall be no exception to this requirement for the safety of persons climbing the ladder sections.

The sheathing shall be easily replaceable if the rubber becomes worn, however, the rung covers shall be designed, constructed, and installed with lifetime service as the objective. To ensure ease of maintenance if damaged, manufacturers using embossed metal in place of the rubber rung covers are not acceptable.

To prevent corrosion of the rungs by introducing air to the inside, under no circumstances will rung covers attached with screws or rivets be acceptable.

Option ID:001509 QTY:1

Ladder Travel Support/Cradle, Light, Cradle Interlock System (UT 100'/107')

HEAVY DUTY LADDER TRAVEL SUPPORT

A heavy duty ladder rest with poly pads shall be provided for support of the ladder in the travel position. The location of the travel support shall be directly behind the chassis cab. The travel support shall be fabricated from heavy duty steel and painted to match the primary body color. If the body is a two-tone design, the travel support shall be painted to match the top body color. The travel support shall be designed to be easily removable to allow for ease of maintenance and repair if necessary.

The base section of the ladder shall contain stainless steel scuff plates where the ladder comes into contact with the ladder support.

An indicator light shall be provided on the turntable to indicate when the ladder is aligned with the travel support and may be lowered into it. The ladder rest shall be attached to the front outrigger box assembly for added stability.

The ladder rest shall be illuminated for nighttime operation. The illumination light shall automatically activate with the aerial master switch.

CRADLE INTERLOCK SYSTEM

A cradle interlock system shall be provided to prevent the lifting of the ladder from the nested position until the operator has positioned all of the stabilizers in a load supporting configuration. An interlock switch shall be installed at the cradle to prevent operation of the stabilizers once the aerial has been elevated from the nested position.

Option ID:001514 QTY:1

Elevation System (UT 100'/107')

ELEVATION SYSTEM

Two (2) double acting lift cylinders shall be utilized to provide smooth precise elevation from 8 degrees below horizontal to 72 degrees above horizontal. The lift cylinders shall have a 6" internal diameter (bore) and a 2.5" solid cylinder rod. The lift cylinders shall be equipped with integral holding valves located on the cylinder to prevent the unit from lowering should the charged lines be severed at any point within the hydraulic system.

The lowering of the ladder shall be controlled by a pressure limiting valve to limit the downward pull of the ladder when it is bedded. Both raising and lowering functions shall be influenced by flow compensation, which shall maintain ladder tip speed within the design speed regardless of load, angle, or extension. Ladder tip speed shall be decelerated above 65 degrees in order to reduce "tip-lash". Ladder lowering shall be controlled on the down motion to prevent the cylinders from completely retracting, thus allowing a cushion of oil for continuous ladder load readout.

The elevation cylinder upper and lower pivot pins shall be installed with a secondary

tensioning system to secure the pins and prevent them from slipping out over time. The design shall not inhibit the pins from being removed for future servicing purposes.

Option ID:UPOxxxxxxx QTY:1

Extension/Retraction System (UT 100'/105') Greaseable Pins and Sheaves

EXTENSION/RETRACTION SYSTEM

A fully hydraulic powered extension and retraction system shall be provided using two (2) sets of Siamese hydraulic cylinders and cables. Each set shall be capable of operating the ladder in the event of a failure of the other. The extension cylinders shall each have a 3.5" internal diameter (bore) and a 1.5" diameter solid rod. Extension and retraction of the telescopic sections shall be internally limited within the cylinders, eliminating excess strain on the cables, sheaves, and ladder structure. Each of the cylinder, cable, and sheave assemblies shall be completely independent of the other, to provide a safety factor wherein a failure of one assembly will not affect the function and operation of the other. The extension cylinders shall be equipped with counter balance holding valves to synchronize the cylinders for smoother operation and prevent the unit from retracting should the charged lines be severed at any point within the hydraulic system. The holding valves shall be mounted directly on the cylinders with no hoses between the valve and the cylinder. The reeling of the cable shall be such to provide synchronized, simultaneous movement of all sections from full extension to full retraction. All pulleys and sheaves shall be enclosed as an added safety feature as well as to prevent personnel on the ladder from becoming entangled in them.

GREASEABLE SHEAVE BEARINGS

For maximum performance in high duty cycle environments, the aerial sheaves shall be provided with bearings made from type 660 bearing bronze. This bronze alloy shall be hard, strong and resistant to wear and galling. A grease zerk shall be provided for each sheave bearing for reliable, long-term performance.

AERIAL CABLES

To ensure a maximum level of safety the following standards shall be used on the extension and retraction cable system with no exception. Cables shall have a 5:1 safety factor based on ultimate strength under all safe operating conditions. The factor of safety shall remain above 2:1 during any extension or retraction system stall. The minimum ratio of the diameter of cable to the diameter of sheave shall be 1:12. The cables used between the base and second section shall be 1/2" diameter. Due to the amount of stress applied to this first pair of cables, they shall be 6x26, Flex-X design for maximum durability, stability, and service life. This design provides greater surface area resulting in less sheave and drum wear. For these reasons, any other cable design on the first set of cables shall not be considered acceptable. The cables between the second and third ladder sections shall be 3/8" diameter. The cables between the third and fly sections shall be 5/16" diameter. These cables shall be 7x19, galvanized aircraft cable for extended corrosion resistance and flexibility. All cables shall be pre-stressed, proof-loaded, and certified by the cable manufacturer to minimize changes to the cable lengths and performance.

CERTIFIED CABLE SWAGED SHACKLES

All swaged shackle ends shall have a certification test from the manufacturer of the assembly.

IGUS ENERGY CHAIN

The electrical cable, hydraulic hose and/or air hose shall be routed through the interior of the structural tubing of the ladder sections as well as utilizing Igus energy chain. The energy chain shall be routed through the inside section of the vertical side walls of the aerial ladder device. The cable and/or hose routing shall use one or both bottom cord rectangular tube(s) on the base section of the ladder and the bottom cord rectangular tube(s) on the last ladder fly section. The ladder sections between the base and last fly shall utilize the energy chain in order to route all electrical cables and hose lines. The energy chain shall travel within a carrier shield, which is fabricated out of 16-gauge anodized aluminum material. Each model of energy chain used shall be adequately sized to fit the application. Rollers, which are located in the lower portion of the ladder section(s), shall be constructed of a nylon plastic material that is specifically designed for these types of applications. Spacer pads, made from the same material as the rollers, shall be installed and evenly spaced in order to secure the Igus energy chain within the specifically designed carrier shield(s). The electrical cables used to transfer power to the ladder tip shall be Igus Chain Flex cables. These cables are specially designed for the Igus energy chain system and custom fit for each aerial apparatus. If applicable, the hydraulic hose(s) and air hose(s) shall be Parker Hannifin with a rating of 2,500 PSI. Igus Energy chain enables travel of up to 130 feet, is virtually wear-free and offers extremely quiet operation. Igus energy chain is very well suited to resist the harsh environmental conditions by being able to withstand extreme temperatures and is UV resistant.

Option ID:911168 QTY:1

Wear Pads/Bearing Surfaces

WEAR PADS/BEARING SURFACES

Nylon wear pads impregnated with molybdenum disulfide and high in molecular weight shall be used between the telescoping sections for maximum weight distribution, strength, and smoothness of operation. This impregnation shall provide a lubricating function.

Stainless steel adjustment screws shall be provided on the wear pads to permit proper side tension. Plates shall be installed on the sides of the slide pads where adjustment screws come into contact with them. No exceptions shall be allowed to this requirement to prohibit the adjustment screws from embedding themselves into the pads, which may cause the pad to crack and fail.

To prevent additional maintenance and pressure points from the limited surface area, roller systems in place of wear pads will not be considered acceptable.

Option ID:911172 QTY:1

Rotation System, Bearing/Gear Box/Interlocks (UT 100'/107')

ROTATION BEARING

A 44-inch diameter external tooth, swing circle bearing shall be used for the rotation system. The bearing shall provide 360-degree continuous rotation. The bearing shall be designed specifically for the aerial device in lieu of the aerial device being designed to accommodate a particular bearing.

The bearing shall be bolted to the turntable and to the base support structure with SAE grade 8 bolts. Welding on the bearing in any manner shall not be acceptable.

The turntable base and the torque box bearing plate surfaces that contact the bearing shall be machined to prevent loading the bearing when the attaching bolts are brought to full torque. Machining of the surfaces shall be done after all welding to assure no further distortion of the material.

Shims shall not be acceptable as they reduce the surface contact area significantly thereby causing a concentration of forces at the shims.

BOLT TORQUING FROM TOP SIDE

All rotation bearing bolts shall be torqued from the top side of the turntable without the bolt or nut being held under the turntable by a person. Units requiring removal of equipment to access the torque bolts shall be considered unacceptable.

This design shall prevent the bolt from "spinning" while torque is being applied to the fastener. Application of Loctite or a similar compound alone, without any other means provided to hold the fastener shall not be acceptable. Additionally, this design feature shall not incorporate drilling, bending, welding on, or in any way modifying the structural fastener, nut, or washers.

ROTATION GEAR REDUCTION BOX

A hydraulically driven planetary gearbox with a drive speed reducer shall be used to provide infinite and minute rotation control throughout the entire rotational travel. The rotation gear reduction box shall be installed on the top side of the turntable so that it is easily accessible, yet it shall be installed so that it does not provide an obstruction or tripping hazard to persons on the turntable. Specifically, it shall be installed toward the front of the turntable, under the aerial ladder base section. Under no circumstance shall the gear box present any interference with the aerial device, even at low elevations.

Due to the additional maintenance required to keep two (2) rotation motors functioning properly without binding, units requiring more than one (1) rotation motor are not considered acceptable.

A spring applied, hydraulically released disc type swing brake shall be furnished to provide positive braking of the turntable assembly.

Provisions shall be made for manual operation of the rotation system should complete loss of hydraulic power occur. These provisions shall include a manual rotation drive tool supplied with the apparatus.

The hydraulic system shall be equipped with pressure relief valves, which shall limit the rotational torque to a nondestructive power. All moving parts of the rotation gear reduction box shall be enclosed or under the turntable decking eliminating safety hazards.

ROTATION INTERLOCK SYSTEM

The aerial device shall be equipped with a rotation interlock system to prevent the ladder from being rotated to any side where the stabilizers are not sufficiently extended to provide for the full tip load rating.

The system shall monitor the stabilizers for extension. When a stabilizer is not sufficiently extended (short-jacked) to provide full tip load rating, the system shall prevent the aerial from being rotated more than 12 degrees past the front or rear center line into the short-jacked side of the apparatus.

A slowdown feature shall be built into the rotation interlock system. When the aerial is operating in a short-jacked mode, the rotational speed shall be automatically reduced, by approximately 50%, when the aerial is rotated to within approximately 10 degrees of the front or rear center line of the apparatus. The rotational speed shall remain reduced throughout an arc of approximately 20-degrees over the front or rear of the apparatus, regardless of the direction of the rotation movement.

The rotation function shall automatically stop when the aerial approaches the front or rear corner area of the short-jacked side of the apparatus.

The rotation interlock system shall allow for normal operation on the side of the apparatus where the stabilizers are sufficiently extended for full tip load rating.

An override system, activated by pull knobs within the main turntable control pedestal, shall be provided that allows the operator to rotate the aerial into the non-recommended (short-jacked) side of the apparatus, should the situation absolutely demand it.

To ensure the maximum amount of safety, units allowing aerial rotation to the short-jacked side of the apparatus or systems which only include a visual and audio warning without automatically stopping rotation shall not be acceptable.

AERIAL STOW OPERATION INTERLOCK SYSTEM

A safety feature shall be included in the aerial operational system that limits the possibility of damage to the apparatus when stowing the aerial.

When a rear mounted aerial is positioned over the cab area of the apparatus, the interlock system shall not allow the downward movement of the aerial below a preset angle of elevation, unless the aerial is rotated into the bed-zone envelope. The bed-zone shall be approximately 2 degrees of rotation to the left and right side of the center of the aerial bed support. Once this bed-zone envelope is attained, downward movement of the aerial shall be allowed for proper positioning into the bed support.

An indicator light shall be located at the turntable control station to inform the aerial operator when the bed-zone envelope is attained.

Option ID:911175 QTY:1

Cab / Body Damage Protection Interlock System

COLLISION PROTECTION INTERLOCK

The apparatus shall be equipped with a cab collision protection interlock. This interlock shall be enabled while rotating the aerial device at elevations as low as, or lower than the cab of the apparatus.

Should the operator accidentally rotate the aerial device toward the cab at an elevation low enough to cause a collision with the cab, the interlock shall automatically stop rotation of the aerial at a point that is within a few degrees of the cab.

A manual override shall be provided to override the interlock system.

APPARATUS BODY DAMAGE CONTROL INTERLOCK SYSTEM

A safety feature shall be included in the aerial operational system that minimizes the possibility of damage to the apparatus body at all angles for all standard (non-override) operational modes.

The system shall automatically stop the downward movement of the aerial at a preset angle of elevation unless the aerial has been rotated at least 80-degrees, left or right, from the center of the ladder support. Once this rotation point is reached, full range downward movement (to -8 degrees) shall be allowed.

The aerial manufacturer shall determine and set the angle of elevation where downward aerial movement is stopped. The highest point of an apparatus, in relation to the distance from the turntable, shall be used to determine the pre-set elevation angle stopping point.

The system shall also minimize the possibility of accidental damage to the apparatus body from aerial rotation whenever the aerial elevation is below the preset elevation angle stopping point.

Rotational speed shall be reduced by approximately 50% when the aerial is rotated within a minimum of 10 degrees of a body avoidance stopping point. Aerial rotation shall automatically stop before the aerial contacts the body of the apparatus.

The body damage interlock system shall have no effect on aerial operation when the aerial is raised above the preset downward movement stopping point.

The body damage interlock system shall not eliminate the possibility of damage to components such as telescopic lights that are in a raised position.

A manual override shall be provided that will override the interlock system.

Option ID:001632 QTY:1

Aerial Power Take-Off

POWER TAKE-OFF

The apparatus shall be equipped with a power take-off (PTO) driven by the chassis transmission and actuated by an electric shift, located inside the cab. The PTO, which drives the hydraulic pump, shall meet all the requirements for the aerial unit operations.

Shop Note: The PTO will be activated with the aerial master and will not have it's own switch.

Option ID:008099 QTY:1

Hydraulic Pump with "Thru-Drive", Generator Operation in Drive (77'/107')

"THRU-DRIVE" HYDRAULIC PUMP

The hydraulic system shall be supplied by a pressure compensated, load sensing, variable flow. The pump shall provide adequate fluid volume to allow all ladder functions to operate simultaneously, without noticeable loss of speed. The pump shall supply oil only when the ladder is in motion, thereby preventing overheating of the hydraulic oil.

The pump shall be a "thru-drive" design. This design shall be provided for applications that require a power source for additional hydraulically operated accessories or tools.

An interlock shall be provided that allows operation of the aerial device PTO shift only after the chassis spring brake has been applied and the chassis transmission has either been placed in the neutral position or the drive position if the driveline has been disengaged from the rear axle.

The Thru-Drive shall be set up so the generator shall be operable while the chassis transmission is in "Drive".

Option ID:001640 QTY:1

Hydraulic System (UT 100'/107')

HYDRAULIC SYSTEM

The tubing and hoses used in the hydraulic system shall have a high-pressure rating, with the tubing having a minimum burst pressure of 9,600 to 17,400 PSI and the hoses being a minimum of 8,000 to 13,000.

The hydraulic oil tank shall have an approximate capacity of 50 gallons. A dipstick shall be provided to check the oil level. The oil fill shall be furnished with a cap that shall act as a ventilator to provide clean fresh air into the oil tank and a 40-micron filter to provide positive protection from contaminants. A magnetic drain plug shall be provided in a low point of the oil tank. An easily accessible 3-micron replaceable oil filter shall be installed on the hydraulic oil tank. The hydraulic oil tank shall be furnished with two pick-up tubes, one tube for normal operation and the other for emergency operation. The emergency pick-up tube shall extend further down into the oil tank to provide for reserve oil in case a hydraulic line is broken.

The hydraulic system shall be protected from possible hydraulic pump malfunctions by a relief valve, which shall route the excess oil into the oil tank when the pressure in the hydraulic system exceeds 3,500 PSI. The hydraulic control valves shall also be protected by being plumbed to a pressure relief valve to protect them from high pressure.

The hydraulic system shall be designed in such a way that all non-sealing moving components whose failure could result in motion of the aerial device shall have a minimum bursting strength of four times the maximum operating pressure to which the component is subjected. The hydraulic system shall have adequate cooling for continuous operation of not less than 2-1/2 hours.

Option ID:111765 QTY:1

Hydraulic Pressure Gauge, Rear Control Station, Inn. Cntrls, 2-1/2", TC Series, psi 0-5000

HYDRAULIC PRESSURE GAUGE

A 2-1/2" Innovative Controls 5,000 PSI, pressure gauge model IC-3010339-21933E-OTP, shall be located at the ground level control station to monitor the hydraulic system pressure. The gauge shall be liquid filled to prevent gauge shock when the hydraulic system is energized. The liquid shall not be vulnerable to freezing in subzero temperatures.

Option ID:UPOxxxxxxx QTY:1

Digital Level Gauge, Hydraulic System Oil Reservoir

DIGITAL OIL RESERVOIR GAUGE

There shall be a digital level gauge provided for the hydraulic oil reservoir.

Shop Note: Gauge will be located in SL1 adjacent to the load center.

Option ID:UPOxxxxxxx QTY:1

Aerial Hydraulic Tank Drain

AERIAL HYDRAULIC TANK DRAIN

There shall be a custom drain for the aerial hydraulic tank with label reading "Aerial Hydraulic Tank Drain". The drain shall be a 1/4 turn ball valve forward of the tandem axles outboard of the frame rails.

Option ID:001649 QTY:1

Emergency Hydraulic Pump (77'/UT100'/107')

EMERGENCY PUMP

The apparatus shall be equipped with one (1) emergency hydraulic pump electrically driven from the chassis battery system. The emergency pump shall be capable of providing adequate ladder functions to stow the aerial and stabilizers in the case of main hydraulic pump failure.

Two (2) control switches for this emergency pump shall be provided. One switch shall be installed at the turntable control console and the stabilizer control station. The switches shall be labeled EPU.

The switch at the stabilizer control station shall be a lighted momentary switch. The switch at the turntable control pedestal shall be a lighted switch on the switch pad.

Option ID:911194 QTY:1

Swivel

HYDRAULIC SWIVEL

The aerial ladder shall be equipped with a swivel at the turntable. The swivel shall connect the hydraulic lines from the hydraulic pump and reservoir to the aerial control bank at the turntable, above the point of rotation.

The swivel shall connect all the electrical circuits through the rotation point. A minimum of thirty-two (32) collector rings shall be provided. All collector rings shall be enclosed and protected with desiccant plugs to protect against condensation and corrosion. Due to the possibility of paint contamination and dirt attraction, units requiring oil or silicone to protect the collector rings shall not be acceptable.

The swivel shall allow for 360 degrees of continuous rotation of the aerial device with no loss of speed or capacity in functions.

Option ID:001805 QTY:1

Aerial Angle Indicator, Base Section

ANGLE INDICATOR

A liquid filled angle indicator shall be mounted on the base section of the aerial ladder. The indicator shall give accurate elevation in degrees from -20 to +80 degrees in relation to level. The liquid shall be of proper viscosity and composition to remain in liquid form even when exposed to below zero temperatures. Reading of the indicator shall be accomplished by observing the position of a suspended ball in relation to the degrees of elevation as marked on the indicator housing. The indicator shall be backlit for visibility in low light conditions.

Option ID:001807 QTY:1

Aerial Extension Tape

EXTENSION INDICATORS

Numerals shall be applied to the inside of the handrail of the base section opposite the turntable control console. The numerals shall be at appropriate intervals indicating total aerial extension in 5-foot increments. A band on the first fly section shall align with these marks at the appropriate extension distance. The extension indicator color shall provide a high contrast with the color of the ladder section to which it is applied. This shall make the length of aerial extension easily readable by the operator by merely glancing at the indicators. Numerals indicating the length of extension shall be placed adjacent to indicating bands.

Option ID:UPO0043317 QTY:1

None

None

Option ID:007719 QTY:1

Torque Box, Painted Black, PPG (107')

TORQUE BOX

A "torsion box" subframe shall be installed on the chassis frame rails, integral with the stabilizers. The torque box shall be constructed of steel plate. The steel plates shall have a minimum yield strength of 36,000 psi and ultimate tensile strength of 58,000 - 80,000 psi. The torque box subframe assembly shall be capable of withstanding all torsional and horizontal loads when the apparatus is supported by the stabilizers. The torque box shall be bolted in place to the chassis frame rails.

The torque box shall have a section modulus of 516.9 cubic inch and a resistance to bending moment of 18,611,273 inch pounds.

The aerial torque box shall be painted with High Solids polyurethane paint. The color shall be black.

To prevent unnecessary stress on the chassis, apparatus that use the chassis frame in place of a true torque box shall not be acceptable.

The torque Box will be adequately lit for night time operations.

Option ID:UPOxxxxxxx QTY:1

Stabilizers, Front and Rear "H" Style, 16' Spread, Standard Stroke, WITH Stabilizer Pins (107') - Brushed SS Covers

FRONT AND REAR STABILIZERS

Two (2) sets of stabilizers shall be installed for stability. Both sets shall be an extending box beam "H" style. Each set of stabilizers shall support full, certified aerial capabilities at a 16' spread, measured from the outermost edge of the stabilizers on each side of the apparatus. For additional stability, the stabilizers on each side of the apparatus shall have the capability of extending one (1) extra foot to a maximum spread of 18'. In order to get the true stabilizer spread, apparatus using measurements other than from each outside edge of the stabilizers shall not be considered acceptable.

The front stabilizers shall be located directly behind the chassis cab rear wall for maximum setup ability with minimal cab deflection. The stabilizers shall be an integral part of the torque box. A heavy-duty undersling assembly shall attach the front stabilizers to the front portion of the torque box. The overlap of the undersling and the torque box shall be a minimum of 24". The bottom side of the tubes shall contain a truss assembly that shall maximize the torsional strength of the undersling assembly.

The front stabilizers and torque box shall be attached to the truck frame in six (6) separate locations, three (3) on each side of the apparatus, utilizing steel plate. The mounting plates shall be located directly under the front stabilizers, under the front torque box area and at the rear stabilizer area.

The rear stabilizers shall be located directly behind the chassis rear wheels. The stabilizers shall be an integral part of the torque box.

The stabilizers shall be of the double box tube design with jack cylinders that have a 5" internal diameter (bore) and a 2.5" diameter solid cylinder rod. The jack cylinders shall be equipped with integral holding valves, which shall hold the cylinders either in the stowed or the working position, should a charged line be severed at any point within the hydraulic system.

The steel used to build the stabilizer system shall have a minimum yield strength of 36,000 psi and ultimate tensile strength of 58,000 – 80,000 psi.

Vertical jack cylinder rods shall be fully enclosed by a telescoping inner box to protect the cylinder rods, seal glands and pistons against damage from nicks, abrasion, and chrome damage. All vertical stabilizer cylinders shall be removable from the top of the box tube. The inner double box system shall be further designed to stabilize the column load imparted upon the cylinder rod, thereby also protecting against damage which may occur from lateral loading possibly caused by side slopes, shifting or sliding of the apparatus on icy or unstable surfaces, sudden sinking of one or more jack pads, or on scene collision while the aerial device is deployed. Vertical stabilizers that require cylinders to be removed from the bottom, or have the vertical stabilizer cylinders exposed, shall not be acceptable.

The stabilizers shall be connected to the hazard light circuit to warn the driver if they are not stowed when the parking brake is released.

Each extending style stabilizer shall have a brushed stainless steel stabilizer cover. The cover shall be adjustable to allow for a proper fit.

MECHANICAL STABILIZER LOCKS

Each extending vertical jack cylinder shall be equipped with a mechanical pin lock to hold it in the working position. The pin shall be zinc plated and have a yellow dipped vinyl handle for increased visibility. The locking system shall be incorporated with the protective tubing used to prevent damage to the jack cylinder rod. The inner and outer jack tubes shall be double-thickness in the pinning area for additional strength.

Safety is of the utmost concern. It is the intent of the fire department to purchase an apparatus that utilizes mechanical stabilizer locks in addition to the hydraulic holding valves integral to the stabilizer jacks. Should a mechanical failure occur with the stabilizer system or hydraulic seepage cause a stabilizer to drift, the mechanical locks shall keep the desired "stabilizer set-up" intact without compromising aerial capabilities or safety. There shall be no exception allowed to this requirement.

STABILIZER STROKE

The stroke of the stabilizers shall be a minimum of 25". The stabilizer pad shall be maintained at a stored height of approximately 12" to 15" (dependent on required ground clearance and angle of departure) resulting in a minimum ground penetration of 10" or greater.

STABILIZER FINISH

The extending front/rear stabilizer beams, inner jack tubes, and stabilizer pads shall be shot blasted to remove any mill scale or contamination. The individual components shall then be hot dip galvanized. The galvanizing process shall require that the entire assembly is completely submerged. Following the galvanizing process, the surface shall be ground smooth to remove dross. This preparation shall provide maximum protection for these critical components. No exceptions shall be allowed to this requirement due to stabilizers exposure to salt spray and road debris.

The outer tubes shall be finished with a water-based, high quality, single component acrylic primer. The primer color shall be flat black.

Option ID:911178 QTY:1

Stabilizer Extension System (UT100'/107)

STABILIZER EXTENSION SYSTEM

Extension of the front and rear horizontal beams shall be activated by dual extension cylinders, which shall each have a 2" internal diameter (bore) and a 1.25" diameter cylinder rod. The extension cylinders shall be totally enclosed within the extension beams to prevent damage to the rod and hoses. The extension beams shall be 6.00" x 8.00" x .375" wall steel tubing with a .62" steel plate welded to the top and bottom of each beam.

WEAR PADS/BEARING SURFACES

Nylon wear pads impregnated with molybdenum disulfide and high in molecular weight shall be used between the stabilizer housing assembly and the extension tube for maximum smoothness of operation.

Two (2) Nylatron wear pads shall be installed in each stabilizer extension system. There shall be one wear pad located on the top back portion of the extension tube assembly that shall glide on the inner wall of the top housing tube wall. There shall be an additional pad located on the inner wall of the bottom housing tube wall that shall separate the bottom side of the extension tube and the bottom wall of the housing tube. The pads shall be installed in such a manner as to reduce friction for ease of operation and to reduce the amount of metal to metal contact.

Each stabilizer down jack housing tube shall contain four wear pads, one (1) on each side of the tubes.

Option ID:001594 QTY:1

Stabilizer Angle Level Gauges (2)

STABILIZER ANGLE LEVEL GAUGES

One (1) manual angle level gauge shall be located on the rear of the apparatus. The gauge shall have a sight bubble that will measure the side-to-side angle of the apparatus in 2 degree increments.

One (1) manual angle level gauge shall be located on the side of the apparatus, near the rear. The gauge shall have a sight bubble that will measure the fore-to-aft angle of the apparatus in 2 degree increments.

Shop Note: The level on the side of the truck needs to be accurate to show level front to back and stay within specs of load chart. The driver side level indicator will be mounted centered in the C-channel below L4. Center on rub rail vertically and horizontally.

Option ID:UPOxxxxxxx QTY:1

Ground Control System, Electric Over Hydraulic Controls, Front and Rear Stabilizers,

Lower Center Rear, Horizontal, Painted Stainless Door (Fresno)

ELECTRIC / HYDRAULIC STABILIZER CONTROLS

The stabilizer controls shall be located at the rear of the apparatus. Two (2) stations shall be installed, one (1) on each side at the rear, arranged so that the operator has full visibility of the stabilizer being positioned. All stabilizer control functions shall be of the electric paddle joystick style. The make and model of the joysticks shall be P-Q controls, model M105. The controls shall be designed to allow stabilizers to be operated independently so that the vehicle may be set up in a restricted area or uneven terrain.

An electrically actuated diverter valve shall be provided in conjunction with the stabilizer controls as a safety device. The diverter valve shall allow the hydraulic fluid to flow either to the stabilizer circuit or the turntable and ladder circuit.

A stabilizer deployment warning alarm, activated by stabilizer mode, shall be provided at each stabilizer to warn personnel. The warning alarm shall deactivate only when all stabilizers are in the load supporting configuration, or when the diverter switch is no longer in the stabilizer mode.

The stabilizer controls shall each be accessible through a painted stainless steel door.

GROUND CONTROL STATION

A control station shall be located at the rear of the apparatus in an easily accessible area. The control panel shall be illuminated for night time operation. The following items shall be furnished at the control console, clearly identified and located for ease of operation and viewing:

- Individual stabilizer down indicator lights
- Aerial PTO engaged indicator light
- High idle switch with indicator light
- Emergency hydraulic pump control with indicator light
- Stabilizer/Aerial diverter control with indicator light
- Side to side leveling bubble

A weather proof compartment shall be furnished behind the control panel and shall contain the aerial circuit breakers, interlock components and control circuit distribution terminals. The control station shall be accessible through a painted stainless steel door.

The stabilizer controls and ground control station surfaces shall be fabricated from 3mm thick solid core aluminum composite panel with double-sided painted aluminum outer surfaces bonded to a solid polyethylene core. They shall include an Innovative Controls graphic overlay design and supply a second- surface printed UV and scratch-resistant polycarbonate graphic overlay backed with UL 969-compliant outdoor adhesive.

The rear body control station and outrigger control box doors will be constructed in a way to eliminate exposed attachment hardware on the outside face of the doors. Chevron the 3 doors as much as possible.

The stabilizer control boxes shall have chrome pull style latches with cables, but no hardware shall be exposed on the outside. The ground control station box will have pop latches, and the striker plates shall be eliminated.

Shop Note: The rear body control station and outrigger control box doors will be constructed in a way to eliminate exposed attachment hardware on the outside face of the doors. Chevron the 3 doors as much as possible. The stabilizer control boxes shall have chrome pull style latches with cables, but no hardware shall be exposed on the outside. The ground control station box will have pop latches, and the striker plates shall be eliminated.

Option ID:UPOxxxxxxx QTY:1

Stabilizer 1" Auxiliary Pads (4) Above Front Wheel Wells In Body, Painted Doors

AUXILIARY STABILIZER PADS

An auxiliary pad for additional load distribution on soft surfaces shall be supplied for each stabilizer. The pads shall be constructed of ultra-high molecular weight composite material that is a minimum of 1" thick with a minimum surface area of 576 square inches. Two (2) storage compartments shall be located above the front wheel wells, one (1) each side, for pad storage. Each compartment shall have the capacity for the storage of two (2) stabilizer pads and shall have a painted door with compression latches installed to keep the pads in place.

Shop Note: Remove the compression latch tabs from inside the compartments. No labels on these doors.

Option ID:111741 QTY:1

Stabilizer Cover Warning Lights (4), Whelen, M6 Super-LED (M6R), Red, Activated with Aerial Master and Emergency Master, Bezel Color to Match Lower Zone Lights

STABILIZER COVER WARNING LIGHTS

One (1) Whelen M6 Series Super-LED flashing light shall be installed on each extending stabilizer cover panel, for a total of four (4). These lights shall be red in color and activated by the aerial master switch and emergency master switch.

The light bezels shall match the color of the lower zone light bezels.

Option ID:008768 QTY:1

Stabilizer Arm Warning Lights (8), Whelen, 5G Series Super-LED (5GR00FRR), Red

STABILIZER ARM WARNING LIGHTS

Eight (8) Whelen 5G Series Super-LED red flashing lights shall be mounted on the stabilizer beams. Each stabilizer beam shall include two (2) lights, one (1) facing forward and one (1) facing rearward. The lights shall be mounted inboard of vertical jack tubes. The warning lights shall be activated by the aerial master switch.

Option ID:003737 QTY:1

Stabilizer Work Lights (4), Truck-Lite LED (81380), Clear

STABILIZER WORK LIGHTS

Four (4) Truck-Lite LED clear floodlights shall be provided at each stabilizer location to

illuminate the surrounding area. The lights shall be located under the stabilizer beams and activated by the aerial master switch.

Option ID:008306 QTY:1

Turntable, Standard (107')

TURNTABLE

The turntable shall be designed in such a manner as to allow a generous working area, regardless of the position of the aerial, including when positioned at maximum elevation. The turntable shall also be designed to allow for the most efficient use of space on the apparatus body.

The turntable shall be a minimum of 95" side to side and 95" forward to aft.

It shall be covered with Tread-Grip Safe-Deck pattern decking to allow the walking surface to shed liquids with unparalleled ease and comply with NFPA intent, to provide secure footing for the operator in all weather conditions.

A downward lip shall "skirt" the turntable decking around the entire circumference to provide protection from hazards.

All hoses and electrical lines shall be routed under removable covers in order to prevent a tripping hazard. The covers shall also be designed to prevent damage from occurring to these components. Likewise, the center of the turntable shall have a removable step cover to prevent tripping hazards as well as provide an easier transition to the first rung of the aerial ladder.

To prevent unnecessary added weight to the apparatus, the turntable shall not be built entirely from solid materials.

AERIAL PIVOT PINS

The aerial device pivot pins shall be located on the turntable and shall attach the aerial device base section to the turntable. To maintain a suitable safety factor, the pivot pins shall be composed of certified structural steel, thereby ensuring structural integrity.

In the interest of safety, the pivot pins shall be located as low as possible and shall be at the aerial device base rails. This shall keep the pivot points away from the areas where persons regressing to and from the aerial base section, might place their hand(s).

Aerial pivot pins shall be installed with a means to keep the pins in place. The design shall not inhibit the pins from being removed by a qualified mechanic.

Option ID:008346 QTY:1

Turntable Handrails, Knurled SS, Standard Turntable, (2) Openings

TURNTABLE HANDRAILS

Three (3) handrails shall be of one piece construction and provide large sweep corners at the edge of the turntable. Each shall be 42" high and shall be constructed of knurled stainless steel. The handrails shall be installed around the rear 180 degree perimeter of

the turntable for operator and personnel safety. Each individual handrail shall be secured to the turntable by the use of two (2) minimum 5/8" anchor bolts on the underside of the turntable. Additionally, chrome plated stanchions with rubber gaskets shall be provided on the top surface of the turntable where each railing meets the decking surface.

There will be two (2) openings in the handrails for access from the turntable access ladders.

Option ID:008344 QTY:1

Turntable Restraints, (2) ManSaver Bars

TURNTABLE RESTRAINTS

Two (2) FRC ManSaver Bars, without covers, shall be installed in the spaces between the handrails. They shall be permanently attached at one end.

Option ID:111717 QTY:1

Turntable Work Lights, (2) OnScene and (1) Truck-Lite, LED

TURNTABLE WORK LIGHTING

The turntable shall be lighted for nighttime operation with two (2) 9" On Scene, which shall be automatically activated by the aerial master switch (day or night). The work lights shall be positioned so the light is directed toward the decking. The lights shall have cast aluminum housings to keep light from glaring upward into the operator's eyes.

An additional Truck-Lite LED light shall be recess mounted in the front access door of the control stand.

Option ID:001614 QTY:1

Ladder Hour Meter, At Turntable

AERIAL HOUR METER

An hour meter shall be installed at the turntable control station connected to the system engagement control for the aerial. The meter shall register the total hours of aerial use for scheduling periodic maintenance.

Hour meters that are not connected to the aerial system engagement are not considered acceptable in order to capture true aerial operational hours.

Option ID:102495 QTY:1

Turntable Control Console, Painted Box/Lid, AL-11, IC Panel, On-Scene Light Under Lid (77"/107"/125')

TURNTABLE CONTROL CONSOLE

The turntable control console shall be located on the turntable, on the driver's side of the apparatus. The console shall be constructed of smooth aluminum and coated with non-metallic paint. There shall be an illuminated by an On-Scene LED light with mounting clips for night time operation and have a hinged weather cover. A pressurized gas filled

cylinder shall be furnished on the cover to hold it in the open position. The gas filled cylinder shall assist in closing the cover automatically when it is positioned over the center. The console surface shall be angled toward the operator so controls may be viewed and operated ergonomically. Rubber bumpers shall be provided so that when the control console lid is closed, the lid and the control panel will be protected from each other (no metal to metal contact).

Three (3) handles for the ladder hydraulic functions (elevation, rotation, and extension) shall be installed at the control console. The controls shall be manual for safety and durability reasons. The function of each control lever shall be cast into the plate under the appropriate lever. The controls shall be capable of being operated independently or simultaneously with a gloved hand. The speed of movement caused by moving any control shall be minimally affected when multiple controls are activated.

The control console surface shall be fabricated from aluminum and shall include a graphic overlay. The overlay shall be Innovative Controls design and supply a second surface-printed UV and scratch-resistant polycarbonate graphic overlay backed with UL 969-compliant outdoor adhesive.

The control stand box and the lid shall be painted aluminum. A hinged door shall be provided on the front of the control console with a pop latch. This door shall allow access to the inner components for inspection purposes. A recessed work light shall be provided in the access door. There shall be a hinged access door provided on the outboard side of the control panel. The door shall be provided with a spring loaded, slotted head latch. The opening shall allow access to the electrical components for service purposes.

The following items shall be furnished at the console, clearly identified and located for ease of operation and viewing:

- Elevation, Extension and Rotation Controls
- Lighted Push/Pull Button to Deactivate Hydraulic and Electrical System
- Panel Light Mounted in Cover
- Ladder Overload Warning Horn
- Monitor Function Controls
- Intercom with Controls
- Operators Load Chart
- Warning Signs

To minimize the chance of failed components, turntable consoles requiring a fan to cool interior components shall not be considered acceptable.

AL-11 AERIAL INFORMATION SYSTEM

Aerial Logic Display

The aerial shall be equipped with a 7" color transmissive TFT LCD display located at the turntable control console. The display shall be viewable in direct sunlight, with a resolution of WVGA, 800 x 480 pixels, 16-bit color and an aspect ratio of 16:9.

The display shall feature LED backlighting, 1000 nit typical brightness (40,000 h lifetime). The display shall include an internal microprocessor Freescale IMX. 375 32bit, 532 MHz utilizing a QNX operating system. The display shall have a minimum 2 GB RAM flash memory and 128 Mbytes SDRAM. The display shall support J1939 and NMEA 2000 protocols.

For protection against extreme environmental conditions, connections shall utilize 2 Ampseal 23 pin connectors AMP770680-1 and AMP770680-4. User inputs shall be accomplished utilizing 14 tactile buttons located directly on the display. The display shall be capable of operating -40° C to +85° C and a minimum IP67 rating front and back. For maximum protection, the display case shall be constructed of Polycarbonate capable of random vibration, 7.86 Grms (5.2000 Hz), 3 axis and a shock of +/- 50G in 3 axis.

The display will gather ladder positional data from an array of sensors. This data will not only be displayed for the device operator, but the rotation and elevation sensors will also be used to protect the body, cab, and installed components from collision damage caused by the aerial device.

Soft Keys

Columns of vertical keys shall be located to the left and/or right of the display. The soft keys correspond to the soft key commands and allow selections with a gloved hand. Icons shall be displayed on the screen adjacent to the soft key and will change according to the options available for the screen being displayed.

Screens

The display shall provide the operator with critical aerial information and switching of aerial electrical components in an easy to read format as follows:

- Extension Retraction Percentage – Digital readout shown 0% - 100%
- Ladder Angle -15 to 90 Degrees (Operational range of Aerial -8 to +72 Degrees)
- Rotation Position – 0 - 360 Degrees
- Ladder Load Percentage - Display live loads acting on the aerial structure shown as 0 - 100%
- Breathing Air – 0-6000 Psi (This is available only if optional breathing air has been specified)
- Bed Zone Alignment Light – When the aerial is aligned and within the bed zone the indicator shall change to a bright color to indicate it is safe to bed the aerial.
- Rung alignment light – When the aerial rungs of each section are aligned the indicator shall change to a bright color to indicate the rungs are aligned to provide safer climbing of the aerial.

Soft keys located on each side of the display shall be programmed to allow the operator to quickly change screens to view the following:

- Positional Waterway – Label shall read “Water Tower” or “Rescue”, depressing this soft key shall allow the user to select what section the waterway will be positioned. When “Water Tower” is displayed the waterway shall be secured to the uppermost fly section of the aerial. When “Rescue” is displayed, the waterway shall be secured to the next lower section. (This is available only if optional positional waterway has been specified)
- Creeper Control Enable – Label shall read “Creep Master”. Pressing this momentary soft key switch allows creeper controls to be used at the tip of the aerial ladder. When the soft key is pressed the indicator shall change to a bright color to indicate the creeper controls at the tip have been activated. (This option available only if optional creeper controls have been specified)
- High Idle – Label shall read “High Idle”. Pressing this soft key shall increase engine RPM to the chassis pre-set high idle, pressing the button again shall return engine RPM to the chassis pre-set idle. The indicator shall change to a bright color to indicate the high idle has been activated.
- Retraction Override - Label shall read “Retract Enable”. Pressing this soft key shall allow the aerial ladder to fully retract when in the overlap zone. Once the operator has verified that it is safe to retract the aerial and presses the soft key, the label shall change to a bright color to indicate the aerial can be fully retracted.
- Emergency Power Unit - Label shall read “EPU”. Pressing this soft key shall activate the electric over hydraulic emergency power unit.

Engine Information Screen – An icon depicting an engine shall be displayed next to the soft key. Pressing this button shall allow the operator to switch to the screen displaying chassis engine information.

Day/Night Display Mode - An icon depicting the sun or the moon shall be displayed next to the soft key, pressing this button shall switch the display to from a bright format for daytime use or a subdued format for nighttime use to maintain greater vision of the operator.

Lighting /Customer Information Screen - An icon depicting a light bulb shall be displayed next to the soft key, pressing this button shall switch the screen from its current screen to the screen to control lighting on the aerial.

The following information shall be displayed on the aerial logic display:

- Customer name
- Production number
- Aerial device type
- Aerial device model number
- Aerial device serial number
- Rated vertical height
- Rated horizontal reach
- Rated capacity
- Contact information for the fire apparatus manufacturer. Information shall include name, address, phone number and website

Chassis Engine Information Screen

- Engine coolant temperature
- Oil pressure
- Transmission temperature
- Fuel level
- Battery voltage
- Engine RPM
- Engine Warnings – To include: Check Engine, Stop Engine, DPF Regeneration Required, Regeneration Status and High Exhaust Temperature

Shop Note: The console will be fully painted and there will be NO treadplate. The screws will NOT be painted. Do NOT install the orange indicator light for the nozzle stow on the control pedestal, and there should NOT be an aerial bed interlock for the nozzle stow. Same as S5275. Program the AL-11 body protection values for zone 1 as follows: SLOW ST: 68° NO GO ST: 63° SAFE ELV: 4° NO GO END: 297° SLOW END: 292°

Option ID:111973 QTY:1

System Lock Control, Red Mushroom Switch on Turntable Console

SYSTEM LOCK CONTROL

A push/pull systems engagement control shall be installed at the turntable control console. The control shall energize the hydraulic system for the ladder function and provide the flow of hydraulic fluid to the master valve bank. An automatic throttle switch shall be attached to the systems engagement control that advances the engine speed to a preset RPM when the engagement control is in the "RUN" position. In the "LOCK" position, the engine speed shall return to the normal idle RPM and the hydraulic system be de-energized.

Option ID:008025 QTY:1

Retraction Override Safety System, Switched Through AL-11

RETRACTION OVERRIDE SYSTEM

An integral part of the extension/retraction system shall be a safety system to prevent injury to personnel on the end of the fly section while the ladder is being retracted. This system shall be designed in such a manner to prevent retraction of the aerial device when the folding steps at the end of the fly section are in overlap with the rungs of another section.

When the steps are in an overlap condition, retraction shall only be accomplished by an operator at the primary control station pressing and holding a momentary switch at the turntable control console while the retraction control is operated.

A retraction override switch shall be programmed into the AL-11 system at the turntable console position.

Option ID:007407 QTY:1

Load Sensing System, Programmed into AL-11

LOAD SENSING AL-11 SYSTEM

Indication for the load sensing system shall be programmed into the AL-11 system at the turntable control console.

Option ID:008264 QTY:1

Load Chart (107')

AERIAL LADDER LOAD CHART

A load chart shall be installed at the turntable control console of the aerial ladder. The load chart shall illustrate the full operating range of the ladder, with the waterway dry or flowing water.

Option ID:001654 QTY:1

Communication System, 2-Way, Turntable-Tip, Atkinson (77'/UT 100'/107'/125')

AERIAL COMMUNICATION SYSTEM

An Atkinson Dynamics two (2) station communication system shall be provided between the aerial tip and the turntable control console. The communication system shall be a two-way system with the communication speaker at the tip requiring no operator attention to transmit or receive. The transmitting and receiving volume controls shall be located at the turntable control console.

Option ID:111835 QTY:1

Tracking Lights (2), 12V, On Front of Cradle, Whelen LED Pioneer Micro (MPPW), White

TRACKING LIGHTS

Two (2) Whelen MPPW lights shall be installed low ahead of the cradle, on the base section of the ladder, one (1) on each side. The light fixtures shall have a white die cast aluminum housing, powder coated white.

The LED work lights shall be rated to last 100,000 hours and produce over 3600 lumens with an amp draw of 4 amps. The light shall have a 90-degree x 20-degree wide flood pattern. The lights shall be controlled from the operator control station at the base of the ladder.

A bolt-on bracket to support the light shall be included.

Shop Note: Activation will be default to "ON".

Option ID:111842 QTY:1

Tracking Lights Switch, AL-11

The tracking lights shall be controlled through the AL-11 system.

Option ID:101923 QTY:1

Egress, Bolt-On, Standard, Clean Tip, (107')

EGRESS

A removable bolt on egress shall be installed on the tip of the fly section. Only certified structural fasteners shall be utilized to attach the egress to the tip of the fly section. Additionally, the fasteners shall be stainless steel. This design shall allow for easy replacement should the egress become damaged during rescue operations. This shall minimize the risk and cost of downtime, as is common with welded on egresses. For this reason, a design that allows the egress to be welded to the fly section shall not be acceptable.

When the ladder is at 0 degree elevation, the rungs on the egress shall be on a plane of -11 degrees. This shall provide a smoother transition onto the ladder from the tip when it is at a high angle elevation.

The egress shall have handrails that match the fly section handrails for an unnoticeable transition between the two. The egress handrails shall have a radius design at the tip to eliminate corner joints, increase strength, and provide a professional appearance.

The rungs on the egress shall be held to the same design load criteria as the rungs of the aerial ladder sections. Specifically, each egress rung shall be able to support a design load of 500 lbs. minimum, distributed across the rung, as specified in NFPA, current edition. This shall be in excess of that required by the aforementioned standard.

Shop Note: There will NOT be any electrical components installed on the egress. It shall match what was previously done and engineering shall provide a 3D layout for approval.

Option ID:007921 QTY:1

Ladder Creeper Controls at Tip, Switched Through AL-11 (107'/125')

AERIAL LADDER CREEPER CONTROLS

A remote ladder creeper control shall be provided at the tip of the fly section. The control shall consist of three (3) spring loaded, triple pole double throw, return to center switches, one for each main ladder function. Each function switch shall be labeled on a black and white label that is located adjacent to the switches. Each switch shall be encircled by a rubber boot to protect the switch box from collecting moisture. The creeper control shall allow the crew member on the tip of the ladder to operate these three functions within the speed limitations as set forth in accordance with NFPA, current edition.

A momentary switch shall be provided in the AL-11 system at the lower turntable control console to activate the creeper control system. When the button is held in the "on" position, power shall be available to the person at the tip and they shall be able to adjust the aerial with the creeper controls. When the button is not depressed, the creeper system will be de-energized.

Option ID:001505 QTY:1

Folding Steps on Fly Section (77'/107'/125')

SECTION FOLDING STEPS

One (1) set of folding steps shall be installed at the tip of the ladder to provide solid footing for personnel while operating the elevated master stream device.

A kick plate shall be provided with each step.

When folded for storage, the steps shall not present significant obstruction to personnel on the apparatus.

Option ID:911157 QTY:1

Load Lifting/Rappelling Eyes on Fly Section

FLY SECTION LOAD LIFTING/RAPPELLING EYES

The aerial ladder shall be equipped with two (2) load lifting/rappelling eyes at the tip of the fly section. The load lifting/rappelling eyes, as a pair, shall be rated not to exceed the tip load of the ladder structure.

Option ID:008288 QTY:1

120V Aerial Wiring (107')

AERIAL WIRING

The AC wiring shall be Thermoplastic Elastomer (TPE) control cables and shall be highly flexible with very fine copper stranding. The cables shall have a center core strain relief for high tensile strength. The conductors shall be braided in bundles around the high tensile strength core. The outer jacket shall be gusset-filled, pressure-extruded, oil-resistant, bio-oil-resistant, PVC-free, halogen-free, and UV-resistant with low-temperature flexibility. The cables shall have a minimum bending radius of not greater than 5x the outer total diameter of the cable while moving.

Option ID:111914 QTY:1

Receptacle (1), Ladder Tip, Officer's Side, 120V, L5-20R Twistlock Single

120V RECEPTACLE

One (1) NEMA L5-20R, 120-volt, single, 3-wire, twist lock receptacle shall be installed on the officer's side of the ladder tip. The receptacle shall have a 20-ampere rating and include a spring-loaded weather resistant cover if mounted in an exterior location. The receptacle shall be wired to the onboard generator.

Option ID:100946 QTY:1

Tip Light (2), 12V, Whelen, LED Micro Pioneer (MPPWCS)

WHELEN MICRO PIONEER TIP LIGHT

Two (2) Whelen MPPWCS Micro Pioneer lighthouse with low profile pedestal/swivel mount shall be installed at the tip of the aerial. Each light fixture shall have a white die cast aluminum housing, powder coated white.

Each MPPWCS shall have an ON/OFF switch covered by a rubber boot and a black fiberglass enforced polycarbonate handle. Stainless steel mounting hardware is included. The LED work light shall have 4,100 usable lumens with an amp draw of 4

amps. The light shall have a 90-degree x 20-degree wide flood pattern. The light shall also be controlled from the operator control station at the base of the ladder.

Option ID:911218 QTY:1

Tip Lights Locations, Ladder Tip, Both Sides

The lights shall be located at the aerial tip, one (1) on the driver's side and one (1) on the officer's side.

Option ID:UPOxxxxxxx QTY:1

Tip Light(s) Switch, AL-11, Additional Activation in Cab With Front Scene Lights

The tip light(s) shall be controlled through the AL-11 system.

In addition the tip lights will be tied to a Front Scene Light button in the V-Mux.

Option ID:UPOxxxxxxx QTY:1

Tip Lights (2), 120V, Whelen, LED Pioneer Plus (PFP1AC) Floodlight, Universal Bail Mount (PBA106U), Short Stanchions, Activation Default ON

WHELEN PIONEER PLUS TIP LIGHTS

Two (2) Whelen PFP1 Pioneer Plus Super-LED lights shall be installed on the positional waterway.

Each rectangular extruded light fixture with die cast end caps shall measure 8-3/16" wide by 4-1/4" high by 2-7/8" deep and have a white powder coat finish. Each light fixture shall have a single panel of (2) horizontal clusters of LED lamps with a molded vacuum metalized reflector that draws .625 amps at 120 Vac. The lights shall have the Whelen lifetime warranty. Activation shall be default to on, and the light stanchions will be as short as possible.

Each light shall be complete with one (1) Whelen universal-bail mount.

Option ID:UPOxxxxxxx QTY:1

Tip Lights Locations, Front of Positional Waterway Plate, Both Sides

The lights shall be located on the positional waterway and be able to move with the waterway, one (1) on the driver's side and one (1) on the officer's side.

Option ID:UPOxxxxxxx QTY:1

Tip Light(s) Switch, AL-11

The tip light(s) shall be controlled through the AL-11 system.

Shop Note: Lights will default to ON.

Option ID:111897 QTY:1

Locator Lights (2), Whelen, LED TIR3, Blue (RSB03ZCR), Activated by Aerial Master

WHELEN LED TIR3 LOCATOR LIGHTS

Two (2) Whelen TIR3 LED locator lights shall be provided. The lights shall have blue LEDs and clear lens, and shall be activated by the aerial master switch.

Option ID:911222 QTY:1

Locator Lights Locations, Ladder Tip, Both Sides

The locator lights shall be located on the aerial tip, one (1) on each side.

Option ID:911201 QTY:1

Waterway System (UT 100'/107')

WATERWAY SYSTEM

A waterway system shall be provided consisting of the following components and features:

A 4-1/2" outside diameter pipe shall be connected to the water supply on one end and to a water swivel at the rotation point of the turntable. The swivel shall allow the ladder to rotate 360 degrees continuously while flowing water.

A 4" inside diameter pipe waterway shall be routed through the rotation point swivel up to the heel pin swivel. The heel pin swivel shall allow the water to flow to the waterway while elevating the aerial ladder from -8 degrees below to +72 degrees above horizontal.

The heel pivot pin shall not be integral with the waterway swivel at any point. The design of the waterway shall allow complete servicing of the waterway swivel without disturbing the heel pivot pin.

WATERWAY PIPE DIAMETERS

The integral telescopic waterway system shall consist of a 5" outside diameter steel pipe in the base section, a 4-1/2" diameter pipe on the second section, a 4" outside diameter pipe on the third section, and a 3-1/2" outside diameter pipe in the fly section.

CP-84 CHROME PLATED WATERWAY

The CP-84 telescopic waterway shall be composed of high quality 84K PSI steel. The pipes shall be professionally prepared to accept a highly durable, hot dipped galvanizing coating. Preparation shall include de-greasing as needed, followed by shot blasting to remove any contaminants or scale.

Following preparation, each water pipe shall be hot-dipped galvanized. The pipes shall be completely submerged in the galvanizing bath to ensure 100% coverage and intimate bonding of the galvanic coating to the steel. Following the dipping process, all dross shall be ground and the perimeter of the pipe shall be ground to a smooth finish.

Each pipe shall then be prepared to be heavily chrome plated. Materials (nickel/copper/chrome) used in the chrome plating process shall be of the highest purity to complete the chrome plating process. The chrome shall be polished to an extremely high luster.

The result of the preceding processes shall provide an aerial waterway that is of unequaled quality and durability. The heavy galvanizing and chrome plating shall ensure that no corrosion occurs on the waterway and that the outer surface remains smooth for long seal life. Additionally, the chrome plating shall aid in preventing nicks, scratches, and abrasions from occurring where they would otherwise easily occur with softer and more malleable aluminum tubes.

The waterway on the base section of the aerial device shall be galvanized with the process described above, followed by complete coverage utilizing paint of job color.

Option ID:007925 QTY:1

Positional Waterway, Switched Through AL-11 (77'/UT 100'/107')

POSITIONAL WATERWAY

The waterway shall be a positional or detachable type in order to allow the uppermost fly section to be clear of obstructions when using the aerial device for rescue purposes. It shall be designed in such a manner to allow the master stream device to be secured to either the tip of the fly or to the end of the next lower section. The device shall be designed in such a manner that when it is in the forward position the monitor master stream device shall be connected to the tip of the ladder and when it is toward the back, the device travels with the next lower ladder section. The connection for remote nozzle controls and electricity to the unit shall be permanent and not incorporate any spring loaded cable reels or electrical contact pads that can foul or become damaged allowing the monitor to become inoperable. In addition, the system shall require no external power supply such as a battery to operate the monitor.

A button shall be provided on the AL-11 system at the turntable control console for the positional waterway. The button shall activate an electric actuator mechanism that will lock the monitor in the desired position. Indication shall be provided on the screen of the AL-11 to inform the aerial operator of the current position of the monitor. The verbiage on the screen for the two (2) positions shall read "Rescue" and "Water Tower".

To ensure maximum safety for personnel, units that require a firefighter to climb to the end of the ladder and manually change the position of the waterway will not be considered acceptable.

Option ID:001713 QTY:1

Waterway Relief Valve / Drain Valve

WATERWAY RELIEF VALVE

A 3/4" safety relief valve shall be installed in the base section waterway. The relief valve shall be preset at 240 psi. The valve shall protect the waterway from overpressure, which is normally caused by the capping of the monitor outlet. This valve in no way is to act as a relief for the total flow of the system.

WATERWAY DRAIN VALVE

A 1-1/2" drain valve shall be installed in the lower section of the aerial plumbing under the apparatus. The valve, when opened, shall drain the aerial waterway and lower plumbing.

Option ID:111770 QTY:1

Flow Meter with Paddle Wheel, FRC Insight Ultimate, 4", PSI, Turntable

WATERWAY FLOW METER

One (1) Fire Research Insight Ultimate combination digital flowmeter and pressure indicator display shall be installed at the aerial ladder turntable control station.

The kit shall include a flowmeter/pressure display module. The display module case shall be waterproof, manufactured of anodized machined aluminum, and have dimensions not to exceed 4 3/8" high by 4 3/8" wide by 3 1/2" deep. The module shall have a digital LED display for flow with super bright digits more than 3/8" high. The flow rate shall be displayed in GPM. The module shall have an analog display for pressure with an expanded scale in the normal operating range for more accurate readings. The pressure indicator input and movement shall be electronic.

The flowmeter/pressure indicator program features shall be accessed from the front of the module. The program shall support multiple calibration points for flow and pressure, set points for high and low flow warnings, and flow totalizing functions. The pressure indicating needle shall be microprocessor controlled. The module shall be able to communicate with other FRC Insight flowmeters over a datalink.

Option ID:001717 QTY:1

Waterway Inlet, Rear, 4" Inlet and 4" Plumbing (UT 100'/107')

AERIAL WATERWAY INLET

A 4" aerial waterway inlet with 4" plumbing, shall be installed on the rear of the apparatus. The inlet shall be as low as possible to reduce the amount of weight on the fire hose coupling.

Option ID:UPOxxxxxxx QTY:1

Valve, 4", Elkhart, Electric, EB40-E14X, Stainless Ball, APEX300 Controller (Valve, Pressure, Flow)

An Elkhart Brass, model EB40-E14X, 4" Unibody valve shall be provided. The valve body shall be constructed of corrosion-resistant brass and the ball shall be constructed from durable stainless steel. Dual self-adjusting seats shall provide bi-directional sealing. The swing out construction shall allow for easy access to internal waterways. The valve shall be pressure rated to 250 PSI and shall carry a ten (10) year warranty by the valve manufacturer.

The valve shall be actuated by an Elkhart Brass, model E14X, electric actuator installed on the valve.

The electric actuator shall be controlled by an Elkhart Brass, model APEX300, valve controller. The valve controller shall display both pressure and flow as well as valve position. The valve controller shall have an all aluminum housing sealed to NEMA 4 rating. The valve controller shall be suitable for operations with any supply voltage between 12 and 24V DC and requires no more than 10 amps. The display shall indicate

the status of the valve from open to close in 10% increments and also provides the pump operator the ability to monitor valve pressure and flow. The display shall feature ten (10) ultra bright LED indicator lights that are clearly visible in sunlight and will automatically dim at night. The valve controller shall be preset to comply in accordance with NFPA 1901, current edition opening and closing speed standards.

Shop Note: The sensor for the flowmeter needs to be accessible. It shall be welded on the base section of the waterway, opposite of the aerial relief valve, painted to match the aerial, and its wires fully protected. The controller will be located at the turntable.

Option ID:UPOxxxxxxx QTY:1
 Intake Relief Valve, Aerial, Elkhart, Factory Preset

INTAKE RELIEF VALVE

An Elkhart Brass intake relief valve shall be installed on the suction side of the pump. The valve shall be the preset type, adjustable from 75 to 250 PSI, and shall be designed to prevent vibration from altering the setting. The relief outlet shall be directed below the pump with the discharge terminating in a 2-1/2" male NH threads connection. The discharge shall be away from the pump operator and labeled "Do Not Cap".

Option ID:UPOxxxxxxx QTY:1
 Chrome Bushing, 4" NPT x 4.50" NST (IL3518AC)- NST Cap, Chrome, South Park

There shall be one (1) South Park model A3748AC, 4" Female NST rocker lug x 4-1/2" Male NST rigid adapter provided. The adapter shall be manufactured from high quality brass that shall be polished to remove manufacturing irregularities with a chrome finish applied to the polished surface.

There shall also be one (1) South Park model LHC26P10AC, 4-1/2" NST long handle steamer cap provided. The cap shall be manufactured from high quality brass that shall be polished to remove manufacturing irregularities with a chrome finish applied to the polished surface.

Option ID:102554 QTY:1
 Aerial Monitor, Electric, TFT, Flex YN-E21A-L (Ladders - With AL-11)

TASK FORCE TIPS FLEX ELECTRIC MONITOR

There shall be one (1) Task Force Tips Flex, model YN-E21A-L, remote controlled electric monitor installed at the end of the aerial waterway. The monitor shall operate with 12-volt direct current and controlled by a monitor mounted switch panel with functions that control rotation, elevation and nozzle patterns. The monitor shall be compatible with optional wired and wireless control panels.

The electrical controls for the monitor shall be waterproof and utilize current limiting and position encoders to protect the drive train at the ends of travel. Monitor will be pre-wired to a control/connection box with 4 feet of wire such that the control/connection box is mountable to the ladder at a nearby location. Control box on monitor will contain a membrane switch panel for control of unit from top of ladder. Remote control/connection box will contain one TFT communications module which will allow the connection of a

remote TFT toggle switch box (supplied separately if additional controls at the ladder tip are desired) simultaneously with allowing input from discreet signals that provide a positive 12-volt signal for actuation of each movement axis or can be easily reconfigured in the field to accept ground signals. The priority of operation will be set from the factory such that the discrete inputs always have control priority. An electrical connection for a TFT remote control nozzle shall be provided. The monitor shall be equipped with small override knobs for use in the event of power failure or electrical malfunction. The knobs control stainless steel worm gears for rotation and elevation adjustment.

The monitor shall have the following capabilities:

- Full horizontal rotation with travel stops at 90° left and right of center
- Vertical travel of 135° with stops at 90° above horizontal and 45° below horizontal
- Field changeable rotation stops, and elevation stops at 45° and 60° above and/or 15° below horizontal. Soft stops can be programmed in any position
- Flow capability of 2000 GPM (7600 l/min) with friction loss of no more than 5 PSI (0.3 bar)
- Maximum operating pressure of 200 PSI

For resistance to corrosion the monitor shall be constructed from hard coat anodized aluminum with a silver powder coat interior and exterior finish. A threaded port for an optional pressure gauge shall be provided.

The monitor shall be designed with a unique waterway that minimizes the path of travel, reduces friction loss and turbulence, and produces a far-reaching water stream. The monitor shall be configured with a 4" ANSI 150 flange inlet and 3-1/2" male NH outlet.

PRIMARY MONITOR CONTROL (TURNTABLE)

The controls for the monitor at the turntable shall be programmed into the AL-11 screen. The control shall be capable of adjusting horizontal rotation, vertical elevation and nozzle stream pattern, oscillate and stow.

REMOTE MONITOR TOGGLE SWITCH CONTROL STATION

Task Force Tips model # YC-TS toggle switch operator station for Flex series remote control monitors shall be installed. The operator station shall be designed for surface mounting using 4 fasteners. The unit shall have a mini four direction toggle for horizontal rotation, and vertical elevation. A paddle toggle shall control nozzle stream pattern adjustment. Controls can be operated with a gloved hand. Unit shall be programmable from a mobile app. Communications shall conform to J1939 standards.

The unit shall be weatherproof and utilize weatherproof components such as liquid tight electrical connections. A Deutsch connector shall be provided for ease of service and installation. The unit shall have a unique serial number and shall be covered by a two-year warranty.

Option ID:112023 QTY:1

Monitor Color, TFT Silver, Powder Coat

MONITOR COLOR

The monitor shall be powder-coated silver by the monitor manufacturer and shall not be repainted by the OEM.

Option ID:006605 QTY:1

Nozzle, Electric, TFT Master Stream 1500 GPM, M-ERP1500-NN, 3-1/2" NH

NOZZLE

A Task Force Tips, model M-ERP1500-NN, Master Stream automatic electric nozzle with 3-1/2" NH thread swivel base shall be provided. The nozzle shall be capable of producing a stream at any volume from 300 to 1500 GPM. The nozzle shall feature an electric pressure adjustment knob, which allows the operating pressure to be adjusted to tactile detent settings between 70 and 120 PSI. The nozzle shall include rubber bumper incorporate "power fog" teeth for fully-filled, finger-free fog pattern. The nozzle shall be lightweight hard coat anodized aluminum for maximum resistance to corrosion and wear.

Option ID:911204 QTY:1

Monitor Sweep, Ladder, Single Monitor

MONITOR SWEEP

The monitor shall be capable of vertical positioning from -135 degrees to 0 degrees and horizontal positioning of 90 degrees from side to side, for a full 180-degree sweep.

Option ID:911209 QTY:1

Master Stream Controls, Turntable and Ladder Tip

MONITOR CONTROLS

The aerial master stream device shall have two (2) separate control stations. One station shall be at the main aerial turntable control console. The other station shall be located at the tip of the aerial ladder. Each station shall have the capability of controlling the nozzle pattern as well as the horizontal and vertical position of the device.

Option ID:UPOxxxxxxx QTY:1

Discharge at Tip 2-1/2" Discharge at Ladder Tip - One (1) Trident 2-1/2" NH Vented Chrome Cap with Chain

2-1/2" AERIAL TIP DISCHARGE

There shall be a 2-1/2" discharge located at the tip of the aerial ladder. The discharge shall have an Akron Brass model 8825 valve and terminate with 2-1/2" NST threads. A 4" butterfly valve with manual handwheel shall be installed under the aerial monitor to allow for operations of the tip discharge.

Trident 2-1/2" NH Vented Chrome Cap with Chain:

There shall be one (1) Trident model 01.006.0, 2-1/2" NH vented rocker lug cap with chain provided. The cap shall have a chrome finish.

Shop Note: The stop for the swivel will have the bolt head cut off and coated.

Option ID:UPOxxxxxxx QTY:1

Dual Rung Lighting, Red/White/Blue LED (105')

DUAL RUNG ILLUMINATION LIGHTING

The aerial ladder sections shall be equipped with permanently installed dual LED rung illumination lights. The lights shall be mounted on the inside of the ladder sections, facing inward; on each aerial section in a "parallel" configuration with two (2) lights at every position, one (1) each side of the structure. The lights shall serve to illuminate ladder rungs without inducing any glare, which would hinder safety. Each light shall be equipped with an integral guard to protect it from damage. The lights shall be positioned such that all light be directed inward toward the rungs of the aerial sections, maximizing safety for all personnel during night operations. The lights shall also aid the operator in locating aerial ladder section in conditions of reduced visibility.

Designs that use luminescent tape on the rungs shall not be permitted as they require previous exposure to sunlight and can wear off over time.

Shop Note: The lighting colors will be as follows: Blue- Base Section White- 2 Middle Sections Red- Fly Section. Activation will default to "ON".

Option ID:111933 QTY:1
Rung Lighting Switch, AL-11

The rung lighting shall be controlled through the AL-11 system.

Option ID:007022 QTY:1
Ladder Signs (2), On Base Section

AERIAL LADDER SIGNS

Two (2) sign panels measuring 16" tall x 133" long shall be installed on the base section of the aerial ladder, one on each side. The sign panels shall be fabricated of 1/8" aluminum plate. The signs shall be large enough to accept a maximum lettering size of 12" high.

Option ID:111948 QTY:1
Solid Beam Roof Ladder Storage, Officer's Side Base Section

BASE SECTION MOUNTED ROOF LADDER

One (1) roof ladder mounting bracket set shall be provided on the outside of the base section, on the officer's side, for a solid beam roof ladder. The brackets shall be formed using break and bend techniques for added strength and an outstanding appearance. To enhance durability, the brackets shall be coated with Bedliner Coating. Stainless steel fasteners shall be employed where the ladder bracket is bolted to the aerial section or ladder sign panel. The roof ladder shall be secured using a spring-loaded handle, which is easily lifted away from the roof ladder with a gloved hand for safe access.

Option ID:101065 QTY:1
Ladder, (1), Duo-Safety, 16' Roof, Double End, 875-DR

One (1) Duo-Safety, model 875-DR, 16' aluminum roof ladder with roof hooks on each end shall be provided.

Option ID:900718 QTY:1

Chassis Paint, Chassis Manufacturer Painted, Two Tone

CHASSIS PAINT

The two-tone chassis cab shall be painted by the chassis manufacturer.

Option ID:009165 QTY:1

Body Paint, Single Tone, Aerial, Aluminum Material

BODY PAINT PREPARATION

The apparatus body and components shall be metal finished as follows to provide a superior substrate for painting:

- All aluminum sections of the body shall undergo a thorough cleaning process, starting with a phosphoric acid solution to begin the etching process, followed by a complete rinse. The next step shall consist of a chemical conversion coating applied to seal the metal substrate and become part of the aluminum surface for greater film adhesion.
- After the cleaning process, the body and its components shall be primed with a high solids primer and the seams shall be caulked.
- All bright metal fittings, if unavailable in stainless steel or polished aluminum, shall be heavily chrome plated. Iron fittings shall be copper underplated prior to chrome plating.

PAINT PROCESS

The paint process shall follow the strict standards as set forth by Guidelines.

The body shall go through a three-stage paint process: primer coat, base coat (color), and clear coat. In the first stage of the paint process, the body shall be coated with primer to achieve a total thickness of 2-4 mills. In the second stage of the paint process, the body shall be painted with BTLV650 High Solids Polyurethane Base Coat. A minimum of two to three coats of paint shall be applied to achieve covering. In the final stage of the paint process, the body shall be painted with a Clear Top Coat. A minimum of two to three coats shall be applied to achieve a total dry film thickness of 2-3 mills.

As part of the curing process, the painted body shall go through a Force Dry / Bake Cycle process. The painted components shall be baked at 185 degrees for 3 hours to achieve a complete coating cure on the finished product.

HAND POLISHED

After the Force Dry / Bake Cycle and ample cooldown time, the coated surface shall be sanded using 3M 1000, 1200, and/or 1500 grit sandpaper to remove surface defects. In the final step, the surface shall be buffed with 3M super-duty compound to add extra shine to coated surface. No more than .5 mil of clear shall be removed in this process.

Option ID:901219 QTY:1

Non-Metallic Paint

The paint shall be a standard non-metallic - color.

Option ID:101843 QTY:1

Body Paint Color, Aerial, Single Tone, Red, PPG

BODY PAINT COLOR

The paint chip is the sole defining paint color; it overrules what is described in this spec.

The body shall be painted with High Solids Polyurethane Base Coat.

The single tone body shall be painted red.

Shop Note: PPG# FBCH-71096-ALT

Option ID:901234 QTY:1

Overlays, Pump Module Structure, Match Pump Panel, Side Mount

PUMP MODULE STRUCTURE OVERLAYS

The side mount structure overlays shall be the same material as the pump panels on each side of the pump compartment. The tubular structure will remain unpainted aluminum.

Option ID:101863 QTY:1

Ladder Paint Color, White, PPG (77'/UT 100'/107')

AERIAL COMPONENT PROTECTION / PAINT

The paint chip is the sole defining paint color; it overrules what is described in this spec.

All aerial device components above the rotation point that are not chrome plate, bright aluminum tread plate, or stainless steel shall be painted. All areas to be painted shall be sanded to remove any metal flakes and smooth any rough surfaces. All surfaces to be painted shall be phosphatized to remove metal impurities, aid paint adhesion and inhibit rust. The components shall be primed and finish painted with a high gloss polyurethane paint. The support structure and components below the rotation point shall be painted black.

The extending stabilizer beams, inner jack cylinder protective tubes, and stabilizer pads shall be hot dip galvanized. The extending stabilizer beams, inner jack tubes, and stabilizer pads shall be shot blasted to remove any mill scale, or contamination prior to galvanizing.

Following this preparation, the individual components shall be hot dip galvanized. The galvanizing process requires that the entire assembly be completely submerged. Following the galvanizing process, the surface shall be ground smooth to remove dross. This preparation shall provide maximum protection for these critical components.

Following surface preparation, components shall be coated with black water-based self-etching coating. No exceptions shall be allowed to this requirement.

The high gloss polyurethane paint, which shall be applied to the aerial ladder sections and other components above the rotation point, shall be cured at an elevated temperature for a period not less than 2 hours to enhance durability and appearance. The temperature shall not be less than 180 degrees Fahrenheit. Curing of the paint shall promote a chemical reaction within the substrate that shall harden the paint. The curing shall be performed in a clean, sealed, controlled atmosphere. The atmosphere shall comply with all environmental standards and any air entering the chamber shall be filtered.

AERIAL DEVICE PAINT COLOR

The aerial device shall be painted with High Solids polyurethane enamel paint. The color shall be white.

Shop Note: PPG# FDGH-2185

Option ID:901219 QTY:1
Non-Metallic Paint

The paint shall be a standard non-metallic - color.

Option ID:901036 QTY:1
Aerial Corrosion Protection

AERIAL CORROSION PROTECTION

Internal structural members of the aerial structure shall be 100% concealed from oxygen or have corrosion protection applied. Totally sealed members are not subject to the possibility of corrosion attacking the metal from the interior.

The structural tubing of the aerial structure that contains drilled holes or is exposed to outside air and elements shall be protected to eliminate the possibility of corrosion occurring on the inside of the tube. No exceptions as this is imperative to the strength and integrity of the aerial structure.

The interior of exposed tubing shall be coated with a compound labeled NWAC 120-4. The application of the coating shall be applied after the welding process of the aerial structure is complete and shall cover 100% of the interior of the structural tube. NWAC 120-4 is an effective cavity corrosion inhibitor that provides long-term protection for both ferrous and non-ferrous metals. The resulting water-repellent, flexible, air-dried film has crevice penetrating, spreading and clinging characteristics. The product dries to a nearly transparent film and provides maximum corrosion protection for all void spaces subject to humidity and condensation.

Option ID:000968 QTY:1
Aerial Egress Paint, Red, PPG# FDGH-4353

AERIAL LADDER EGRESS PAINT COLOR

The aerial ladder egress shall be painted with High Solids polyurethane enamel paint. The color shall be red.

Option ID:911225 QTY:1

Ladder Sign Paint, Match Aerial Ladder Structure Color

AERIAL LADDER SIGN PAINT COLOR

The aerial ladder signs, mounted on the base section, shall be painted the same color as the aerial ladder.

Option ID:001170 QTY:1

Under Body Finish, Two-Step Undercoating Process

UNDERCOATING

The apparatus shall undergo a two-step undercoating process. The first step shall be a rubberized polyurethane base compound applied after the body has been primed. The materials used incorporate unused paint products to reduce the amount of waste released into the environment. This coat shall be applied to all hidden pockets and surfaces that are not visible after completion.

As a final step, the entire underside of the body shall be coated with a bituminous based automotive type undercoating when the apparatus is completed. During this application, special care shall be taken to avoid spraying the product on air lines, cables, or other items that would hinder normal maintenance.

Option ID:006089 QTY:1

Corrosion Protection, Electrolysis Corrosion Kontrol (ECK)

CORROSION PREVENTION

One (1) 3.75 ounce tube of Electrolysis Corrosion Kontrol (ECK) shall be provided to use when additional items are mounted to the apparatus. ECK protects aluminum and stainless steel against electrolytic reaction, isolates dissimilar metals and gives bedding protection for hardware and fasteners. ECK contains an anti-seizing lubricant for threads. ECK is dielectric and perfect for use with electrical connectors.

Option ID:900875 QTY:1

Coating Material Technical Specification, Bedliner Coating

THERMOPLASTIC COATING

In designated areas, Bedliner Coating XS-350, a two-component spray-in-place thermoplastic polyurethane system shall be used for maximum protection of the body and equipment. Bedliner Coating XS-350 is a 100% high-performance aromatic solids pure Polyurea elastomeric membrane. The coating shall be a fast cure, textured surface, multi-purpose material designed for commercial and industrial applications. It shall adhere to the body and serve as a protective, abrasion resistant liner where applied.

The coating shall exhibit the following minimum typical physical properties:

- Tensile strength - 3,432 PSI (ASTM D-412)
- Elongation - 162% (ASTM D-412)
- Tear Strength - 783 PLI (ASTM D-624)
- Shore D Hardness - 60 +/-1 (ASTM D-2240)

Option ID:001033 QTY:1

Sample Paint Card with Paint Formula

SAMPLE PAINT CARD

One (1) sample paint card shall be provided with the apparatus. The card shall show an example of the apparatus body color on one side and have the specific paint formula printed on the reverse side.

Option ID:900879 QTY:1

Front Cab Striping, Wrap to Grill

REFLECTIVE STRIPING - FRONT CAB

The retroreflective stripe located on the sides of the apparatus shall wrap around the front of the chassis cab and terminate at chassis grill.

Option ID:UPOxxxxxxx QTY:1

Rear Door, Reflective Striping, White, Inner Door Stiffeners

REAR DOOR REFLECTIVE

There shall be white reflective material installed on the inner and outer faces of the rear door stiffeners.

Option ID:004523 QTY:1

Rub Rail Striping, 2", Silver, Reflective, Aerial

RUB RAIL REFLECTIVE STRIPING

There shall be 2" reflective striping installed in the rub rail channel. The reflective striping shall be diamond grade quality material for increased visibility. The reflective shall be silver in color.

Option ID:008694 QTY:1

Body Striping, Aerial, 1"-4"-1", Straight Around Perimeter

REFLECTIVE STRIPING

3M Scotchlite Retroreflective striping shall be applied to the exterior of the apparatus and shall conform to the reflectivity requirements in accordance with NFPA, current edition.

The striping shall consist of:

- 1" retroreflective stripe
- 1" gap
- 4" retroreflective stripe
- 1" gap
- 1" retroreflective stripe

The striping shall be low across the front of the chassis and along the sides, staying below the tops of the wheel well areas.

Option ID:900888 QTY:1
Upper Stripe Color, White

The upper stripe shall be white.

Option ID:900906 QTY:1
Main Stripe Color, White

The main stripe shall be white.

Option ID:900924 QTY:1
Lower Stripe Color, White

The lower stripe shall be white.

Option ID:121751 QTY:1
Stabilizer Beam Striping, Front and Rear, (4) Stabilizers, Chevron To Match Rear

REFLECTIVE STRIPING - STABILIZER BEAMS

Retroreflective striping, utilizing a chevron pattern, shall be installed on the front and rear sides of the four (4) horizontally extending stabilizer beams for increased visibility when extended. The striping shall be applied at a 45 degree angle and shall be a minimum of 6" wide. The chevron color shall be the same color as the rear of the apparatus.

Option ID:900935 QTY:1
Chevron Color, Red / Fluorescent Yellow-Green, 3M 1172EC & 4083

CHEVRON COLOR - RED/FLUORESCENT YELLOW-GREEN

The chevron striping shall consist of red, 3M part number 1172 EC, and fluorescent yellow-green, 3M part number 4083, and shall meet the chevron color requirements in accordance with NFPA, current edition.

Only 3M Diamond Grade VIP Reflective Striping shall be used. 3M Diamond Grade VIP Reflective Striping is a wide-angle prismatic lens reflective sheeting designed for the production of durable traffic control signs and delineators that are exposed vertically in service. This sheeting is designed to provide higher sign brightness than sheeting's that use glass bead lenses. It is intended to also provide high sign brightness in the legibility distance where other sheeting's do not. If something other than 3M is being used, third party documentation must be provided with the bid to prove it is compliant with Federal DOT and NFPA, current edition.

Option ID:007382 QTY:1

Chevron Layout, Rear Body Surface, EXCLUDE Torque Box Door

CHEVRON STRIPING - REAR BODY

Retroreflective striping shall cover at least 50% of the rear-facing vertical surfaces in accordance with NFPA, current edition. The striping shall be in a chevron pattern sloping downward and away from the centerline of the apparatus at an angle of 45 degrees. Each stripe shall be a minimum of 6" in width. The striping shall consist of a solid base layer of reflective material and alternate between the exposed base layer material and durable, transparent, acrylic colored film.

The chevron pattern shall include the rear face of the body. The torque box door shall be excluded from the chevron reflective striping.

Option ID:RFW0002 QTY:1

General Two (2) Years or 36,000 Miles Limited Warranty

GENERAL TWO (2) YEARS or 36,000 MILES LIMITED WARRANTY

Purchaser shall receive a General Two (2) Years or 36,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0002. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

Option ID:RFW0502 QTY:1

Body Structure (Aluminum) Ten (10) Years or 100,000 Miles Limited Warranty

BODY STRUCTURE (ALUMINUM) TEN (10) YEARS or 100,000 MILES LIMITED WARRANTY

Purchaser shall receive a Body Structure (Aluminum) Ten (10) Years or 100,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0502. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

Option ID:RFW0403 QTY:1

Aerial Ladder Structure Twenty (20) Years or 100,000 Miles Limited Warranty

AERIAL LADDER STRUCTURE TWENTY (20) YEARS or 100,000 MILES LIMITED WARRANTY

Purchaser shall receive a Aerial Ladder Structure Twenty (20) Years or 100,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0403. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

Option ID:RFW0421 QTY:1

Aerial Leak-Free Hydraulics Three (3) Years or 48,000 Miles Limited Warranty

AERIAL LEAK-FREE HYDRAULICS THREE (3) YEARS or 48,000 MILES LIMITED WARRANTY

Purchaser shall receive a Aerial Leak-Free Hydraulics Three (3) Years or 48,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0421. The warranty certificate is incorporated by reference into this proposal and included with this proposal or available upon request.

Option ID:RFW0810 QTY:1

Aerial Waterway Ten (10) Years or 100,000 Miles Limited Warranty

AERIAL WATERWAY TEN (10) YEARS or 100,000 MILES LIMITED WARRANTY

Purchaser shall receive a Aerial Waterway Ten (10) Years or 100,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0810. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

Option ID:RFW0232 QTY:1

Control-Maxx Electronics Two (2) Years or 36,000 Miles Limited Warranty

ELECTRICAL TWO (2) YEARS or 36,000 MILES LIMITED WARRANTY

Purchaser shall receive a Control-MAXX™ Electronics Two (2) Years or 36,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0232. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

Option ID:RFW0800 QTY:1

Plumbing and Piping (Stainless Steel) Ten (10) Years or 100,000 Miles Limited Warranty

PLUMBING AND PIPING (STAINLESS STEEL) TEN (10) YEARS or 100,000 YEARS LIMITED WARRANTY

Purchaser shall receive a Plumbing and Piping (Stainless Steel) Ten (10) Years or 100,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0800. The warranty certificate is incorporated by reference into this proposal and included with this proposal or available upon request.

Option ID:RFW0710 QTY:1

Paint and Finish (Exterior Clear coated) Ten (10) Years Limited Warranty

PAINT AND FINISH (EXTERIOR CLEAR COATED) TEN (10) YEARS LIMITED

WARRANTY

Purchaser shall receive a Paint and Finish (Exterior Clear coated) Ten (10) Years limited warranty in accordance with, and subject to, warranty certificate RFW0710. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

