SPECIAL CALLED CITY COMMISSION MEETING
JOINTLY WITH THE McCRACKEN COUNTY FISCAL COURT
AGENDA FOR DECEMBER 15, 2020
5:30 PM
VIDEO AND/OR AUDIO TELECONFERENCE MEETING

Any member of the public who wishes to make comments to the Board of Commissioners is asked to fill out a Public Comment Sheet and return to the City Clerk's Office no later than 3:30 p.m. on the day of the Commission Meeting. The Mayor will call on you to speak during the Public Comments section of the Agenda

ROLL CALL

INVOCATION

PLEDGE OF ALLEGIANCE

ADDITIONS/DELETIONS

	I.	**ORDINANCE(S) - ADOPTION**
		A. Approve an Interlocal Cooperation Agreement with McCracken County, GPED, and the IDA along with a Loan Forgiveness Note for GPED related to the Ohio River Triple Rail Megasite - **J ARNDT**
		B. Amend Chapter 2 of the Paducah Code of Ordinances related to the Industrial Development Authority - **J ARNDT**

PRESENTATION Plaque Presentation in Honor of City Commission Service - Jim Arndt

PRESENTATION LOVE Awards Presentation - Jim Arndt

PRESENTATION Paducah Fiscal 2020 Audit - David Hampton, Kemper CPA

Items on the Consent Agenda are considered to be routine by the Board of Commissioners and will be enacted by one motion and one vote. There will be no separate discussion of these items unless a Board member so requests, in which event the item will be removed from the Consent Agenda and considered separately. The City Clerk will read the items recommended for approval.

	II.	**CONSENT AGENDA**	
		A.	Approve Minutes for December 8, 2020
		B.	Receive & File Documents
		C.	Reappointment of Glenn Denton and Kelm Burchard and Appointment of Sara Bradley to the Paducah Convention & Visitors Bureau.
		D.	Personnel Actions

		E.	Approve the Early Construction Completion Bonus for Peck Education Trail - **M THOMPSON**
		F.	Purchase of One (1) Pumper Truck for use by the Fire Department in an amount of $515,360 - **S KYLE**
		G.	Application for and Acceptance of the Second Round of CARES Act Funding for COVID-19 Relief through the Department of Local Government in the amount of $559,821 - **T WILSON**
		H.	Approve the Updated Proposal for a Change in the Group Life Insurance with to Mutual of Omaha effective January 1, 2021 - **S SUAZO**
	III.	**RESOLUTION(S)**	
		A.	Resolution Encouraging the Incoming Board of Commissioners to Consider Relief Options Related to Alcohol Licensing Renewal Fees - **B MCELROY**
	IV.	**ORDINANCE(S) - ADOPTION**	
		A. Approve Sprocket $900,000 Forgivable Loan - **J ARNDT**	
	V.	**ORDINANCE(S) - INTRODUCTION**	
		A.	Greenway Trail Phase V- Change Order #1 to Jim Smith Contracting, LLC contract for $37,585.10 **- R MURPHY**
	VI.	**COMMENTS**	
		A.	Comments from the City Manager
		B.	Comments from the Board of Commissioners
		C.	Comments from the Audience
	VII.	**EXECUTIVE SESSION**	

Agenda Action Form
Paducah City Commission

Meeting Date: December 15, 2020

Short Title: Approve an Interlocal Cooperation Agreement with McCracken County, GPED, and the IDA along with a Loan Forgiveness Note for GPED related to the Ohio River Triple Rail Megasite - **J ARNDT**

Category: Ordinance

Staff Work By: James Arndt, Lindsay Parish, Jonathan Perkins
Presentation By: James Arndt

Background Information: The City of Paducah McCracken County, the Paducah-McCracken County Industrial Development Authority (IDA) and Greater Paducah Economic Development Council (GPED) have discussed repositioning the IDA and its role with regard to property ownership, maintenance, development, marketing, and management within the City and the County. This ordinance would authorize an Interlocal Cooperative Agreement, to make the IDA owner of certain publicly owned development sites within Paducah and McCracken County, including the Ohio River Triple Rail Megasite (formerly known as "Riverport West"), which is currently owned by GPED.

Additionally, the City previously provided certain financial assistance to GPED for the acquisition, development and construction of the Ohio River Triple Rail Megasite. This financial assistance included the extension of a loan in the amount of $600,000.00 for completion of Phase II of the Project, which loan and repayment terms were evidenced by a Financing Agreement and a promissory note dated September 18, 2007. The financial assistance also included the extension of a loan in the principal amount of $311,375.00 for completion of the Final Phase of the Project, which loan and repayment terms were evidenced by a Financing Agreement and a promissory note dated December 19, 2008.

In order to effect the repositioning of the IDA and to carry out the terms of the Interlocal Cooperative Agreement, the City desires to forgive the repayment by GPED of both the Phase II Note and the Final Phase Note, in a combined amount of $911,375.00.

Does this Agenda Action Item align with a Strategic Plan Action Step? Yes

If yes, please list the Action Step Item Codes(s): E-6 Initiate and maintain ongoing effective communications with GPED

Funds Available: Account Name:
Account Number:

Staff Recommendation: Approval.

Attachments:

1. ORD GPED IDA Interlocal & Debt Forgiveness – Triple Rail Mega site
2. (2020.12.03) Exhibits 1 - 6 - Interlocal Cooperation Agreement
3. MANAGEMENT AGREEMENT BETWEEN IDA AND GPED
4. IDA BYLAWS

ORDINANCE NO. 2020 - _____

AN ORDINANCE OF THE CITY OF PADUCAH, KENTUCKY, APPROVING AND AUTHORIZING THE EXECUTION OF AN INTERLOCAL COOPERATIVE AGREEMENT AMONG THE CITY OF PADUCAH, KENTUCKY, THE COUNTY OF MCCRACKEN, KENTUCKY, THE PADUCAH-MCCRACKEN COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY, AND GREATER PADUCAH ECONOMIC DEVELOPMENT COUNCIL AND AUTHORIZING THE EXECUTION OF A FORGIVENESS OF DEBT AGREEMENT BETWEEN THE CITY OF PADUCAH, KENTUCKY, AND GREATER PADUCAH ECONOMIC DEVELOPMENT COUNCIL PURSUANT TO THE TERMS OF SAID INTERLOCAL AGREEMENT.

WHEREAS, the City of Paducah (the "City"), McCracken County, (the "County"), the Paducah-McCracken County Industrial Development Authority (the "IDA") and Greater Paducah Economic Development Council ("GPED"), together the "Parties," desire to effect the repositioning of the IDA and its role with regard to property ownership, maintenance, development, marketing, and management within the City and the County; and

WHEREAS, pursuant to Sections 65.210 to 65.300, inclusive, of the Kentucky Revised Statutes, as amended (the "Interlocal Act"), the Parties may join together to achieve this objective and their agreement as to same has been memorialized into an Interlocal Cooperative Agreement; and

WHEREAS, pursuant to the proposed Interlocal Cooperative Agreement, the IDA shall become the owner of certain publicly owned development sites within Paducah and McCracken County, including the "Ohio River Triple Rail Megasite" (formerly known as "Riverport West"), which is currently owned by GPED; and

WHEREAS, the City previously provided certain financial assistance to GPED for the acquisition, development and construction of said real estate (the "Project"); and

WHEREAS, said financial assistance included the extension of a loan in the amount of $600,000.00 for completion of Phase II of the Project, which loan and repayment terms were evidenced by a Financing Agreement and a promissory note dated September 18, 2007 and secured by a mortgage of record with the McCracken County Clerk's Office in Mortgage Book 1147, page 569; and

WHEREAS, said financial assistance also included the extension of a loan in the principal amount of $311,375.00 for completion of the Final Phase of the Project, which loan and repayment terms were evidenced by a Financing Agreement and a promissory note dated December 19, 2008 and secured by a mortgage of record with the McCracken County Clerk's Office in Mortgage Book 1201, page 293; and

WHEREAS, in order to effect the repositioning of the IDA and to carry out the terms of the Interlocal Cooperative Agreement, the City desires to forgive the repayment by GPED of both the Phase II Note and the Final Phase Note, in a combined amount of $911,375.00;

NOW THEREFORE be it ordained by the City Commission of the City of Paducah as follows:

Section 1. Authorization of Interlocal Cooperative Agreement. The City of Paducah, Kentucky, hereby approves the Interlocal Cooperative Agreement between the City, the County, the IDA, and GPED in substantially the form attached hereto as Exhibit A and made a part hereof.. It is hereby found and determined that the Interlocal Cooperative Agreement furthers the public purposes of the City and it is in the best interest of the citizens, residents and inhabitants of the City that the City enter into the Interlocal Cooperative Agreement for the purposes therein specified and the execution and delivery of the Interlocal Cooperative Agreement is hereby authorized and approved. The Mayor is hereby authorized to execute the Interlocal Cooperative Agreement, together with such other agreements, instruments or certifications which may be necessary to accomplish the transaction contemplated by the Interlocal Cooperative Agreement with such changes in the Interlocal Cooperative Agreement not inconsistent with this Ordinance and not substantially adverse to the City as may be approved by the official executing the same on behalf of the City. The approval of such changes by said official, and that such are not substantially adverse to the City, shall be conclusively evidenced by the execution of such Interlocal Cooperative Agreement by such official.

Section 2. Forgiveness of Debt. The City hereby forgives the repayment of the indebtedness under both the Phase II Note dated September 18, 2007 and the Final Phase Note dated December 19, 2008 and the Notes and all indebtedness and obligations due thereunder are hereby fully released, discharged, extinguished, and cancelled. Further, the City hereby approves the Debt Forgiveness Agreement by and between the City and GPED in substantially the form attached hereto as Exhibit B and made part hereof. It is further determined that it is necessary and desirable and in the best interests of the City to enter into said Debt Forgiveness Agreement for the purposes therein specified, and the Mayor of the City is hereby authorized to execute the Debt Forgiveness Agreement, together with such other documents, instruments or certifications which may be necessary to accomplish the transaction contemplated by this Ordinance with such changes not inconsistent with this Ordinance and not substantially adverse to the City as may be approved by the official executing the same on behalf of the City. The approval of such changes by said official, and that such are not substantially adverse to the City, shall be conclusively evidenced by the execution of such Debt Forgiveness Agreement by such official.

Section 3. Severability. If any section, paragraph or provision of this Ordinance shall be held to be invalid or unenforceable for any reason, the invalidity or unenforceability of such section, paragraph or provision shall not affect any of the remaining provisions of this Ordinance.

Section 4. Compliance With Open Meetings Laws. The City Commission hereby finds and determines that all formal actions relative to the adoption of this Ordinance were taken in an open meeting of this City Commission, and that all deliberations of this City Commission

and of its committees, if any, which resulted in formal action, were in meetings open to the public, in full compliance with applicable legal requirements.

Section 5. Conflicts. All ordinances, resolutions, orders or parts thereof in conflict with the provisions of this Ordinance are, to the extent of such conflict, hereby repealed and the provisions of this Ordinance shall prevail and be given effect.

Section 6. Effective Date. This Ordinance shall be read on two separate days and will become effective upon summary publication pursuant to KRS Chapter 424.

_____
MAYOR

ATTEST:

_____
City Clerk

Introduced by the Board of Commissioners, December 8, 2020
Adopted by the Board of Commissioners, _____, 2020
Recorded by City Clerk, _____, 2020
Published by *The Paducah Sun*, _____, 2020
ORD\GPED IDA Interlocal & Debt Forgiveness – Triple Rail Mega site
Ordinance prepared by Holly Homra – Denton Law

EXHIBIT A

INTERLOCAL COOPERATION AGREEMENT

THIS INTERLOCAL COOPERATION AGREEMENT (the "Agreement') is made and entered into as of _____, 2020 by and between the CITY OF PADUCAH, KENTUCKY (the "City"), the COUNTY OF McCRACKEN, KENTUCKY (the "County"), the PADUCAH/MCCRACKEN COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY ("IDA"), and GREATER PADUCAH ECONOMIC DEVELOPMENT COUNCIL ("GPED").

WITNESSETH

WHEREAS, the City and the County are parties to that certain Interlocal Cooperation Agreement dated March 6th, 1997 (attached hereto as Exhibit 1) pursuant to which the Paducah/McCracken County Industrial Development Authority was created;

WHEREAS, the City, the County, the IDA, and GPED desire to enter into this Agreement for the purpose of repositioning the Paducah/McCracken County Industrial Development Authority and its role with regard to property ownership, maintenance, development, marketing, and management; and

WHEREAS, after such repositioning, the IDA shall hold certain publicly owned development sites within Paducah and McCracken County and shall be responsible for management, maintenance, and development of such properties; and

WHEREAS, GPED is the economic development organization of Paducah and McCracken County whose mission is to proactively recruit, obtain, and maintain companies providing high quality, high paying jobs with benefits for our region, and after the repositioning of the IDA as contemplated herein, shall be responsible for the management of the IDA and marketing of properties owned by the IDA; and

WHEREAS, the parties recognize that, in order to maximize the region's economic development potential, GPED must serve as the active, outward facing economic development entity for Paducah / McCracken County providing oversight and guidance to the IDA; and

WHEREAS, the parties recognize that to best position our community for sustainable economic growth, the IDA must serve as an aid in capturing incentives and holding, obtaining, and developing favorable economic development properties; and

WHEREAS, the parties have determined that the repositioning of the IDA as outlined in this Agreement is in the public interest and the parties now wish to establish their respective rights and duties related thereto;

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS BETWEEN THE PARTIES, IT IS AGREED AS FOLLOWS:

1. GENERAL FINANCING PLAN

1.1 Pursuant to KRS 96.895, the County is the recipient of annual payments under the Regional Development Agency Assistance Program in the current amount of approximately $154,000.00 per year ("RDAAP Funds"). The County hereby consents and agrees that it shall designate the Paducah/McCracken County Industrial Development Authority as the recipient of all RDAAP Funds. Additionally, upon signing this Agreement, the County shall allocate all RDAAP Funds currently held by the County to the IDA. The City of Paducah hereby consents and agrees that it shall match the annual RDAAP Funds received by the IDA in the minimum amount of $150,000.00 and up to a maximum amount of $250,000.00 for a period of ten (10) years, with the first of such payments being made no later than March 31, 2021.

1.2 The City and County are parties to the Interlocal Cooperation Agreement dated March 6th, 1997 for the creation of the Paducah/McCracken Industrial Park under which the City and the County share payroll taxes from qualifying projects (See Exhibit 1). Except as otherwise stated herein, this agreement shall remain in full force and effect until its expiration.

1.3 The City and the County are parties to a Memorandum of Understanding dated June 15, 2004, pursuant to which the City and the County agreed to provide economic incentives to AAA Fabricators for the acquisition, installation, and equipment of a manufacturing facility and to share payroll taxes generated from said project.. A copy of this agreement is attached hereto as Exhibit 2. Except as otherwise stated herein, this agreement shall remain in full force and effect until its expiration.

1.4 The City and the County are parties to the Economic Development Revenue Sharing Agreement dated February 13th, 2006 ("Revenue Sharing Agreement"), a copy of which is attached hereto as Exhibit 3. Pursuant to such Revenue Sharing Agreement, the City and County have agreed to split equally the payroll taxes generated from Qualified Projects as defined therein. Except as otherwise stated herein, this agreement shall remain in full force and effect until its expiration.

1.5 For each new development project locating in an IDA-held property which is not subject to a revenue sharing agreement as identified above, whether involving the sale or lease of the property, either the City or the County (as applicable based upon the location of the property) will designate a total of ten percent (10%) of the payroll taxes generated from such project to the IDA for a period of ten (10) years. In the event that the property is sold or leased to a new tenant during the term, such payroll tax designation shall continue until the expiration of the original ten year term.

1.6 The Parties agree that they shall cooperate as necessary in pursuing and applying for grants and other funding opportunities to support the IDA.

1.7 The IDA shall prepare and submit an annual budget to the City and the County.

2. TRANSFER OF REAL PROPERTY

The City, the County, and GPED each own development sites located within Paducah and McCracken County, as more particularly described in Exhibit 4 hereto. The Parties agree that all development sites listed on Exhibit 4 shall be transferred to the IDA in accordance with the schedule set out in Section 7 below. It is the intent of the parties that, upon completion of the

above-described transfers, the IDA shall be the owner of certain publicly-held development sites within Paducah and McCracken County and GPED will be the organization responsible for the management and marketing of said IDA-owned properties.

3. DEBT FORGIVENESS

3.1 The City has made loans to GPED with a current outstanding balance of $911,375.00 for the purchase of the Triple Rail Site. The City agrees that, upon transfer of the property to the IDA in accordance with Section 2 above, it will forgive the full amount of this loan. A separate debt forgiveness agreement may be entered into between the City and GPED to carry out this objective and a copy of such agreement shall be attached as Exhibit 5.

3.2 The County has made loans to GPED with a current outstanding balance of $411,375.00 for the purchase of the Triple Rail Site. The County agrees that, upon transfer of the property to the IDA in accordance with Section 2 above, it will forgive the full amount of this loan. A separate debt forgiveness agreement may be entered into between the County and GPED to carry out this objective and a copy of such agreement shall be attached as an exhibit hereto as Exhibit 6.

4. DUTIES OF THE PADUCAH/MCCRACKEN COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY

4.1 The IDA shall serve as the owner of certain publicly-held development sites until such sites are sold for development. The IDA will also purchase additional property in collaboration with the City, County, and GPED for further development opportunities.

4.2 The IDA shall be responsible for maintenance and repair of all property under its ownership, including all medians and right of ways, which shall include landscaping, mowing, signage, lighting, and installation of other fixtures, as well as other maintenance duties as necessary and appropriate to maintain the safety, appearance, and marketability of the property.

4.3 In addition to general maintenance and repair, the IDA shall actively take steps to mitigate any environmental, utility, or other barriers to development of the sites. Additionally, upon the advice and recommendation of the City, the County, or GPED, the IDA may make such improvements to the sites as necessary to attract business prospects to the sites including, but not limited to, site preparation, infrastructure build up, and construction of speculative buildings.

4.5 The IDA may utilize its undeveloped properties for revenue-generating activities (such as rental of the property for crop land), so long as such activities do not compromise or limit the property's development potential. All revenue generated from such activities shall remain the property of the IDA and shall be used for property maintenance, upkeep, development, and purchase, or other approved activities as designated.

4.6 Within each industrial park, whether now owned by the IDA or later acquired, the IDA shall establish an advisory committee of up to four (4) members which allows businesses located within the park to communicate their needs and resources and to promote collaboration amongst themselves and the IDA.

4.7 Working in collaboration with GPED, the IDA will serve as a vehicle for potential initiatives to aid in facilitating economic development within the region including, but not limited to tax favorable purchases of land and equipment.

5. IDA BOARD OF DIRECTORS RESTRUCTURE.

5.1 The Parties agree that all current members of the IDA board of directors shall resign from their positions for the purpose of carrying out the repositioning contemplated hereunder. The IDA shall amend and restate its bylaws to provide for a total of seven (7) directors, who shall all be voting members. One (1) of the Director positions shall be occupied by the Mayor of the City of Paducah, and one (1) of the Director positions shall be occupied by the McCracken County Judge Executive for so long as they are serving in their elected positions. The Mayor of the City of Paducah shall appoint one (1) Director position from the GPED Board of Directors. The McCracken County Judge Executive shall also appoint one (1) Director position from the GPED Board of Directors. Of the remaining three (3) Director positions, one (1) shall be appointed by the Mayor, one (1) shall be appointed by the Judge Executive, and the remaining one (1) shall be appointed jointly by the Mayor and Judge Executive.

5.2 With the exception of the Director positions held by the Mayor and Judge Executive, who shall maintain their board positions for so long as they are serving in their elected positions, the Directors shall serve for terms of four (4) years. The terms of the initial appointed board members shall be staggered for continuity, with two Directors appointed for four (4) years, two Directors appointed for three (3) years, and one director appointed for two (2) years. No elected Director shall serve for more than two (2) consecutive terms. A person may be considered to rejoin the board as a Director after being off the Board for a period of one (1) year.

5.3 The Mayor or the Judge Executive shall serve as Chair and Vice Chair of the Board, alternating the positions every two (2) years. Such other officers as may be deemed necessary may be elected or appointed by the Board of Directors.

6. DUTIES OF GPED

6.1 GPED shall serve as the manager of the IDA and shall be responsible for managing and ensuring completion of the duties and responsibilities as set forth in Section 4 above.

6.2 GPED shall maintain a list of IDA-owned properties and market said properties promoting economic development.

6.3 GPED shall work to identify obstacles and barriers to the development, maintenance, and disposition of IDA-owned properties and advise the IDA on their improvement or removal.

6.4 GPED shall negotiate and manage incentive packages promoting IDA-owned properties for economic development projects.

6.5 GPED shall coordinate the establishment of a committee within each industrial park allowing businesses located therein to communicate their needs and resources and to promote collaboration amongst themselves and the IDA.

6.6 GPED shall perform or assist with such other services as may, from time to time, be necessary.

A separate Management Agreement shall be entered into between the IDA and GPED to govern the management arrangement contemplated herein.

7. REPOSITIONING PLAN

7.1 Phase 1. Phase One of the repositioning plan shall extend through December 31, 2020. During such phase, the parties shall strive to execute the loan forgiveness agreements as stated in Sections 3.1 and 3.2, , amend and restate the bylaws of the IDA as contemplated by Section 5 hereof, and affect the Management Agreement between GPED and the IDA as contemplated by Section 6 hereof.

7.2 Phase 2. Phase Two of the repositioning plan shall extend through March 31, 2021. During such phase, the GPED and the County shall affect the transfer of the properties as identified on Exhibit 4 and assign all outstanding leases to the IDA.

7.3 Phase 3. Phase Three shall be the final phase of the repositioning plan and shall extend through June 30, 2021. During Phase Three, the parties shall assign all outstanding broker option agreements from GPED to the IDA, transfer any relevant fixed assets to the IDA, and complete any other outstanding items related to the repositioning plan.

8. DURATION AND TERMINATION; AMENDMENTS

This Agreement shall become operational and have force and effect upon its execution and approval by the Attorney General pursuant to KRS 65.260, and the filing of this Agreement with the Clerk of the County of McCracken, Kentucky, all pursuant to the Interlocal Act. This Agreement shall remain in full force and effect for a term of ten (10) years, unless earlier terminated by joint action of the City and the County. Termination of this Agreement shall not affect the legal status or standing of the IDA or GPED, who shall retain their own assets and property. This Agreement may be amended or any of its terms modified only by a written document authorized, executed and delivered by each of the parties hereto.

9. NON-LIABILITY OF OFFICERS AND EMPLOYEES

No officer or employee of any Party hereto shall be subject to any personal liability for any debt or contract created by this Agreement or as a result thereof.

10. NATURE OF AGREEMENT

The City, County, IDA, and GPED agree to engage in a joint and cooperative undertaking only within the scope set out in this Agreement and do not intend to create among them any relationship of surety, indemnification or responsibilities for debts, claims, or liabilities

incurred by any party in their operations, other than as specifically set out herein. Furthermore, the execution of this Agreement shall not constitute a waiver of any defense or immunity that a Party would otherwise be entitled to under any applicable law.

11. FURTHER ASSURANCES.

The Parties agree that they shall, at any time upon the request of another party, make, execute, and deliver or cause to be made, executed, and delivered to the requesting party any and all other further instruments, certificates, and other documents as may, in the reasonable opinion of requesting party, be necessary or desirable in order to effect, complete, perfect, or otherwise to fulfill the obligations of the parties under this Agreement.

12. MISCELLANEOUS

This Agreement shall be binding upon the parties hereto and upon their respective permitted successors and transferees.

Nothing expressed or implied herein is intended or shall be construed to confer upon any person, firm or corporation other than the parties hereto any right, remedy or claim by reason of this Agreement or any term hereof, and all terms contained herein shall be for the sole and exclusive benefit of the parties hereto, their successors and permitted transferees.

This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky.

If one or more provisions of this Agreement, or the applicability of any such provisions for any set of circumstances shall be determined to be invalid or ineffective for any reason, such determination shall not affect the validity and enforceability of the remaining provisions of this Agreement.

The waiver by any Party of a breach, default or violation of this Agreement shall not operate as or be constructed to be a waiver of any subsequent breach hereof.

This Agreement may be amended or any of its terms modified only by a written document authorized, executed and delivered by each of the parties hereto.

This Agreement may be executed in one or more counterparts and when each party hereto has executed at least one counterpart, this Agreement shall become binding on all parties and such counterparts shall be deemed to be one and the same document.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first above written.

CITY OF PADUCAH, KENTUCKY, Authorized by Action of the City Commission on _____

_____

Mayor

Attest:

_____
City Clerk

COUNTY OF MCCRACKEN, KENTUCKY,
Authorized by Action of the Fiscal Court of the County on _____.

_____
Judge Executive

Attest:

_____
Fiscal Court Clerk

GREATER PADUCAH ECONOMIC DEVELOPMENT

_____
Board Chair

PADUCAH/MCCRACKEN INDUSTRIAL DEVELOPMENT AUTHORITY

_____
Board Chair

EXHIBITS

Exhibit 1 – Interlocal Cooperation Agreement dated March 6th, 1997
Exhibit 2 – Memorandum of Understanding dated June 15, 2004
Exhibit 3 – Interlocal Economic Development Revenue Sharing Agreement dated February 13th, 2006
Exhibit 4 – Property Schedule
Exhibit 5 – Debt Forgiveness Agreement b/t City of Paducah and GPED
Exhibit 6 – Debt Forgiveness Agreement b/t McCracken County and GPED

APPROVAL

Office of the Attorney General
700 Capitol Avenue, Suite 118
Frankfort, Kentucky 40601-3449
(502) 696-5300

This Interlocal Cooperation Agreement is in proper form and is compatible with the laws of the Commonwealth of Kentucky; therefore, it is approved this _____ day of _____, 2020.

OFFICE OF KENTUCKY ATTORNEY

GENERAL, DANIEL CAMERON

By: _____

Title: _____

Date:_____

EXHIBIT B

DEBT FORGIVENESS AGREEMENT

THIS FORGIVENESS OF DEBT AGREEMENT is made and entered into on this _____ day of December, 2020, by and between CITY OF PADUCAH, KENTUCKY, a city of the home rule class of the Commonwealth of Kentucky, (the "City") and GREATER PADUCAH ECONOMIC DEVELOPMENT COUNCIL ("Borrower") a Kentucky non-profit corporation organized and existing pursuant to the laws of the Commonwealth of Kentucky.

RECITALS

WHEREAS, the City previously provided certain financial assistance to the Borrower for the acquisition, development and construction of certain real estate located in Paducah, McCracken County, Kentucky and known as the Ohio River Triple Rail Megasite (formerly "Riverport West") real estate (the "Project"); and

WHEREAS, said financial assistance included the extension of a loan in the amount of $600,000.00 for completion of Phase II of the Project, which loan and repayment terms were evidenced by a Financing Agreement and a promissory note dated September 18, 2007 and secured by a mortgage of record with the McCracken County Clerk's Office in Mortgage Book 1147, page 569; and

WHEREAS, said financial assistance also included the extension of a loan in the principal amount of $311,375.00 for completion of the Final Phase of the Project, which loan and repayment terms were evidenced by a Financing Agreement and a promissory note dated December 19, 2008 and secured by a mortgage of record with the McCracken County Clerk's Office in Mortgage Book 1201, page 293; and

WHEREAS, the City desires to forgive the repayment by the Borrower of both the Phase II Note and the Final Phase Note (collectively referred to as the "Note") in a combined amount of $911,375.00;

WHEREAS, it is mutually desirable, beneficial, agreeable and in the best interest of the parties hereto and the City residents that the City forgive the repayment of the Note as such forgiveness furthers the public purposes of the City.

NOW, THEREFORE, for and in consideration of the foregoing premises, and for other valuable consideration, the legal adequacy, sufficiency, and receipt of which is hereby acknowledged by all parties hereto, the parties do covenant and agree as follows:

1. Forgiveness. Effective as of December 31, 2020, the City hereby forgives the repayment of the Note; and the Note and all indebtedness and obligations due thereunder are hereby fully released, discharged, extinguished, and cancelled; and Borrower is fully released

and discharged from any liability with respect to the Note and all indebtedness and obligations due thereunder.

2. Miscellaneous Provisions. This Agreement shall be binding upon the parties hereto, their successors, and assigns. In the event of any litigation concerning this Agreement, Borrower submits itself to the jurisdiction of the McCracken Circuit Court, and additionally, hereby waives its right of trial by jury.

IN TESTIMONY WHEREOF, this Forgiveness of Debt Agreement has been executed by the parties on the day and year first above written.

[SIGNATURE LINES ON FOLLOWING PAGE]

CITY OF PADUCAH, KENTUCKY

By _____
Mayor Brandi Harless

COMMONWEALTH OF KENTUCKY)
:ss.
COUNTY OF McCRACKEN)

Subscribed, sworn to and acknowledged before me by **CITY OF PADUCAH, KENTUCKY, by and through its duly authorized representative,** _____, on this the_____day of _____, 2020.

_____
NOTARY PUBLIC
STATE AT LARGE

My commission expires: _____
Notary ID # _____

GREATER PADUCAH ECONOMIC DEVELOPMENT

By _____

Title_____

COMMONWEALTH OF KENTUCKY)
:ss.
COUNTY OF McCRACKEN)

Subscribed, sworn to and acknowledged before me by **GREATER PADUCAH ECONOMIC DEVELOPMENT, by and through its duly authorized representative, _____**, on this the__day of _____, 2020.

_____
NOTARY PUBLIC
STATE AT LARGE

My commission expires: _____
Notary ID # _____

1726

INTERLOCAL COOPERATION AGREEMENT
PADUCAH/McCRACKEN INDUSTRIAL PARK

THIS INTERLOCAL COOPERATION AGREEMENT is made and entered into this 6 day of March 1997, by and between the CITY OF PADUCAH, McCracken County, Kentucky, a municipal operation of the 2nd class under the laws of the Commonwealth of Kentucky, (hereinafter "PADUCAH"), and MCCRACKEN COUNTY FISCAL COURT, McCracken County, Kentucky, a local government, (hereinafter "MCCRACKEN COUNTY").

WHEREAS, under the Interlocal cooperation Act (the "Act"), Sections 65.210 to 65.300, inclusive, of the Kentucky Revised statutes, as amended ("KRS"), any power or powers, privileges or authority exercised or capable of exercise by a public authority (including a city, a county or any other political subdivision of the Commonwealth) may be exercised jointly with another public agency under an agreement (an "interlocal cooperation agreement") for joint or cooperative action pursuant to the provisions of an Act, and such public agencies may acquire, construct, maintain, add to and improve necessary property, real and personal which is required in order to accomplish the public purposes set forth in such interlocal cooperation agreement; and

WHEREAS, the Act further authorizes the public agencies to create or utilize a "separate legal or administrative entity," which entity may, on behalf of the participating public agencies have certain powers delegated to it as provided in the interlocal cooperation agreement; and

WHEREAS, pursuant to KRS 154.50-301 through 154.50.346, a governmental agency may create a corporation called an Industrial Development Authority (an

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EXHIBIT
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"Authority") to act as the agency and instrumentality and the constituted authority of such governmental agency in the acquisition and development of industrial sites, parks, and subdivisions (defined at KRS 154.50.313) for economic development purposes; and

WHEREAS, PADUCAH and MCCRACKEN COUNTY have agreed it is in their mutual interest to pursue economic development opportunities cooperatively and to purchase and develop land for the purpose of an industrial park in order to enhance the community's competitiveness for new jobs and capital investment.

NOW THEREFORE BE IT RESOLVED that PADUCAH and MCCRACKEN COUNTY jointly develop the Olivet Church Road site (Attachment A) optioned by the GPEDC (hereinafter "INDUSTRIAL PARK") under the following terms and conditions:

1. Duties of PADUCAH: to annex the property in order to provide municipal services to the tenants of the INDUSTRIAL PARK, to provide 50% of the funding for purchasing and developing the property, and to share with MCCRACKEN COUNTY 50% of all payroll taxes generated from within the INDUSTRIAL PARK for the following length of time: Ten years after 97% of the property is sold/developed or 25 years total, whichever occurs first. The taxes will be collected during the Fiscal year and paid annually no later than September 1 of each year.

2. Duties of MCCRACKEN COUNTY: to provide maintenance and upkeep of the land owned by the PADUCAH & MCCRACKEN COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY, to provide 50% of the funding for purchasing and developing the property, to agree to the annexation of the property, and to continue the practice of empowering the

Sheriff's Department to cooperate in assisting the Paducah Police Department in serving the fringe areas of the City.

3. Ownership: PADUCAH and MCCRACKEN COUNTY agree to establish a local Industrial Development Authority (IDA) as outlined in KRS 154.50-301 to 154.50-346 utilizing GPEDC as staff to the authority. The IDA will own the property and all proceeds from the sale of property in the Industrial Park will be returned to the IDA for future industrial park development. The representatives on the IDA will be comprised of three appointments from the City of Paducah and three from McCracken County with one appointment from each body being a recommendation from the GPEDC. In the event the Interlocal Agreement is not in effect, the property will remain owned by the IDA.

Any future economic development projects of the IDA will adhere to the same type of tax sharing as set forth above. Additionally, the "host" municipality, identified by whichever jurisdiction the property resides in, will share the payroll taxes as outlined in this agreement and provide the municipal services as mandated by the jurisdiction. The "partnering" municipality will provide maintenance of the land owned by the IDA.

4. Term: The term of this Agreement, to the extent permitted by Kentucky Law, shall be ten years after 97% of the property is sold/developed or 25 years total, whichever occurs first. The term shall begin on the final closing date of purchasing the property from the three current owners-- Charles & Judy Beyer, Dr. William Shidal and Richard & Janet Fairhurst.

5. Successors or Assigns. Neither party shall assign this agreement without first obtaining the written consent of the other party, which written consent will not be unreasonably withheld.

IN WITNESS WHEREOF OF WHICH, the City of Paducah, Kentucky has caused its corporate name to be hereunto subscribed by its Mayor, attested by its City Clerk and its corporate seal to be hereunto affixed; and the McCracken County Court has caused its name to be hereunto subscribed by the McCracken County Judge Executive, attested by its proper authority and its corporate seal to be hereunto affixes; all in quadruplet identical copies on the day and year first above written.

MCCRACKEN COUNTY FISCAL COURT

ATTEST:

CITY OF PADUCAH, KENTUCKY

ATTEST:

Approved by the Office of the Attorney General of the Commonwealth of Kentucky.

Asst. Deputy AG 4-2-97

Title & Date

STATE OF KENTUCKY }
COUNTY OF McCRACKEN } SCT.

I, Randy Otey, Clerk of the County Court for the County and State aforesaid, do certify that the foregoing instrument of writing was lodged for record on the 12th day of May 19 97 at 1:04 P. M. o'clock, and I have recorded the same together with this and the foregoing certificate in my office in Deed Book No. 87 Page No. 726

Given under my hand this 12th day of May 19 97

RANDY OTEY, CLERK

By Julie Griggs D.C.

IN WITNESS WHEREOF OF WHICH, the City of Paducah, Kentucky has caused its corporate name to be hereunto subscribed by its Mayor, attested by its City Clerk and its corporate seal to be hereunto affixed; and the McCracken County Court has caused its name to be hereunto subscribed by the McCracken County Judge Executive, attested by its proper authority and its corporate seal to be hereunto affixes; all in quadruplet identical copies on the day and year first above written.

MCCRACKEN COUNTY FISCAL COURT

ATTEST:

CITY OF PADUCAH, KENTUCKY

ATTEST:

RECEIVED & FILED
MAY 12 4 2PM '94
JOHN Y. BROWN III
SECRETARY OF STATE
COMM. OF KENTUCKY
BY

Approved by the Office of the Attorney General of the Commonwealth of Kentucky.

Asst. Deputy AG 4-2-92

Title & Date

I hereby certify that the above is a true and correct copy of an Interlocal Cooperation Agreement, Paducah/McCracken Industrial Park, executed by McCracken County Fiscal Court and the City of Paducah, Kentucky.

Lenita Smith, City Clerk

COPY

February 24, 1997
Regular Meeting
McCracken County Fiscal Court
Court Met Pursuant to Call of County Judge/Executive
County Judge/Executive and Commissioners McNeil and Bradford Present

On motion of Commissioner Bradford seconded by Commissioner McNeil it is ordered that the inter local cooperation agreement of the Paducah-McCracken Industrial Park be approved.

The motion was carried with County Judge/Executive and all Commissioners voting aye.

/s/ Danny Orazine
McCracken County Judge/Executive

STATE OF KENTUCKY } SCT.
COUNTY OF McCRACKEN

I, Randy Otey, Clerk of the County Court for the County and State aforesaid, do certify that the foregoing is a true and correct copy of same as appears on record in my office in Order Book 86 page ____

Given under my hand this 19th day of March 19 97.

RANDY OTEY, CLERK
By Pat Smith D.C.

COPY

ORDINANCE NO. 97-2-5642

AN ORDINANCE APPROVING AN INTERLOCAL COOPERATION AGREEMENT BETWEEN THE CITY OF PADUCAH AND McCRACKEN COUNTY, KENTUCKY, RELATING TO THE JOINT DEVELOPMENT OF AN INDUSTRIAL PARK LOCATED ON OLIVET CHURCH ROAD, AND AUTHORIZING AND DIRECTING THE MAYOR TO EXECUTE SAME

BE IT ORDAINED BY THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. That the City of Paducah approves an Interlocal Cooperation Agreement between the City of Paducah and McCracken County, Kentucky, relating to the joint development of an industrial park located on Olivet Church Road.

SECTION 2. That the Mayor is hereby authorized and directed to execute the Interlocal Agreement referred to in Section 1 above.

SECTION 3. This ordinance shall be read on two separate days and will become effective upon summary publication pursuant to KRS Chapter 424.

Albert Jones
Mayor

ATTEST:

Lenita Smith
City Clerk

Introduced by the Board of Commissioners February 19, 1997
Adopted by the Board of Commissioners February 25, 1997
Recorded by Lenita Smith, City Clerk, February 25, 1997
Published by The Paducah Sun February 26, 1997.

ord/contract
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I hereby certify that the above is a true and correct copy of an ordinance adopted by the City of Paducah on February 25, 1997.

Lenita Smith
Lenita Smith, City Clerk

ORDINANCE NO. 97-2-5642

AN ORDINANCE APPROVING AN INTERLOCAL COOPERATION AGREEMENT BETWEEN THE CITY OF PADUCAH AND McCRACKEN COUNTY, KENTUCKY, RELATING TO THE JOINT DEVELOPMENT OF AN INDUSTRIAL PARK LOCATED ON OLIVET CHURCH ROAD, AND AUTHORIZING AND DIRECTING THE MAYOR TO EXECUTE SAME

BE IT ORDAINED BY THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. That the City of Paducah approves an Interlocal Cooperation Agreement between the City of Paducah and McCracken County, Kentucky, relating to the joint development of an industrial park located on Olivet Church Road.

SECTION 2. That the Mayor is hereby authorized and directed to execute the Interlocal Agreement referred to in Section 1 above.

SECTION 3. This ordinance shall be read on two separate days and will become effective upon summary publication pursuant to KRS Chapter 424.

Albert Jones
Mayor

ATTEST:

Lenita Smith
City Clerk

Introduced by the Board of Commissioners February 19, 1997
Adopted by the Board of Commissioners February 25, 1997
Recorded by Lenita Smith, City Clerk, February 25, 1997
Published by The Paducah Sun February 26, 1997.

ord/contract
89

ss #30944 **ORDINANCE # 97-2-5641**

ORDINANCE CREATING AND ESTABLISHING AN ENTITY TO BE KNOWN AS THE PADUCAH-McCRACKEN COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY; PROVIDING FOR THE APPOINTMENT OF MEMBERS; AND SETTING FORTH THE POWERS, FUNCTIONS AND DUTIES OF SAID INDUSTRIAL DEVELOPMENT AUTHORITY.

WHEREAS, KRS 154.50-301, et seq, authorizes Cities and Counties to jointly create industrial development authorities for the purpose of acquiring and developing industrial sites, parks, and subdivisions for economic development purposes; and

WHEREAS, the City of Paducah and McCracken County, Kentucky, have agreed to jointly create an industrial development authority in accordance with the aforesaid statutes.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. Creation: There is hereby created and established pursuant to the provisions of KRS 154.50-310, et seq, the Paducah-McCracken County Industrial Development Authority.

SECTION 2. Composition; Appointment of Members: The Industrial Development Authority shall be composed of six (6) members, three (3) of whom shall be appointed by the Mayor of the City of Paducah, and three (3) of whom shall be appointed by the County Judge of McCracken County, Kentucky. Appointments made by the Mayor shall be with the approval of the Board of Commissioners.

SECTION 3. Qualifications of Members; City and County Officials Not Eligible for Membership: All members appointed to the Industrial Development Authority shall reside within McCracken County and each shall have knowledge or experience in matters relating to industry or economic development. No member of the Industrial Development Authority shall hold any official office with the City or County.

SECTION 4. Terms of Members: Of the initial appointments to the Industrial Development Authority, the Mayor and County Judge shall each appoint one member for two (2) years, one member for three (3) years, and one member for four (4) years. Thereafter, members of the Industrial Development Authority shall serve for a term of four (4) years each, and until their successors are appointed and qualified.

SECTION 5. Powers, Functions and Duties: The Industrial Development Authority established hereby shall have all the powers, functions and duties authorized by the Local Industrial Development Authority Act, KRS 154.50-301, et seq.

SECTION 6. This Ordinance shall be read on two separate days and become effective upon publication in accordance with KRS Chapter 424.

Albert Jones, Mayor

ATTEST:

City Clerk

Introduced by the Board of Commissioners February 19, 1997

Adopted by the Board of Commissioners February 25, 1997

Recorded by City Clerk February 25, 1997

Published by The Paducah Sun February 26, 1997

MEMORANDUM OF UNDERSTANDING

This is a Memorandum of Understanding Agreement by and between **AAA FABRICATORS, LLC,** a Kentucky limited liability company ("AAA Fabricators"), the **GREATER PADUCAH ECONOMIC DEVELOPMENT COUNCIL** ("GPEDC"), the **CITY OF PADUCAH, KENTUCKY** ("City"), and **MCCRACKEN COUNTY, KENTUCKY** ("County").

WHEREAS, AAA Fabricators proposes to acquire, install, and equip a manufacturing facility in the former NES Building located at 3885 Coleman Road, Paducah, McCracken County, Kentucky, (the "Project"); and

WHEREAS, AAA Fabricators development of the Project will have a positive impact on the entire community by stimulating the local economy, expanding the tax base, and eliminating and or preventing high rates of unemployment; and

WHEREAS, in order to induce the acquisition, installation and equipping of the Project by AAA Fabricators, the City, County, and GPEDC have agreed to provide certain economic incentives to AAA Fabricators for purposes of defraying the costs of acquiring, installing, and equipping the Project; and

WHEREAS, it is deemed necessary and advisable that this Agreement be entered into by the parties setting forth their agreement with respect to the acquisition, installation, and thereof; and

WHEREAS, economic incentives to be provided to AAA Fabricators are in conformity with the "Guidelines for Providing Economic Incentives to Qualified Projects Located within the Boundaries of the County of McCracken and the City of Paducah" previously adopted by the County and City.

NOW, THEREFORE, AAA Fabricators, City, County and GPEDC agree to the following:

A. AAA Fabricators commits to:

1. Acquiring, installing, and equipping a manufacturing facility in the former NES Building located at 3885 Coleman Road, Paducah, McCracken County, Kentucky.

2. Hire a minimum of 15 net new employees within 1 year.

3. Hire a minimum of 25 employees by year 5.



4. Achieve total annual plant payroll within one year in excess of $500,000.

5. Achieve a total annual plant payroll by year 5 exceeding $860,000.

6. Invest over $1.5 million in capital, building and equipment in the Project.

B. The City, County, and GPEDC commit to:

1. The City will provide a cash grant to AAA Fabricators of $75,000.00 to defray the costs of acquiring, installing and equipping the Project.

2. The County will provide a cash grant of $75,000.00 to defray the costs of acquiring, installing, and equipping the Project.

3. GPEDC will use best efforts to secure the maximum amount of KIDA incentives on behalf of AAA Fabricators.

4. GPEDC will use its best efforts to secure the maximum amount of state training incentives on behalf of AAA Fabricators.

5. GPEDC will use its best efforts to expedite local permitting.

B. Recapture:

AAA Fabricators agrees that in the event it fails to either meet the required levels of employment or investment for the Project by the end of the third year, unless another time has been mutually agreed to, then the cash grant funds provided above by the City and County shall be fully reimbursed, plus interest calculated by using New York prime rates. The City and County further agree that in the event the failure to attain or maintain the required levels of employment or investment by AAA Fabricators, in spite of the its good faith best efforts, were the result of unavoidable and unforseen circumstances, including, but, not limited to an Act of God or national emergencies, then the City and County, at their sole discretion, may: (a) seek a pro rata reimbursement, or (b) waive any reimbursement.

D. Payroll Tax Sharing:

The City hereby agrees that as the "host" municipality it will share with the County (50)% of all payroll taxes generated from the Project for a period of 25 years. The taxes will be collected during the Fiscal year and paid annually no later than September 1 of each year.

E. Miscellaneous Provision:

This Agreement represents the entire understanding and agreement reached between the parties, and all prior covenants, agreements, and presentations are merged herein. This Agreement shall be fully binding upon the parties hereto and shall be deemed fully enforceable in accordance with the terms and provisions hereof. Neither party shall assign this Agreement without first obtaining the written consent of the other parties, which written consent shall not be unreasonably withheld. If any provision of this Agreement shall be held invalid under any applicable laws, such invalidity shall not affect any other provision of this Agreement than can be given affect without the invalid provision, and, to this end, the provisions hereof are severable.

IN WITNESS WHEREOF the parties hereto have set their hands on the day and year first above written.

AAA FABRICATORS

Signature: W E Barker

Title: President & CEO

Date: 6/16/04

CITY OF PADUCAH, KENTUCKY

Signature:

Title: Mayor

Date: 06-15-04

MCCRACKEN COUNTY, KENTUCKY

Signature:

Title: Judge Executive

Date: 6-15-04

$3226Cityincentives

ORDINANCE NO. 2004-6-6824

AN ORDINANCE AUTHORIZING AND APPROVING THE CITY OF PADUCAH GRANTING CERTAIN ECONOMIC INCENTIVES TO AAA FABRICATORS, LLC., AND AUTHORIZING TRANSFER OF FUNDS FROM COMMISSION CONTINGENCY FOR SAID PROJECT

WHEREAS, the City of Paducah finds that economic development through the attraction of new and expanding industry is a valid public purpose, positively impacting the entire community by stimulating the local economy, expanding the tax base and eliminating and/or preventing high rates of unemployment; and

WHEREAS, the City of Paducah finds, that in order to competitively compete for new, high quality employers and to induce significant expansion by existing industry, certain reasonable economic incentives are necessary; and

WHEREAS, upon receiving offers of certain economic incentives, AAA Fabricators, LLC, has declared its willingness to execute binding agreements committing it to the development of a manufacturing company within the corporate boundaries of the City of Paducah; and

WHEREAS, the economic incentives to be provided to AAA Fabricators are in conformity with the "Guidelines For Providing Economic Incentives To Qualified Projects Located Within The Boundaries Of The City Of Paducah" previously adopted by the City of Paducah on January 20, 2004, by Municipal Order No.1035; and

WHEREAS, the City of Paducah, in consideration of the aforesaid commitment, approves and authorizes the following economic incentives to AAA Fabricators, LLC.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF PADUCAH, KENTUCKY, AS FOLLOWS:

The City of Paducah, participating equally with the County of McCracken, (the "County") will:

Section 1. Recitals and Authorization. The City hereby approves providing AAA Fabricators, LLC, ("AAA Fabricators") with a $150,000.00 cash grant to offset the costs of renovating and equipping the former NES Building located at 3885 Coleman Road, Paducah, McCracken County, Kentucky, (the "Project Site") and relocating AAA Fabricator's manufacturing facility to the Project Site; the City share being $75,000.00. Further the City hereby approves the Memorandum of Understanding to be entered into among the City, the County, Greater Paducah Economic Development Council ("GPEDC") and AAA Fabricators (the "Agreement") in substantially the form attached hereto as Exhibit A and made part hereof. It is determined that it is necessary and desirable and in the best interests of the City to enter into the Agreement for the purposes therein specified, and the execution of the Agreement is hereby authorized and approved. The Mayor of the City is hereby authorized to execute the Agreement, together with such other agreements, instruments or certifications which may be necessary to accomplish the transaction contemplated by the Agreement with such changes in the Agreement not inconsistent with this Ordinance and not substantially adverse to the City as may be approved by the official executing the same on behalf of the City. The approval of such changes by said official, and that such are not substantially adverse to the City, shall be conclusively evidenced by the execution of such Agreement by such official.

Section 2. Conditional Authorization. The adoption of this Ordinance is predicated upon AAA Fabricators executing the Agreement and all other legally necessary documents to bind AAA Fabricators to its commitment to establish and locate the manufacturing facility at the Project Site, meet or exceed its stated investments in capital, building, and equipment, and use its best efforts to meet or exceed the employment and payroll schedules, all as set forth in the Agreement.

Section 3. Transfer of Funds. The Finance Director is hereby authorized and directed to transfer the sum of $75,000.00, from the Commission Contingency Fund and other unexpended budgetary line items.

Section 4. Severability. If any section, paragraph or provision of this Ordinance shall be held

to be invalid or unenforceable for any reason, the invalidity or unenforceability of such section, paragraph or provision shall not affect any of the remaining provisions of this Ordinance.

Section 5. Compliance With Open Meetings Laws. This City Commission hereby finds and determines that all formal actions relative to the adoption of this Ordinance were taken in an open meeting of this City Commission, and that all deliberations of this City Commission and of its committees, if any, which resulted in formal action, were in meetings open to the public, in full compliance with applicable legal requirements.

Section 6. Conflicts. All ordinances, resolutions, orders or parts thereof in conflict with the provisions of this Ordinance are, to the extent of such conflict, hereby repealed and the provisions of this Ordinance shall prevail and be given effect.

Section 7. Effective Date. This Ordinance shall be read on two separate days and will become effective upon summary publication pursuant to KRS 424.

Mayor

ATTEST:

City Clerk

Introduced by the Board of Commissioners, May 25, 2004
Adopted by the Board of Commissioners, June 8, 2004
Recorded by City Clerk, June 8, 2004
Published by *The Paducah Sun*, June 14, 2004

53226CityIncentives

OrdIncentives AAA Fabricators

EXHIBIT A

MEMORANDUM OF UNDERSTANDING

This is a Memorandum of Understanding (Agreement) by and between **AAA FABRICATORS, LLC**, a Kentucky limited liability company ("AAA Fabricators"), the **GREATER PADUCAH ECONOMIC DEVELOPMENT COUNCIL** ("GPEDC"), the **CITY OF PADUCAH, KENTUCKY** ("City"), and **MCCRACKEN COUNTY, KENTUCKY** ("County").

WHEREAS, AAA Fabricators proposes to acquire, install, and equip a manufacturing facility in the former NES Building located at 3885 Coleman Road, Paducah, McCracken County, Kentucky, (the "Project"); and

WHEREAS, AAA Fabricators development of the Project will have a positive impact on the entire community by stimulating the local economy, expanding the tax base, and eliminating and or preventing high rates of unemployment; and

WHEREAS, in order to induce the acquisition, installation and equipping of the Project by AAA Fabricators, the City, County, and GPEDC have agreed to provide certain economic incentives to AAA Fabricators for purposes of defraying the costs of acquiring, installing, and equipping the Project; and

WHEREAS, it is deemed necessary and advisable that this Agreement be entered into by the parties setting forth their agreement with respect to the acquisition, installation, and equipping of the Project and the economic incentives to be provided to defray the costs thereof; and

WHEREAS, the economic incentives to be provided to AAA Fabricators are in conformity with the "Guidelines For Providing Economic Incentives To Qualified Projects Located Within The Boundaries Of The County Of McCracken and the City of Paducah" previously adopted by the County and City.

NOW, THEREFORE, AAA Fabricators, City, County and GPEDC agree to the following:

A. AAA Fabricators commits to:

1. Acquiring, installing, and equipping a manufacturing facility in the former NES Building located at 3885 Coleman Road, Paducah, McCracken County, Kentucky.

2. Hire a minimum of 15 net new employees within 1 year.

3. Hire a minimum of 25 employees by year 5.

4. Achieve total annual plant payroll within one year in excess of $500,000.00.

5. Achieve a total annual plant payroll by year 5 exceeding $860,000.00.

6. Invest over $1.5 million in capital, building, and equipment in the Project.

B. The City, County, and GPEDC commit to:

1. The City will provide a cash grant to AAA Fabricators of $75,000.00 to defray the costs of acquiring, installing, and equipping the Project.

2. The County will provide a cash grant of $75,000.00 to defray the costs of acquiring, installing, and equipping the Project.

3. GPEDC will use best efforts to secure the maximum amount of KIDA incentives on behalf of AAA Fabricators.

4. GPEDC will use its best efforts to secure the maximum amount of state training incentives on behalf of AAA Fabricators.

5. GPEDC will use its best efforts to expedite local permitting of the Project

C. Recapture:

AAA Fabricators agrees that in the event it fails to either meet the required levels of employment or investment for the Project by the end of the third year, unless another time has been mutually agreed to, then the cash grant funds provided above by the City and County shall be fully reimbursed, plus interest calculated by using New York prime rates. The City and County further agree that in the event the failure to attain or maintain the required levels of employment or investment by AAA Fabricators, in spite of the its good faith best efforts, were the result of unavoidable and unforseen circumstances, including, but, not limited to an Act of God or national emergencies, then the City and County, at their sole discretion, may: (a) seek a pro rata reimbursement, or (b) waive any reimbursement.

D. Payroll Tax Sharing:

The City hereby agrees that as the "host" municipality it will share with the County (50)% of all payroll taxes generated from the Project for a period of 25 years. The taxes will be collected during the Fiscal year and paid annually no later than September 1 of each year.

E. Miscellaneous Provision:

This Agreement represents the entire understanding and agreement reached between the parties, and all prior covenants, agreements, and presentations are merged herein. This Agreement shall be fully binding upon the parties hereto and shall be deemed fully enforceable in accordance with the terms and provisions hereof. Neither party shall assign this Agreement without first obtaining the written consent of the other parties, which written consent shall not be unreasonably withheld. If any provision of this Agreement shall be held invalid under any applicable laws, such invalidity shall not affect any other provision of this Agreement than can be given affect without the invalid provision, and, to this end, the provisions hereof are severable.

IN WITNESS WHEREOF the parties hereto have set their hands on the day and year first above written.

AAA FABRICATORS, LLC

Signature: _____

Title: _____

Date: _____

CITY OF PADUCAH, KENTUCKY

Signature: _____

Title: _____

Date: _____

MCCRACKEN COUNTY, KENTUCKY

Signature: _____

Title: _____

Date: _____

GREATER PADUCAH ECONOMIC DEVELOPMENT COUNCIL

Signature: _____

Title: _____

Date: _____

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INTERLOCAL COOPERATION AGREEMENT

PADUCAH & McCRACKEN COUNTY ECONOMIC DEVELOPMENT REVENUE SHARING AGREEMENT

THIS INTERLOCAL COOPERATION AGREEMENT is made and entered into this 13th day of February 2006, by and between the CITY OF PADUCAH, McCracken County, Kentucky, a municipal operation of the 2nd class under the laws of the Commonwealth of Kentucky, (hereinafter "City"), and McCRACKEN COUNTY FISCAL COURT, McCracken County, Kentucky, a local government, (hereinafter "County")

WHEREAS, under the Interlocal Cooperation Act (the "Act"), Sections 65.210 to 65.300, inclusive, of the Kentucky Revised Statutes, as amended ("KRS"), any power or powers, privileges or authority exercised or capable of exercise by a public authority (including a city, a county or any other political subdivision of the Commonwealth) may be exercised jointly with another public agency under an agreement (an "interlocal cooperation agreement") for joint or cooperative action pursuant to the provisions of the Act; and

WHEREAS the City and County find that economic development through the attraction of new and expanding businesses and industries is a valid public purpose, positively impacting the entire community by stimulating the local economy, expanding the tax base and eliminating and/or preventing high rates of unemployment; and

WHEREAS, the City and County find that, in order to competitively compete for new, high quality employers and to induce significant expansion by existing industry, certain reasonable economic incentives are necessary; and

WHEREAS, the City and County have agreed it is in their mutual interest to pursue economic development opportunities cooperatively in order to enhance the community's competitiveness for new jobs and capital investment, and;

RECEIVED AND FILED
DATE 3.10.06

TREY GRAYSON
SECRETARY OF STATE
COMMONWEALTH OF KENTUCKY
BY L TROOP



WHEREAS, the City and County have previously cooperated to share the cost of developing industrial park land and providing incentives for the attraction of new and expanding business and industries, and

WHEREAS, the City and County have previously agreed to share tax revenues generated by new businesses and industries where they have shared the cost of incentives for those businesses.

NOW THEREFORE BE IT RESOLVED that THE CITY OF PADUCAH and MCCRACKEN COUNTY FISCAL COURT agree as follows:

SECTION 1: DEFINITIONS

1. Qualified Project: A new business or industry or an expansion of an existing business or industry that meets the guidelines for providing economic incentives as previously adopted by the City and County.
2. Host: If a project is located within the City limits, the City Commission is the host. If a project is located in McCracken County outside the City limits, the County Fiscal Court is the host.
3. Incentives: The payment of City or County local funds in conjunction with an inducement agreement with a qualified project to locate or expand in McCracken County. The payment may be made directly to the qualified project or may be made to purchase land or construct infrastructure committed to the qualified project in an inducement agreement.

SECTION 2: STATEMENT OF INTENT

The City and County intend to share the cost of incentives for qualified projects and when incentive costs are shared to share the business license and payroll tax revenues generated by the qualified project.

SECTION 3: PROCEDURE FOR COMMITTING TO SHARE INCENTIVES

A. When a new business or industry is identified as a qualified project the City Manager will ask the City Commission and the County Administrator will ask the County Fiscal Court to consider legislation committing the governing body to share equally the costs of incentives for the qualified project.

B. When the expansion of an existing business or industry is identified as a qualified project the administrator of the host jurisdiction will ask his governing body to decide whether they want to invite the other jurisdiction to share the costs of incentives for the qualified project.

C. If the governing body of the host jurisdiction decides to invite the other jurisdiction to share in the cost of the project, then the City Manager will ask the City Commission and the County Administrator will ask the County Fiscal Court to consider legislation committing the governing body to share equally the costs of incentives for the qualified project.

SECTION 4: SHARING REVENUES FROM QUALIFIED PROJECTS

A. When business license or payroll tax revenues are received from a qualified project that received incentives from the City and County, those revenues will be shared between the City and County on an equal basis throughout the term of this agreement.

B. The City will share with the County 50% of all business license and payroll taxes generated from a qualified project located within the corporate limits of the City.

C. The County will share with the City 50% of all occupational and payroll taxes generated from a qualified project located within the County and outside the corporate limits of the City.

D. For the purpose of this agreement, taxes generated from a project shall include payroll taxes generated during the construction phase of the project and from contract employees working at the qualified project.

E. Payments by the City to the County and by the County to the City for the previous fiscal year shall be made by September 15. Payments shall be accompanied by a report that identifies each qualifying project and the taxes collected.

SECTION 5: TERM

The term of this agreement, to the extent permitted by Kentucky Law, shall be for 15 years from the date of its execution.

SECTION 6: PADUCAH/McCRACKEN INDUSTRIAL PARK

This agreement does not apply to business and industries located in the Paducah/McCracken County Industrial Park. Sharing of park development and incentive costs for projects located in the Park will be governed by the Interlocal Cooperation Agreement between the City and County dated March 6, 1997.

SECTION 7: ULRICH MEDICAL SERVICES

Since the City and County shared incentive costs for the Ulrich Medical Services facility in the Information Age Park, business license and payroll taxes generated from Ulrich Medical Services and its successors and assigns will be shared in accord with the provisions of this agreement. Revenue shall begin with business license and payroll taxes due January 1, 2006.

SECTION 8: LYNX SERVICES

Since the City and County substantially shared incentive costs for Lynx Services From PPG facility in the Information Age Park, business license and payroll taxes generated from Lynx Services, its successors and assigns, will be shared in accord with the provisions of this agreement. Revenue shall begin with business license and payroll taxes due January 1, 2006.

SECTION 9: MARQUETTE TRANSPORTATION

Since the City and County shared incentive costs for the Marquette Transportation project in the Information Age Park, business license and payroll taxes generated from Marquette, its successors and assigns, will be as follows:

A. The term of the agreement shall be for 15 years.

B. The city will not share revenue until the first $94,450.00 is collected from Marquette.

SECTION 10 SEVERABILITY

If any section, subsection, or clause of this agreement shall be deemed to be unconstitutional or otherwise invalid, the validity of the remaining sections, subsections, and clauses shall not be affected.

IN WITNESS WHEREOF, the City of Paducah, Kentucky has caused its corporate name to be hereunto subscribed by its Mayor, attested by its City Clerk and its corporate seal to be hereunto affixed; and the McCracken County Court has caused its name to be hereunto subscribed by the McCracken County Judge Executive, attested by its proper authority and its corporate seal to be hereunto affixed; all in quadruplet identical copies on the day and year first above written.

McCRACKEN COUNTY FISCAL COURT

CITY OF PADUCAH, KENTUCKY

ATTEST:

ATTEST:

Governor's Office of Local Development

02/22/a

Hon. Steve Robertson
Commissioner
Gov Office For Local Development

Prepared by:

Steve Doolittle
McCracken County Administrator
McCracken County Courthouse
601 Washington Street
Paducah, KY 42003

ORDINANCE NO. 2005-11-7046

183

AN ORDINANCE APPROVING AN INTERLOCAL COOPERATION AGREEMENT BETWEEN THE CITY OF PADUCAH (CITY) AND MCCRACKEN COUNTY (COUNTY), KENTUCKY RELATING TO REVENUE SHARING ON JOINT ECONOMIC DEVELOPMENT PROJECTS WHEN ECONOMIC INCENTIVES ARE SHARED BY THE CITY AND COUNTY, AND AUTHORIZING AND DIRECTING THE MAYOR TO EXECUTE SAME

BE IT ORDAINED BY THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. That the City of Paducah approves an Interlocal Cooperation Agreement between the City of Paducah and McCracken County, Kentucky, relating to the revenue sharing of an economic development projects in Paducah and McCracken County.

SECTION 2. That the Mayor is hereby authorized and directed to execute the Interlocal Agreement referred to in Section 1 above.

SECTION 3. This ordinance shall be read on two separate days and will become effective upon summary publication pursuant to KRS Chapter 424.

MAYOR

ATTEST:

Tammara S Brock
Tammara S. Brock, City Clerk

Introduced by the Board of Commissioners November 22, 2005
Adopted by the Board of Commissioners November 28, 2005
Recorded by Tammara S. Brock, City Clerk, November 28, 2005
Published by The Paducah Sun, December 2, 2005
\ord\agree-revenue sharing

CERTIFICATION

I hereby certify that the above is a true and correct copy of an ordinance adopted by the City of Paducah, Kentucky on November 28, 2005.

Tammara S Brock
Tammara S. Brock
City Clerk

STATE OF KENTUCKY
COUNTY OF McCRACKEN } SCT.

I, Jeff Jerrell, Clerk of the County Court for the County and State aforesaid, do certify that the foregoing instrument of writing was lodged for record on the 3rd day of March 20 06 at 8:45A M. o'clock, and I have recorded the same together with this and the foregoing certificate in my office in Deed Book No. 1087 Page No. 178

Given under my hand this 3 day of March 20 06.

JEFF JERRELL, CLERK
By Virginia Sadler D.C.

EXHIBIT "4"
SECTION 2. TRANSFER OF REAL PROPERTY

Property/Lien Holder/Debt	Previous Owners	Property Value
Ohio River Park / Paducah Bank / $490,086.00		
Ohio River Park/ City & County / $1,322,750.00		Part owned by P&L & Rex Smith
TeleTech / Paducah Bank / $515,379.00		
Tract 7 – 3.1 acres on Bobo Road, West Paducah KY	Hall	$26,517.00
Tract 11 – 4 acres Bobo Road, West Paducah KY	Peeler	$145,480.00
Tract 41 – 7320 Noble Road, West Paducah KY	Reagan	$389,567.00
Tract 24 – 7250 Noble Road, West Paducah KY	Hall	$336,567.00
Tract 31 – 4+ acres Noble Road, West Paducah KY	Robison	$47,476.00
Tract 20 – 6525 Bobo Road, West Paducah KY	Hines	$325,575.00
Tract 6 – 80 acres Bobo Road, West Paducah KY	Graham	$381,656.00
Tract 1 – 5 acres Noble Road, West Paducah KY	McElya	$110,537.00
Tract 40 – 6405 Rudy Wood Road, West Paducah KY	Causey	Part owned by P&L Railroad
Tract 27 – 6750 Bobo Road, West Paducah KY	Alvey	$129,978.00
Tract 21 – 6565 Bobo Road, West Paducah KY	Hines	$312,267.00
Tract 8 – 3.1 acres Bobo Road, West Paducah KY	Hall	$26,517.00
Tract 23 – 66.7 acres Bobo Road, West Paducah KY	Clark	$344,573.00
Tract 36 – 4+acres Noble Road, West Paducah KY	Louden	$36,375.00
Tract 12 – 7270 Noble Road, West Paducah KY	Lawrence	$63,617.00
5 Tract of Land on Bobo Road, West Paducah KY		Part owned by P&L Railroad
6560 Rudy Woods Road, West Paducah KY	Peeler	$145,480.00
6340 Bobo Road, West Paducah KY	Abanatha	
5 Tract of Land on (Former Frazee Property)	Frazee	
McCracken County Land – 6865 and 6925 Bobo Road, West Paducah, KY	Modrow	$100,000.00

EXHIBIT 5 – Debt Forgiveness Agreement between City of Paducah and GPED

[TO BE SUPPLIED BY CITY OF PADUCAH]

EXHIBIT 6 – Debt Forgiveness Agreement between McCracken County and GPED

[TO BE SUPPLIED BY McCRACKEN COUNTY]

AGREEMENT FOR PROFESSIONAL SERVICES

THIS AGREEMENT is entered into as of this ____ day of _____, 2020 by and between the Paducah/McCracken County Industrial Development Authority ("IDA") and Greater Paducah Economic Development (hereinafter referred to as GPED),

WITNESSETH:

WHEREAS, the IDA and GPED are parties to that certain Interlocal Agreement dated _____, 2020; and

WHEREAS, pursuant to such Interlocal Agreement, the IDA is charged with the ownership, maintenance, and development of certain publicly-held development sites in the City of Paducah and McCracken County; and

WHEREAS, GPED is the economic development organization of Paducah and McCracken County whose mission is to proactively recruit, obtain, and maintain companies providing high quality, high paying jobs with benefits for our region; and

WHEREAS, GPED and the City of Paducah are parties to that certain Contract for Services dated June 26, 2020 pursuant to which GPED has agreed, among other things, to provide staff support to the Paducah-McCracken Industrial Development Authority in exchange for consideration received from the City of Paducah; and

WHEREAS, GPED and McCracken County are parties to that certain Agreement for Services dated July 27, 2020 pursuant to which GPED has agreed, among other things, to provide staff support to the Paducah-McCracken Industrial Development Authority in exchange for consideration received from McCracken County; and

WHEREAS, the parties recognize that in order to maximize the region's economic development potential, GPED must serve as the active, outward facing economic development entity for Paducah / McCracken County providing management and guidance to the IDA; and

WHEREAS, the parties recognize that to best position our community for sustainable economic growth, the IDA must serve as an aid in capturing incentives and holding, obtaining, and developing favorable economic development properties; and

WHEREAS, the IDA desires to engage GPED to render certain professional management services, guidance, and assistance in connection with the IDA's ownership, maintenance, and development of the sites;

NOW THEREFORE, the parties hereto do mutually agree as follows:

1. MANAGEMENT SERVICES. GPED will manage the IDA and its properties. Specific activities shall include, but not be limited to the following:

a. GPED will provide bookkeeping and accounting services to the IDA.

b. GPED will provide management and guidance to the IDA as it relates to the IDA executing on its role as a property holder and as a vehicle for incentives.

c. GPED will provide staffing at its own expense to support administrative duties to the IDA.

d. GPED will provide IDA such management services at no cost to the IDA.

e. While the IDA is responsible for the maintenance and repair of all IDA held properties, including all medians and right of ways, which duties shall include but not be limited to mowing, landscaping, signage, and lighting and installation of other fixtures as necessary to maintain the safety and appearance of the properties, GPED will provide management and administrative services to carry out such maintenance, repair, and installation services.

f. While the IDA is responsible to take steps to mitigate environmental, utility, or other barriers to the development of IDA held properties, including making improvements which will attract business prospects such as site preparation, infrastructure build up, and construction of speculative buildings, GPED will provide management and administrative services to carry out such functions.

g. While the IDA may utilize its undeveloped properties for revenue generating activities (such as rental of property for crop land), so long as such activities do not compromise or limit the property's development potential, GPED will provide management and advisory services to carry out such activities.

h. GPED shall maintain a list of IDA owned properties and market said properties promoting economic development.

i. GPED shall coordinate the establishment of a committee within each industrial park allowing businesses located therein to communicate their needs and resources and to promote collaboration amongst themselves and the IDA.

j. GPED shall perform or assist with such other services as may, from time to time, be necessary.

2. TERM. The term of this Agreement will commence on _____, 2020 and conclude on _____. This Agreement shall automatically renew for successive one year terms, on the same terms and conditions contained herein, unless, not later than six (6) months prior to the end of the then-current term, either Party shall give written notice to the other Party of its election to terminate this Agreement.

3. TERMS AND CONDITIONS. This agreement is subject to the following Terms and Conditions:

a. GPED shall provide the services as outlined in Section I at no cost to the IDA. The records related to such services will be made available for audit purposes to the IDA, the City of Paducah, and McCracken County, or any authorized representative, and will be retained for three years after the expiration of this Agreement unless permission to destroy them is granted by the IDA.

b. In carrying out its duties under this Agreement, GPED shall comply with all applicable laws, ordinances, and regulations and with the terms of the Interlocal Agreement.

c. This Agreement may be amended or any of its terms modified only by a written document authorized, executed and delivered by each of the parties hereto.

d. The waiver of a breach, default or violation of this Agreement shall not operate as or be constructed to be a waiver of any subsequent breach hereof.

IN WITNESS WHEREOF, the Paducah/McCracken County Industrial Development Authority and Greater Paducah Economic Development have executed this Agreement for Professional Services as of the date above written.

PADUCAH/MCCRACKEN COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY	GREATER PADUCAH ECONOMIC DEVELOPMENT
_____	_____
BY: _____	BY: _____

AMENDED AND RESTATED BYLAWS OF PADUCAH MCCRACKEN COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY

ARTICLE I
NAME

The name of the authority shall be the Paducah McCracken County Industrial Development Authority (the "Authority"), a non-profit corporation organized and existing under the laws of the Commonwealth of Kentucky.

ARTICLE II
PURPOSE

The purpose of the authority shall be to own, develop, maintain, and manage publicly owned development sites within Paducah and McCracken County, KY

ARTICLE III
OFFICES

The registered office of the Authority in the Commonwealth of Kentucky shall be at the offices of the Greater Paducah Economic Development Council, or its successor, which is currently 300 South Third Street, Paducah, Kentucky, 42001. The Authority may have such other offices, either within or without the Commonwealth of Kentucky, from time to time, as the Board of Directors may determine or as the business of the Authority may require. The address of the registered office may be changed from time to time by the Board of Directors.

ARTICLE IV
DIRECTORS

1. GENERAL POWERS. The business and affairs of the Authority shall be managed by its Board of Directors in accordance with KRS 154.50-301 – 154.50-350.

2. NUMBER AND QUALIFICATIONS. There shall be seven (7) Directors of the Authority who shall all be voting members. One (1) of the Director positions shall be occupied by the Mayor of the City of Paducah, and one (1) of the Director positions shall be occupied by the McCracken County Judge Executive for so long as they are serving in their elected positions. The Mayor of the City of Paducah shall appoint one (1) Director position from the GPED Board of Directors. The McCracken County Judge Executive shall also appoint one (1) Director position from the GPED Board of Directors. Of the remaining three (3) Director positions, one (1) shall be appointed by the Mayor, one (1) shall be appointed by the Judge Executive, and the remaining one (1) shall be appointed jointly by the Mayor and Judge Executive.

3. DIRECTOR TERMS. With the exception of the Director positions held by the Mayor and Judge Executive, who shall maintain their board positions for so long as they are serving in their elected positions, the Directors shall serve for terms of four (4) years. . The

terms of the initial board members shall be staggered for continuity, with two Directors appointed for four (4) years, two Directors appointed for three (3) years, and one director appointed for two (2) years. No elected Director shall serve for more than two (2) consecutive terms. A person may be considered to rejoin the board as a Director after being off the Board for a period of one (1) year.

4. COMPENSATION. Directors shall not receive any compensation for services, but may be reimbursed for actual expenses incurred on behalf of and in conjunction with Authority business.

5. CONFIDENTIALITY. The Board of Directors acknowledges that board members may receive and consider confidential information, such as the prospective location, relocation or expansion of businesses or industries, along with their confidential, proprietary information, trade secrets, and financial information. The Board of Directors acknowledges that the Authority and the Board may be asked to sign contractual agreements regarding non-disclosure and confidentiality, thus exposing the Authority to contractual liability. Accordingly, the Authority and the Board shall adhere to a strict policy of confidentiality. Best efforts will be used to advise that information presented is (1) subject to an a contractual agreement regarding non-disclosure or confidentiality, (2) confidential but not subject to a contractual agreement, (3) public records but excluded from inspection except on order of a court or (4) public records and information open for inspection by any person. Board members shall endeavor to treat such information with an appropriate level of confidentiality. In the event that any Director should break such confidentiality, he or she may be removed by the Board. Directors shall not use confidential information learned through their involvement with the Authority to further their business or personal interests. Notwithstanding the provisions of this Section, the Judge Executive and the Mayor may, at his or her discretion, share information which has been designated as confidential with the elected members of their respective boards. In such event, the Judge Executive and/or Mayor shall inform their board that such information is confidential in nature and is expected to remain as such.

6. CONFLICT OF INTEREST. Each Director working with or for the Authority shall sign a (1) conflict of interest disclosure statement and (2) confidentiality agreement, with the forms of same being approved by the Board, as a condition of their service. The forms shall be reviewed by the Board. Any conflict will be promptly disclosed to the Board and reviewed by the Board at its next meeting. The Board may take any appropriate action to address any conflicts. It is expected that Directors will abstain from voting on issues that relate directly to the Authority awarding work to a particular firm or individual in cases where the Director has a vested interest in the firm or in the individual. In the event that the Board of Directors reasonably believes that a Director, by reason of vested interest, personal affiliations, employment, or other involvement, has a conflict of interest relative to a matter to be discussed, such Director shall leave the meeting room voluntarily, upon request, until discussion and voting, if any, on the subject is completed. If the Director refuses to leave the meeting voluntarily, he or she may be required to leave the meeting by vote of a majority of the Board of Directors. In the event that any Director, employee or committee members should violate this provision, he or she may be removed by the Board, terminated or removed from any committee or subcommittee of the Authority.

ARTICLE V
OFFICERS

1. NUMBER. The officers of the Authority shall be a Chair, Vice Chair, a Secretary, and a Treasurer. Such other officers as may be deemed necessary may be elected or appointed by the Board of Directors. With the exception of the Chair and Vice Chair, all officers shall be elected by the Board of Directors.

2. ELECTION AND TERM OF OFFICE. The officers of the Authority to be elected by the Directors shall be elected annually in a June meeting. If the election of officers is not held at such meeting, the election shall be held as soon thereafter as practicable. With the exception of the Chair and Vice Chair, each officer shall hold office for a one (1) year period.

3. CHAIR. Either the Mayor or the Judge Executive shall serve as Chair of the Board, with the position alternating every two (2) years. The Chair shall be the principal executive officer of the Authority and, subject to the control of the Board of Directors, shall in general supervise and control all of the business and affairs of the Authority. When present, he/she shall preside at meetings of the Board of Directors. He or she may sign, with the Secretary or any other proper office of the Authority thereunto authorized by the Directors, deeds, mortgages, bonds, contracts, or other instruments which the Directors have authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Directors or by these Bylaws to some other officer or agent of the Authority, or shall be required by law to be otherwise designed or executed, and in general shall perform all duties incident to the Office of Chair and such other duties as may be prescribed by the Board of Directors from time to time.

4. VICE CHAIR. Either the Mayor or the Judge Executive shall serve as Vice Chair of the Board, with the position alternating every two (2) years. The Vice Chair shall have the responsibilities of the Chair in the Chair's absence or incapacity,

5. SECRETARY. The Secretary shall (a) oversee keeping the minutes of the proceedings of the Directors in one or more books provided for that purpose; (b) see that all notices are duly given in accordance with the provisions of these Bylaws or as required by law; (c) be custodian of the Authority records; and (d) in general perform all duties incident to the office of Secretary and other such duties as may from time to time be assigned by the Chair or Directors.

6. TREASURER. The Treasurer shall: (a) oversee having charge and custody of and be responsible for all funds and securities of the Authority; (b) receive and give receipts for monies due and payable to the Authority from any source whatsoever, and deposit all such monies in the name of the Authority in such banks, trust companies, or other depositories as shall be selected in accordance with the provisions of Article VII of these Bylaws; and (c) in general perform all duties incident to the office of Treasurer and such other duties as from time to time may be assigned by the Chair or Directors.

ARTICLE VI
MEETINGS

1. REGULAR MEETINGS. Regular meetings of the Board of Directors shall be held quarterly at a mutually agreeable time.

2. SPECIAL MEETINGS. Special meetings of the Board of Directors may be called by or at the request of the Chair or by a majority of the members. The person or persons authorized to call special meetings may fix any place, either within or without the Commonwealth of Kentucky, as the place for holding any special meetings called by them.

3. NOTICE. Notice of any meeting shall be given at least two (2) days previously thereto by written notice delivered to each Director at his or her business address by facsimile or electronic mail. If notice is given by facsimile or electronic mail, such notice shall be deemed to be delivered when the notice is accepted by the receiving unit. Any Director may waive notice of any meeting. The attendance of a Director at any meeting shall constitute a waiver of notice of such meeting, except where a Director attends for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at nor the purpose of any regular or special meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

4. QUORUM. A majority of the voting members of the Board of Directors shall constitute a quorum for the transaction of business at any meeting of the Board of Directors.

5. MANNER OF ACTING. The act of the majority of the Directors at a meeting at which a quorum is present shall be the act of the Board of Directors. In case of tie voting, the issue shall be deemed to have failed passage. There shall be no voting by proxy. However, subject to the attendance requirements outlined below, a Director may participate and vote in a meeting via remote communication including telephonically or via videoconferencing. Each Director shall have one vote.

6. ACTION WITHOUT A MEETING. Any action required or permitted to be taken by the Board of Directors or by a committee thereof at a meeting may be taken without meeting if consent in writing, setting forth the action taken, shall be signed by all of the Directors, or by all of the members of the committee, as applicable. Such consent shall have the same effect as a unanimous vote.

7. ATTENDANCE. If a member of the Board of Directors misses more than 33% of the regularly scheduled meetings in a calendar year or three (3) consecutive meetings, he or she shall be removed from the Board of Directors unless the excessive absences are due to extreme circumstances.

ARTICLE VII
CONTRACTS, LOANS, CHECKS, AND DEPOSITS

1. CONTRACTS. The Board of Directors may authorize any officer or agent to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Authority, and such authority may be general or confined to specific instances.

2. LOANS. No loans or other indebtedness shall be contracted on behalf of the Authority or issued in its name unless authorized by a resolution of the Board of Directors. Such authority may be general or confined to specific instances.

3. CHECKS, DRAFTS, ETC. All checks, drafts, or other orders for the payment of money, notes, or other evidences of indebtedness issued in the name of the Authority shall be signed or otherwise issued by such officer or agent of the Authority and in such manner as shall from time to time be determined by resolution of the Board of Directors.

4. DEPOSITS. All funds of the Authority not otherwise employed shall be deposited from time to time to the credit of the Authority and in such banks, trust companies, or other depositories as the Directors may select.

ARTICLE VIII
MANAGEMENT AND ADMINISTRATIVE SUPPORT

1. GPED. The Greater Paducah Economic Development Council (GPED), or its successor, shall provide administrative support, guidance, and management to the Authority. The Authority shall work in conjunction with GPED in the marketing and disposition of the Authority's real property and other assets for the purpose of promoting economic development.

2. LEGAL COUNSEL. The Authority shall appoint legal counsel who shall serve at the pleasure of the Board of Directors.

ARTICLE IX
FISCAL YEAR

The fiscal year of the Authority shall begin on the 1st day of July and end on the 30th day of June each year.

ARTICLE X
REVISIONS

1. REVISIONS TO BYLAWS. Any of these Bylaws may be amended or altered by two-thirds vote of the Board of Directors at any regular or special called meeting. Any proposed amendments or alterations shall be submitted to the Board in writing, at least ten (10) days in advance in the meeting at which they are to be acted upon.

2. REVISIONS TO ARTICLES. The Articles of Incorporation may be amended or altered by two-thirds vote of the Board of Directors at any regular or special called meeting. Any proposed amendments or alterations shall be submitted to the Board in writing, at least ten (10) days in advance in the meeting at which they are to be acted upon.

ARTICLE XI
DISSOLUTION

The Authority may be dissolved only upon agreement of the City of Paducah, McCracken County, and the Authority in accordance with KRS 154.50-330.

ARTICLE XII
WAIVER OF NOTICE

Whenever any notice is required to be given to any Director of the Authority under the provisions of these Bylaws, the Articles of Incorporation, or law, a waiver thereof in writing signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

ARTICLE XIII
INDEMNIFICATION

A Director of the Authority shall not be personally liable for the acts or debts of the Authority. The Authority shall indemnify any Director made a party to any proceeding, provided a determination is made that such Director (1) acted in good faith and (2) honestly believed his or her conduct was in the best interests of the Authority, or in any other case, his or her conduct was at least not opposed to the best interest of the Authority.co

The foregoing Bylaws were adopted by the Board on the ____day of _____.

_____
Chair

_____
Vice Chair

Attest:

_____
Secretary

Agenda Action Form
Paducah City Commission

Meeting Date: December 15, 2020

Short Title: Amend Chapter 2 of the Paducah Code of Ordinances related to the Industrial Development Authority - **J ARNDT**

Category: Ordinance

Staff Work By: James Arndt, Lindsay Parish
Presentation By: James Arndt

Background Information: The City of Paducah, McCracken County, the Paducah-McCracken County Industrial Development Authority (IDA), and Greater Paducah Economic Development Council (GPED) desire to reposition the IDA and its role with regard to property ownership, maintenance, development, marketing, and management within the City and the County. Said repositioning includes certain changes to the composition, qualification, and terms of the Industrial Development Authority as described in the Interlocal Cooperation Agreement as established by the City of Paducah, McCracken County, Paducah/McCracken County Industrial Development Authority, and Greater Paducah Economic Development Council. These changes need to be reflected in the sections of the Paducah Code of Ordinances that governs the establishment of the IDA. This ordinance amends those sections related to the IDA to change the number of members from six (6) to seven (7); remove the restriction that members cannot hold any official office in the City or County; and bring the terms of members in line with the Interlocal Cooperation Agreement.

Does this Agenda Action Item align with a Strategic Plan Action Step? No
If yes, please list the Action Step Item Codes(s):

Funds Available: Account Name:
Account Number:

Staff Recommendation: Approval.

Attachments:
1. ORD 2-562 IDA Composition

ORDINANCE NO. 2020-_____ -_____

AN ORDINANCE AMENDING CHAPTER 2 OF THE CODE OF ORDINANCES OF THE CITY OF PADUCAH

WHEREAS, the City of Paducah (the "City"), McCracken County, (the "County"), the Paducah-McCracken County Industrial Development Authority (the "IDA") and Greater Paducah Economic Development Council ("GPED"), together the "Parties," desire to effect the repositioning of the IDA and its role with regard to property ownership, maintenance, development, marketing, and management within the City and the County; and

WHEREAS, said repositioning includes certain changes to the composition, qualification, and terms of the Industrial Development Authority; and

WHEREAS, the City desires to amend certain sections of the Paducah Code of Ordinances to reflect such repositioning.

BE IT ORDAINED BY THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. That the City of Paducah, Kentucky hereby amends Chapter 2 of the Paducah Code of Ordinances by amending the following sections:

***Sec. 2-562. - Composition*.** The Industrial Development Authority shall be composed of [~~six (6)~~] seven (7) members. Said members shall be appointed in the manner described by the Interlocal Cooperation Agreement as established by the City of Paducah, McCracken County, Paducah/McCracken County Industrial Development Authority, and Greater Paducah Economic Development Council, pursuant to KRS 154.50-326.

Sec. 2-563. - Qualifications of members. [~~;City and County officials not eligible for membership.~~] All members appointed to the Industrial Development Authority shall reside within the County and each shall have knowledge or experience in matters relating to industry or economic development. [~~No member of the Industrial Development Authority shall hold any official office with the City or County.~~]

Sec. 2-564. - Terms of members. [~~See KRS 154.50-526.~~] The terms of members shall be in conformity with the Interlocal Cooperation Agreement as established by the City of Paducah,

McCracken County, Paducah/McCracken County Industrial Development Authority, and Greater Paducah Economic Development Council.

SECTION 2. Severability. If any section, paragraph or provision of this Ordinance shall be held to be invalid or unenforceable for any reason, the invalidity or unenforceability of such section, paragraph or provision shall not affect any of the remaining provisions of this Ordinance.

SECTION 3. Compliance With Open Meetings Laws. The City Commission hereby finds and determines that all formal actions relative to the adoption of this Ordinance were taken in an open meeting of this City Commission, and that all deliberations of this City Commission and of its committees, if any, which resulted in formal action, were in meetings open to the public, in full compliance with applicable legal requirements.

SECTION 4. Conflicts. All ordinances, resolutions, orders or parts thereof in conflict with the provisions of this Ordinance are, to the extent of such conflict, hereby repealed and the provisions of this Ordinance shall prevail and be given effect.

SECTION 5. Effective Date. This Ordinance shall be read on two separate days and will become effective upon summary publication pursuant to KRS Chapter 424.

_____
Brandi Harless, Mayor

ATTEST:

_____
Lindsay Parish, City Clerk

Introduced by the Board of Commissioners, _____
Adopted by the Board of Commissioners, _____
Recorded by the City Clerk, _____
Published by *The Paducah Sun*, _____
ord\2-562 IDA Composition

December 8, 2020

At a Regular Meeting of the Board of Commissioners, held on Tuesday, December 8, 2020, at 5:30 p.m., Mayor Brandi Harless presided, and upon call of the roll by the City Clerk, the following answered to their names: Commissioners Abraham, McElroy, Wilson and Mayor Harless (4). Due to technical difficulties, Commissioner Watkins was unavailable at roll call time, but was able to join the meeting at a later time.

In order to keep the Commission and public safe in the midst of the COVID-19 outbreak and in accordance with Kentucky Executive Order 2020-243 and SB 150, all members of the Board of Commissioners participated using video and/or audio teleconferencing. The public was invited to view the meeting on the government access channel Government 11 (Comcast channel 11). The meeting was also streamed on the City's You Tube channel for the public's convenience. Further, members of the public were invited to participate in the meeting to make public comments by joining the virtual teleconference.

INVOCATION:
Commissioner McElroy led the Invocation.

PLEDGE OF ALLEGIANCE
Commissioner Abraham led the pledge.

PRESENTATION

Communications Manager Pam Spencer, offered the following summary of the presentation:

> **"BUILD Grant Riverboat Landing Area Concept and Environmental Assessment Presentation**
>
> City Engineer Rick Murphy presented to the Paducah Board of Commissioner the concept drawings for the riverboat landing area which is part of the BUILD grant project. This project will be funded by the $10.4 million Better Utilizing Investments to Leverage Development (BUILD) Grant that the City was notified in 2019 that it will be receiving from the U.S. Department of Transportation. The Environmental Assessment process is underway with the final submittal of the document possible in April or May 2021. To provide your thoughts about the concepts and the riverfront improvements, comment through the form located in the middle of the webpage at http://paducahky.gov/build-grant-2019 or by email buildgrant@paducahky.gov. The concepts are located on the webpage."

CONSENT AGENDA

Mayor Harless asked if the Board wanted any items on the Consent Agenda removed for separate consideration. Mayor Harless asked for Item I(H) to be removed for further discussion. Mayor Harless asked the City Clerk to read the remaining items on the Consent Agenda.

I(A)	Approve Minutes for the November 24, 2020 Paducah Board of Commissioners Meeting
I(B)	Receive and File Documents:

	Minute File: 1. Notice of Meeting of the Board of Commissioners of the City of Paducah, Kentucky for meeting dated November 24, 2020 *Contract File:* 1. Scope of Work & Proposed Engineering Fee – S. 25th and S. 24th Streets Improvement Projects Bacon, Farmer, Workman (BFW) - **ORD 2020-11-8661** 2. Amendment #3 to Agreement for the Professional Engineering Flood Pump Stations #2 & #9 – HDR – **ORD 2020-11-8662** 3. Invoice For Consultant Services – TIF – Paducah Downtown Riverfront Redevelopment Project – KEDFA - $25,000 – **MO #2408** *Proposals:* 1. RFQ from Bacon, Farmer, Workman for the South 24th and 25th Street Projects
I(C)	Appointment of Maurie McGarvey to the Board of Ethics, to replace David Barnett, who resigned. This term shall expire February 10, 2023.
I(D)	Personnel Actions
I(E)	A MUNICIPAL ORDER AUTHORIZING THE MAYOR TO EXECUTE AN INTERLOCAL AGREEMENT FOR FIRE AND RESCUE SERVICES BETWEEN THE CITY OF PADUCAH, KENTUCKY, McCRACKEN COUNTY, KENTUCKY, AND THE PADUCAH-McCRACKEN COUNTY OFFICE OF EMERGENCY MANAGEMENT TO PROVIDE SERVICES RELATED TO FIRE AND RESCUE SERVICES TO RESPOND TO WATER EMERGENCIES **(MO #2412; BK 11)**
I(F)	A MUNICIPAL ORDER AUTHORIZING AND APPROVING AN AGREEMENT BETWEEN THE CITY OF PADUCAH AND KOA HILLS CONSULTING FOR COMPLEX DATA CONVERSION, SYSTEMS INTEGRATION, TESTING AND CONFIGURATION RELATED TO THE TYLER TECHNOLOGIES MUNIS IMPLEMENTATION IN AN AMOUNT OF $95,200, AND AUTHORIZING THE MAYOR TO EXECUTE THE AGREEMENT **(MO #2413; BK 11)**
I(G)	A MUNICIPAL ORDER AUTHORIZING AND APPROVING AN AGREEMENT BETWEEN THE CITY OF PADUCAH AND RETAIL STRATEGIES, LLC, FOR RETAIL ECONOMIC DEVELOPMENT RECRUITMENT SERVICES, DATA AND TRAINING IN AN AMOUNT OF $40,000 PER YEAR FOR THREE (3) YEARS AND AUTHORIZING THE MAYOR TO EXECUTE THE AGREEMENT **(MO #2414; BK 11)**
I(H)	~~A MUNICIPAL ORDER AUTHORIZING AND APPROVING AN AGREEMENT BETWEEN THE CITY OF PADUCAH AND THE PADUCAH CONVENTION & VISITORS BUREAU REGARDING LOU HAMMOND GROUP FOR MARKETING CAMPAIGN SERVICES, IN AN AMOUNT OF $27,000, AND AUTHORIZING THE MAYOR TO EXECUTE THE AGREEMENT~~ "(Removed from Consent Agenda for separate consideration)

I(I)	A MUNICIPAL ORDER ADOPTING THE PADUCAH-MCCRACKEN COUNTY EMERGENCY OPERATIONS PLAN AND AUTHORIZING THE MAYOR TO EXECUTE ALL DOCUMENTS RELATED TO SAME **(MO #2415; BK 11)**

Mayor Harless offered motion, seconded by Commissioner Wilson, that the consent agenda be adopted as presented.

Adopted on call of the roll, yeas, Commissioners Abraham, McElroy, Wilson and Mayor Harless (4). Commissioner Watkins was unable to vote due to technical difficulties

MUNICIPAL ORDER

AGREEMENT BETWEEN THE CITY OF PADUCAH AND THE PADUCAH CONVENTION AND VISITORS BUREAU REGARDING LOU HAMMOND GROUP

Mayor Harless offered motion, seconded by Commissioner McElroy, to adopt a Municipal Order entitled, "A MUNICIPAL ORDER AUTHORIZING AND APPROVING AN AGREEMENT BETWEEN THE CITY OF PADUCAH AND THE PADUCAH CONVENTION & VISITORS BUREAU REGARDING LOU HAMMOND GROUP FOR MARKETING CAMPAIGN SERVICES, IN AN AMOUNT OF $27,000, AND AUTHORIZING THE MAYOR TO EXECUTE THE AGREEMENT"

Adopted on call of the roll, yeas, Commissioners Abraham, McElroy, Watkins, Wilson and Mayor Harless (5). **(MO #2416; BK 11)**

RESOLUTION

Mayor Harless offered Motion, seconded by Commissioner Abraham, that the Board of Commissioners adopt a Resolution in Memory of Former Commissioner Robert Coleman.

A Resolution in Memory of Mr. Robert Coleman

WHEREAS, Robert Coleman served as a Commissioner on the Paducah Board of Commissioners from 1974-1975, then again from 1978-1991, and again from 1994-2008.; and

WHEREAS, Mr. Coleman was Paducah's longest serving elected official, having served a total of 31 years as City Commissioner; and

WHEREAS, Mr. Coleman brought a passion for equality and job accessibility to his role as City Commissioner and will be remembered as a true example of leadership by both the African American community and the City of Paducah as a whole; and

WHEREAS, the many contributions Mr. Coleman made to the City of Paducah will live on as his legacy and his accomplishments will continue to influence this community for years to come.

NOW THEREFORE, be it resolved that the Board of Commissioners of the City of Paducah, Kentucky, on behalf of its citizens, offer their condolences to the family of Robert Coleman and express their gratitude for his commitment and leadership in our community.

Adopted on call of the roll, yeas, Commissioners Abraham, McElroy, Watkins, Wilson and Mayor Harless (5).

ORDINANCE ADOPTIONS

CLOSURE OF TWO ALLEYS EXTENDING WEST OF NORTHVIEW STREET ONTO THE PADUCAH-McCRACKEN COUNTY JOINT SEWER AGENCY PROPERTY LOCATED AT 621 NORTHVIEW STREET

Mayor Harless offered Motion, seconded by Commissioner McElroy, that the Board of Commissioners adopt an Ordinance entitled, "AN ORDINANCE PROVIDING FOR THE CLOSING OF TWO ALLEYS EXTENDING WEST OF NORTHVIEW STREET ONTO THE PADUCAH-MCCRACKEN COUNTY JOINT SEWER AGENCY PROPERTY LOCATED AT 621 NORTHVIEW STREET, AND AUTHORIZING THE MAYOR TO EXECUTE ALL DOCUMENTS RELATING TO SAME." This ordinance is summarized as follows: The City of Paducah does hereby authorize the closing of two alleys extending west of Northview Street onto the Paducah-McCracken County Joint Sewer Agency Property located at 621 Northview Street, and authorizes, empowers and directs the Mayor to execute a quitclaim deed from the City to the property owner in or abutting the public ways to be closed.

Adopted on call of the roll, yeas, Commissioners Abraham, McElroy, Watkins, Wilson and Mayor Harless (5) **(ORD 2020-12-8663; BK 36)**

ORDINANCE INTRODUCTION

SPROCKET $900,000 FORGIVABLE LOAN

Mayor Harless offered Motion, seconded by Commissioner McElroy, that the Board of Commissioners introduce an Ordinance entitled, "AN ORDINANCE AMENDING ORDINANCE NO. 2020-6-8641; AUTHORIZING CITY OF PADUCAH TO EXECUTE A FORGIVABLE LOAN AGREEMENT WITH SPROCKET, INC., IN AN AMOUNT UP TO $900,000 TO PARTIALLY FUND THE CONSTRUCTION COST OF A RENOVATED FACILITY THAT WILL BE USED FOR THE CREATION OF NEW START-UP BUSINESSES AND JOB OPPORTUNITIES WITHIN THE CITY OF PADUCAH, AND TO EXECUTE THE OTHER AGREEMENTS AND DOCUMENTS THAT ARE A PART THEREOF.." This Ordinance is summarized as follows: This ordinance authorizes the execution of a Forgivable Loan Agreement with Sprocket, Inc., in an amount up to $900,000.00 for a portion of the construction cost, systems and improvements of facilities at the Sprocket location together with the Loan Guaranty Agreement and other agreements, instruments or certifications which may be necessary to accomplish said forgivable loan. Further, this ordinance authorizes the annual budget for the fiscal year beginning July 1, 2020, and ending June 30, 2021, as adopted by Ordinance No. 2020-6-8641, be amended to transfer $900,000 from Debt Service Undesignated Fund Balance (3000) to the General Fund Note Receivable Account 1000-101055.

APPROVE AN INTERLOCAL COOPERATION AGREEMENT WITH McCRACKEN COUNTY, GPED, AND THE IDA AND A LOAN FORGIVENESS NOTE FOR GPED RELATED TO THE OHIO RIVER TRIPLE RAIL MEGASITE

Mayor Harless offered Motion, seconded by Commissioner Wilson, that the Board of Commissioners introduce an Ordinance entitled, ""AN ORDINANCE OF THE CITY OF PADUCAH, KENTUCKY, APPROVING AND AUTHORIZING THE EXECUTION OF AN INTERLOCAL COOPERATIVE AGREEMENT AMONG THE CITY OF PADUCAH, KENTUCKY, THE COUNTY OF MCCRACKEN, KENTUCKY, THE PADUCAH-MCCRACKEN COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY, AND GREATER PADUCAH ECONOMIC DEVELOPMENT COUNCIL AND AUTHORIZING THE EXECUTION OF A FORGIVENESS OF DEBT AGREEMENT BETWEEN THE CITY OF PADUCAH, KENTUCKY, AND GREATER PADUCAH ECONOMIC DEVELOPMENT COUNCIL PURSUANT TO THE TERMS OF SAID INTERLOCAL AGREEMENT." This ordinance authorizes the execution of an Interlocal Cooperative Agreement, to make the Paducah-McCracken County Industrial Development Authority (IDA) the owner of certain publicly owned development sites within Paducah and McCracken County, including the Ohio River Triple Rail Megasite (formerly known as "Riverport West"), which is currently owned by the Greater Paducah Economic Development Council and to effect a repositioning the Paducah/McCracken County Industrial Development Authority and its role with regard to property ownership, maintenance, development, marketing, and management. Further, this ordinance authorizes a Forgiveness of Debt Agreement with the Greater Paducah Economic Development in a total amount of $911,375.00 related to the Ohio River Triple Rail Megasite.

AMEND CHAPTER 2 OF THE PADUCAH CODE OF ORDINANCES RELATED TO THE INDUSTRIAL DEVELOPMENT AUTHORITY (IDA)

Mayor Harless offered Motion, seconded by Commissioner McElroy, that the Board of Commissioners introduce an Ordinance entitled, ""AN ORDINANCE AMENDING CHAPTER 2 OF THE CODE OF ORDINANCES OF THE CITY OF PADUCAH." This Ordinance is summarized as follows: This ordinance amends Paducah Code of Ordinances Sections 2-562 through 2-564 to change the composition of the Paducah Industrial Development Authority from six (6) to seven (7) members and allow for the appointment of members in the manner described by the Interlocal Cooperation Agreement as established by the City of Paducah, McCracken County, the Paducah Industrial Development Authority and the Greater Paducah Economic Development Council. Further, this ordinance removes the restriction that members cannot hold any official office in the City or County and brings the terms of members in line with said Interlocal Cooperation Agreement.

COMMENTS BY ASSISTANT CITY MANAGER

- He is pleased to report that over 1,000 vehicles participated in the reverse parade this weekend in Noble Park. That far exceeded the expectations of participation. (Commissioner Wilson commented that it was a great response from the community)

COMMENTS FROM THE PUBLIC

- Mayor Elect George Bray commented on the forgivable loan to Sprocket. He is concerned about spending the money now. Paducah faces several issues, including stormwater

infrastructure, a new 911 system, participation in funding of the new airport terminal and the Outdoor sports park.

EXECUTIVE SESSION

Mayor Harless offered motion, seconded by Commissioner Wilson, that the Board of Commissioners go into closed session for discussion of matters pertaining to the following topic:

- Future sale or acquisition of a specific parcel(s) of real estate, as permitted by KRS 61.810(1)(b)

Adopted on call of the roll yeas, Commissioners Abraham, McElroy, Watkins, Wilson and Mayor Harless (5).

RECONVENE IN OPEN SESSION

Mayor Harless offered motion, seconded by Commissioner McElroy, that the Paducah Board of Commissioners reconvene in open session.

Adopted on call of the roll yeas, Commissioners Abraham, McElroy, Watkins, Wilson and Mayor Harless (5).

ADJOURN

Mayor Harless offered motion, seconded by Commissioner Abraham, to adjourn the meeting. All in favor.

Meeting ended at approximately 7:33 p.m.

ADOPTED: December 15, 2020.

_____
Brandi Harless, Mayor

ATTEST:

_____
Lindsay Parish, City Clerk

December 15, 2020

Minute File:

1. Notice of Meeting of the Board of Commissioners of the City of Paducah, Kentucky for meeting dated December 8, 2020

Contract File:

1. Contract For Services – FY 2021 – W. W. Young Community Center - $1,100 – signed by City Manager

Financials

1. Paducah Water Works – October, 2020 – Financial Highlights

CITY OF PADUCAH
December 15, 2020

Upon the recommendation of the City Manager's Office, the Board of Commissioners of the City of Paducah order that the personnel changes on the attached list be approved.

Michelle Smolen

City Manager's Office Signature

12/10/2020

Date

CITY OF PADUCAH
PERSONNEL ACTIONS
December 15, 2020

PAYROLL ADJUSTMENTS/TRANSFERS/PROMOTIONS/TEMPORARY ASSIGNMENTS

FINANCE	PREVIOUS POSITION AND BASE RATE OF PAY	CURRENT POSITION AND BASE RATE OF PAY	NCS/CS	FLSA	EFFECTIVE DATE
Cole, Corie K	Accountant - A/P	Accountant - A/P	NCS	Ex	December 17, 2020
	$20.98/hr	$21.50/hr			
Gray, Kristi	Accountant	Accountant	NCS	Ex	December 17, 2020
	$26.99/hr	$27.80/hr			
HUMAN RESOURCES / RISK MGMT					
Suazo, Stefanie E	Director of Human Resources	Director of Human Resources	NCS	Ex	December 31, 2020
	$43.75/hr	$45.00/hr			

TERMINATIONS - FULL-TIME (F/T)

PARKS & RECREATION	POSITION	REASON	EFFECTIVE DATE
Byas, Jaylon	ROW - Parks Maintenance	Voluntary Resignation	January 3, 2020
Styers, James B.	Laborer - Parks Maintenance	Voluntary Resignation	January 3, 2020

Agenda Action Form
Paducah City Commission

Meeting Date: December 15, 2020

Short Title: Approve the Early Construction Completion Bonus for Peck Education Trail - **M THOMPSON**

Category: Municipal Order

Staff Work By: Mark Thompson
Presentation By: Mark Thompson

Background Information: The Peck Education Trail as funded 100% by the Community Foundation of West Kentucky by the estate of J. Lane Peck is almost complete. The contract and bid documents totaling $242,690 with Youngblood Excavation Contractors (YEC) was approve by Commission on September 8, 2020 through Municipal Order 2378. Not included in the approved in the $242,690 was an early substantial completion clause in the bid documents of $100 per day for up to fourteen (14) days. It appears that YEC will meet all early completion deadlines to earn the substantial completion bonus of up to $1400. This request is to authorize this bonus increasing the contract with YEC and expenditure from the Community Foundation to $244,090.

Does this Agenda Action Item align with a Strategic Plan Action Step? Yes
If yes, please list the Action Step Item Codes(s): N1

Funds Available: Account Name: Noble Park Peck Addition

Account Number: PA0108

Staff Recommendation: Approval

Attachments:
1. MO - bonus payment – YEC – Peck Addition 12-2020
2. 18422 Substantial-Incentive Recommendation_120220
3. 18422_SubstantialWalk-thru_120120

MUNICIPAL ORDER NO. _____

A MUNICIPAL ORDER AUTHORIZING AN ADDITIONAL PAYMENT TO YOUNGBLOOD EXCAVATION CONTRACTORS IN THE AMOUNT OF $1,400 FOR MEETING ALL EARLY COMPLETION DEADLINES RELATED TO CONSTRUCTION OF THE PECK EDUCATION TRAIL

WHEREAS, the City of Paducah approved Municipal Order No. 2378 on September 8, 2020, authorizing payment to Youngblood Excavation Contractors in the amount of $242,690 for the Peck Education Trail Project; and

WHEREAS, contained in the contract was an early substantial completion clause in the amount of $100 per day for up to fourteen (14) days; and

WHEREAS, Youngblood Excavation Contractors has met all early completion deadlines to earn the substantial completion bonus of up to $1,400.

NOW THEREFORE, BE IT ORDERED BY THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. That the City of Paducah hereby authorizes a bonus payment to Youngblood Excavation Contractors in an amount up to $1,400 for meeting early completion deadlines associated with the Peck Education Trail Project. This increases the total contract with Youngblood Excavation Contractors to $244,090.

SECTION 2. This order shall be in full force and effect from and after the date of its adoption.

_____
Brandi Harless, Mayor

ATTEST:

_____
Lindsay Parish, City Clerk

Adopted by the Board of Commissioners, December 15, 2020
Recorded by Lindsay Parish, City Clerk, December 15, 2020
\mo\ bonus payment – YEC – Peck Addition 12-2020

BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.
500 SOUTH 17th STREET | PADUCAH, KY 42003

December 2, 2020

Mark Thompson, Director
Department of Parks & Recreation, City of Paducah
300 S 5th Street
Paducah, Kentucky 42003

RE: Peck Educational Trail – Substantial Completion Incentive Recommendation

Dear Mr. Thompson:

Upon review of the Peck Educational Trail project site on December 1, 2020, it is my opinion that the Contractor, Youngblood Excavating & Contracting, LLC, has reached a level of construction progress sufficient to be deemed "Substantially Complete" per the Project Bid-Documents.

In addition, it is also my opinion that the Contractor has met the condition in the Bid-Documents (Agreement for Project, Art. 2 paragraph 3) where he shall be provided "*up to $100/day compensation payment for a maximum of (not to exceed) 14 consecutive calendar days (above the Original Bid Agreement Amount)*" for obtaining early approval of Substantial Completion by the Owner. The Contractor obtained Substantial Completion on December 1, 27 days prior to the required date.

According to the Bid-Documents the Contractor shall be entitled to an additional $1,400.00 (one-thousand four-hundred dollars and zero cents) to his agreed upon construction contract amount of $242,690.00, dated September 15, 2020.

Please consider this letter my recommendation as Project Landscape Architect.

Respectfully,
Bacon | Farmer | Workman Engineering & Testing, Inc.

Jonathan E. Perkins, PLA, ASLA, LEED AP
Project Landscape Architect

Cc: BFW File

CITY OF PADUCAH, KENTUCKY
DEPARTMENT OF PARKS & RECREATION

AGREEMENT FOR PROJECT

THIS AGREEMENT, made this 15 day of September 2020 by and between the **CITY OF PADUCAH**, hereinafter called the **OWNER**, and Youngblood Excavating & Contracting, LLC, hereinafter called the **CONTRACTOR**, for the consideration hereinafter named, agree as follows:

ARTICLE 1. SCOPE OF WORK

The Contractor agrees to furnish all the necessary labor, materials, equipment, tools and services necessary for the construction of the **PECK EDUCATIONAL TRAIL**. All Work shall be in accordance with this Agreement, the Plans, Specifications and any Addendum(s) issued.

Throughout the performance of this Contract, the Engineering-Public Works Department of the City of Paducah shall, in all respects, be acting as both Engineer and agent for the Owner, City of Paducah. All work done by the Contractor shall be completed under the general supervision of the Engineer.

ARTICLE 2. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The Contractor hereby agrees to commence work under this contract on or before a date to be specified in the Notice to Proceed and to fully complete the project **within Ninety (90) consecutive calendar days** thereafter.

Failure of the Contractor to complete the work in the time specified above plus any extensions allowed in accordance with the General Conditions shall result in the assessment of liquidated damages for the delay (not as a penalty). Liquidated damages shall be in the amount of One-Hundred Dollars **($100.00)** per consecutive calendar day for failure to meet the final completion date and shall be withheld from final payment.

If the Contractor receives approval of Substantial Completion, by the Owner, of the Work by the Date stated in the Notice to Proceed, and the Work is accepted by the Owner, then the Owner agrees to provide up to $100/day compensation payment for a maximum of (not to exceed) 14 consecutive calendar days (above the Original Bid Agreement Amount) to the Contractor.

ARTICLE 3. THE CONTRACT SUM

The Owner agrees to pay the Contractor for the performance of the Contract, subject to additions and deductions provided therein: Two Hundred, Forty Two Thousand, Six Hundred Ninety Dollars and Zero Cents ($242,690.00) as quoted in the Bid Proposal by the Contractor dated August 31, 2020 which shall constitute full compensation for the work and services authorized herein.

ARTICLE 4. PROGRESS PAYMENTS

The Contractor may submit each month, and no more than once a month, a Request for Payment for work completed in accordance with the Specifications. The Owner will make partial payments on or about thirty (30) days after submission of a properly completed invoice and approval of the completed work. At the Engineer's discretion, a ten percent (10%) retainage may be held until final completion and acceptance of the work.

ARTICLE 5. ACCEPTANCE AND FINAL PAYMENT

Final payment shall be due sixty, (60) days after substantial completion of the work, provided the work will then be fully completed and the Contract fully performed in accordance with the specifications.

ARTICLE 6. GOVERNING LAW

The Parties agree that this Agreement and any legal actions concerning its validity, interpretation and performance shall be governed by the laws of the Commonwealth of Kentucky. The parties further agree that the venue for any legal proceeding relating to this Agreement shall exclusively be in McCracken County, Kentucky.

ARTICLE 7. THE CONTRACT DOCUMENTS

The Plans, Specifications and any addendum that may have been issued are fully a part of this Contract as if thereto attached or herein repeated.

IN WITNESS WHEREOF:

The parties hereto have executed this Agreement, the day and year first above written.

CONTRACTOR

BY Brent Humphrey

TITLE Owner

ADDRESS:
150 Hickory Rd.
Hickory Ky 42051

CITY OF PADUCAH, KENTUCKY

BY

Hon. Brandi Harless, Mayor

ADDRESS:
Post Office Box 2267
Paducah, Kentucky 42002-2267

NOTICE OF AWARD

TO: CONTRACTOR

PROJECT: PECK EDUCATIONAL TRAIL

After consideration of all Bids received for the above referenced **PECK EDUCATIONAL TRAIL** project, you are hereby notified that your Bid dated August 31, 2020, has been accepted as the responsive bid with the lowest bid price in accordance with the specifications. This Award is contingent upon final approval of the City of Paducah Board of Commissioners.

You are hereby required by the Information for Bidders to execute and deliver the Contract Agreement and to furnish the required Bond(s) and Certificate of Insurance within **Ten (10) calendar days** from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said Bond(s) and Certificate of Insurance within the stipulated time period, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your bid as abandoned and as a forfeiture of your Bid Bond. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

OWNER

CITY OF PADUCAH, KY

By: _____
Director of Parks and Recreation

Date: 9-21-2020

ACCEPTANCE OF NOTICE

Receipt of this NOTICE is hereby acknowledged by: Brad Youngblood

of VEC, LLC (Name of Company), this the 15th day of September, 2020.

By Brad Youngblood

Title Owner

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project: **"PECK EDUCATIONAL TRAIL"**

Contract N°: _____ Date Executed: SEPTEMBER 15, 2020

Contract Name: PECK EDUCATIONAL TRAIL

Owner: CITY OF PADUCAH, KENTUCKY – PARKS AND RECREATION DEPARTMENT

Contractor: YOUNGBLOOD EXCAVATING & CONTRACTING, LLC

Contract Work or
Designated Portion Thereof: PROJECT INCLUDES CONSTRUCTION OF AN AGGREGATE SURFACED NATURE TRAIL, OUTDOOR EDUCATIONAL SPACE, PRESSURE-TREATED NATURAL LUMBER BOARDWALK, SEGMENTAL RETAINING WALL. PROJECT ALSO INCLUDES LANDSCAPE PLANTINGS (ORNAMENTAL TREES).

Subject to the Punch List Items and other conditions attached hereto to this Certificate, Owner certifies that the work performed under the Contract (or a designated portion thereof as set out above) was substantially performed on:

DECEMBER 1, 2020
[Insert Date of Substantial Completion]

Owner's Authorized Representative

Title: DIRECTOR, PARKS AND RECREATION

Name: MR. MARK H. THOMPSON

Signature: _____

Title / Date: 12-7-2020

CONDITIONS AND PUNCH LIST ITEMS

Punch List Items to be Completed or Corrected:

SEE ATTACHED "SUBSTANIAL COMPLETION SITE WALK-THROUGH/REVIEW:"

- Required Completion Date(s): FEBRUARY 3, 2021 (ORIGINAL FINAL COMPLETION DATE)

Other Outstanding Items to be Completed or Corrected:

SEE ATTACHED "SUBSTANIAL COMPLETION SITE WALK-THROUGH/REVIEW:"

- Required Completion Date(s): N/A

BACON | FARMER | WORKMAN
ENGINEERING & TESTING, INC.
500 SOUTH 17th STREET | PADUCAH, KY 42003

Substantial Completion Site Walk-through/Review:

Date: December 01, 2020
Location: On-site, Noble Park Trace

PECK EDUCATIONAL TRAIL (BFW #18422)

Observations/General:

1. Started walk-through beginning at End of Trail (approx. STA 27+00) and ended at STA 0+00
2. Work Substantially Completed based upon observation and agreement by Owner (Mark Thompson)
3. YEC will be provided incentive monies promised for an early Substantial Completion date. YEC finished 28 day ahead of scheduled Subs. Completion date [Dec. 28, 2020]
4. On-going work included repair of concrete walk at STA 26+82
5. Standing water observed in 1 location between STA 24+00 and STA 26+00 (approx.)
6. Broken branches observed throughout trail corridor

Contract Items to be Completed:

A. Trail surface at end of concrete path (STA 26+82) shall be filled with additional quarter-minus stone to provide smooth surface transition from concrete to agg. pathway.
B. Portion of trail observed holding water shall be filled with additional stone and crowned to shed water to both sides of the trail – standing water to the sides of the trail is acceptable in this scenario.
C. Low spot in drainage swale at switch-back (STA 15+50) shall be filled with additional soil, regraded to drain, and re-seeded.
D. Contractor shall trim, with a pruning saw or chainsaw, any hanging branches or snags from trees damaged during construction of trail. (near switch-back and boardwalk specifically)
E. Broken limbs along switchback area shall be cut up and removed – debris may be placed in adjacent woods
F. Owner requests additional rolling of trail at location of standing water, at end of concrete path near road, and at STA 2+50 (this area shall be wetted prior to compacting).
G. Dogwood trees shall be planted per Bid-Documents
H. Erosion Control measures shall be removed upon establishment of vegetation and permanent stormwater structures.
I. Notice of Termination for KY Division of Water shall be provided upon completion of project.

Owner Items:

I. Owner requests that unused quarter-minus stone be piled off-site at Stuart Nelson Park either in the existing stockpile area near field 1 or in the parking lot where indicated by Owner.
II. BFW to provide letter of recommendation for the release of the $1400.00 incentive monies included within the Bid-Documents.
III. Also, BFW verification of Substantial Completion
IV. Official Ribbon Cutting ceremony tentative scheduled during the week of December 14-18, 2020. Mark Thompson will notify of actual date.

Review notes compiled by Jonathan E. Perkins, PLA, ASLA, CLARB – Project Landscape Architect, December 02, 2020.

PECK EDUCATIONAL TRAIL (BFW #18422) –

Tuesday, December 01, 2020
Time: 2:00 pm (CT)
Location: On-site, Noble Park Trace

Name:	Email:	Organization:
Jonathan Perkins, PLA	jperkins@bfwengineers.com	BFW Engineering & Testing, Inc.
Mark Thompson	mthompson@paducahky.gov	Parks & Rec
Amie Clark	aclark@paducahky.gov	Parks & Rec
Taylor Morsching	tmorsching@paducahky.gov	Parks & Rec
Mary Wurth	mwurth@paducahky.gov	Parks & Rec
Kevin Kell	kevin@yecllc.com	YEC
Robert Crittendon	270-705-9209	YEC

Agenda Action Form
Paducah City Commission

Meeting Date: December 15, 2020

Short Title: Purchase of One (1) Pumper Truck for use by the Fire Department in an amount of $515,360 - **S KYLE**

Category: Municipal Order

Staff Work By: Randy Crouch, Debbie Collins
Presentation By: Steve Kyle

Background Information: On October 22, 2020 sealed bids were received and opened for One (1) Pumper Truck to be used by the Paducah Fire Department. One bid was received from Finley Fire. The bid contained a proposed purchase price of $593,461.00 which exceeds available funds per ordinance. The City Manager rejected the bid and requested negotiation with the vendor in order to acquire the equipment needed with the available funds. The outcome of this negotiation resulted in the equipment meeting specifications at a price of $534,160.00 with a prepayment deduction sum of $18,800.00. This will make the final price of the equipment $515,360.00 which is below available funds.

Does this Agenda Action Item align with a Strategic Plan Action Step? No
If yes, please list the Action Step Item Codes(s):

Funds Available: Account Name: Rolling Stock/Vehicle Fleet Lease Trust Fund

Account Number: 71000210-540050

Staff Recommendation: For a Municipal Order allowing the Mayor to sign an agreement with Finley Fire Equipment for the purchase of One (1) Pumper Truck to be used by the Paducah Fire Department for a negotiated price of $534,160.00 with a prepayment deduction sum of $18,800.00. For a final price of the equipment $515,360.00.

Attachments:
1. MO - purchase- 1 pumper truck Fire Department 2020
2. Agreement
3. Finley_original bid document
4. PADUCAH SABER PROPOSAL_negotiated spec
5. Prepayment Letter_negotiated pricing
6. Paducah sun Ad_ran 9-16-2020
7. Bid Tab - Pumper Truck Finley Fire

MUNICIPAL ORDER NO. _____

A MUNICIPAL ORDER ACCEPTING THE BID OF FINLEY FIRE EQUIPMENT, INC., FOR SALE TO THE CITY OF ONE (1) PUMPER TRUCK IN THE AMOUNT OF $515,360, FOR USE BY THE PADUCAH FIRE DEPARTMENT, AND AUTHORIZING THE MAYOR TO EXECUTE A CONTRACT FOR SAME

WHEREAS, pursuant to Sec. 2-645 of the Code of Ordinances of the City of Paducah, Kentucky, one sealed bid was received from Finley Fire Equipment, Inc., on October 22, 2020, for the purchase of one (1) Pumper Truck for the Paducah Fire Department; and

WHEREAS, pursuant to 2-650(e), 2-651 and 2-654 of the Code of Ordinances of the City of Paducah, Kentucky, a written determination has been made by the City Manager that the bid received was in excess of the available funding and that it was in the best interest of the City to go into competitive negotiations with Finley Fire Equipment for the purchase of the Pumper Truck; and

WHEREAS, the outcome of this negotiation resulted in the equipment meeting specifications at a price of $534,160 with a prepayment deduction sum of $18,800. This will make the final price of the equipment $515,360, which is below available funds.

BE IT ORDERED BY THE BOARD OF COMMISSIONERS OF THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. That the Mayor is hereby authorized to execute an agreement with Finley Fire Equipment, Inc. in an amount of $515,360 for the purchase of one (1) pumper truck, according to the specifications, bid proposal and all contract documents heretofore approved and incorporated in the bid.

SECTION 2. This purchase shall be charged to Rolling Stock/Vehicles Fleet Lease Trust Fund account, account number 71000210-540050.

SECTION 3. This Order shall be in full force and effect from and after the date of its adoption.

_____
Brandi Harless, Mayor

ATTEST:

_____
Lindsay Parish, City Clerk

Adopted by the Board of Commissioners, December 15, 2020
Recorded by Lindsay Parish, City Clerk, December 15, 2020
\mo\purchase- 1 pumper truck Fire Department

CITY OF PADUCAH, KENTUCKY
PUBLIC WORKS DEPARTMENT

AGREEMENT FOR ONE (1) PUMPER TRUCK FOR USE BY THE FIRE DEPARTMENT

THIS AGREEMENT, made this _____ day of _____, 2020 by and between the **CITY OF PADUCAH**, hereinafter called the OWNER, and **Finley Fire Equipment,** hereinafter called the **VENDOR**, for the consideration hereinafter named, agree as follows:

ARTICLE 1. SCOPE OF WORK

The Vendor shall provide **One (1) Pumper Truck for use by the City Fire Department** in in full compliance with the Specifications as contained in the Bid Proposal Dated October 22, 2020. The Pumper Truck supplied shall be in accordance with this Agreement, the Specifications and any Addendum(s) issued.

ARTICLE 2. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The Vendor hereby agrees to commence work under this and to fully complete the delivery of the Aerial Platform Truck by November 2021.

ARTICLE 3. THE CONTRACT SUM

The Owner shall pay the Vendor for the performance of the Contract, subject to additions and deductions provided therein: **Five Hundred Fifteen Thousand, Three Hundred Sixty Dollars and Zero cents** ($**515,360.00**) as quoted in the aforementioned Negotiated Letter by the Vendor, which shall constitute full compensation for the work and services authorized herein.

ARTICLE 4. PAYMENTS

Payment will be made in full within 15 days of signed agreement in accordance with the negotiated items.

ARTICLE 5. THE CONTRACT DOCUMENTS

The Specifications and any addendum that may have been issued are fully a part of this Contract as if thereto attached or herein repeated.

IN WITNESS WHEREOF: The parties hereto have executed this Agreement, the day and year first above written.

VENDOR

BY _____

ADDRESS:
_____
_____

CITY OF PADUCAH, KENTUCKY

BY _____
Brandi Harless, Mayor

ADDRESS:
Post Office Box 2267
Paducah, Kentucky 42002-2267

PADUCAH FIRE DEPARTMENT

PIERCE IMPEL PUMPER

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4. PROPOSAL REMARKS & CLARIFICATIONS
5. PIERCE APPARATUS WARRANTIES
6. PIERCE APPARATUS CERTIFICATIONS
7. PIERCE APPARATUS ELECTRICAL & TURNING ANALYSIS
8. FINLEY & PIERCE LITERATURE

John Baker
Sales Representative
859-221-9718
john@bluegrassfire.com

Finley Fire Equipment Co., Inc. - 740.962.4328 - www.finleyfire.com

CITY OF PADUCAH, KENTUCKY
PUBLIC WORKS DEPARTMENT

BID PROPOSAL

Proposal of Finley Fire Equipment Co., Inc.

(hereinafter called Bidder), organized and existing under the laws of Kentucky

(state) and doing business as Finley Fire Equipment Co., Inc. *, as

applicable to the City of Paducah, Kentucky (hereinafter referred to as Owner.)
*Insert "A Corporation", A Partnership" or "An Individual"

PUMPER TRUCK

In compliance with your Invitation for Bid, Bidder hereby proposes to furnish all the necessary labor, material, equipment, tools and services necessary for the purchase and delivery of **One (1) Pumper Truck** for use by the Paducah Fire Department in accordance with the specifications and other contract documents prepared by the Public Works Department, at the prices stated below.

By submission of this Bid, each Bidder certifies that this Bid has been arrived at independent, without consultation, communication or agreement as to any matter relating to this Bid with any other Bidder or with any other competitor.

Security in the sum of $ 5% Bid Bond in the form of a Bid Bond or cashier's check is submitted herewith in accordance with the Specifications. This Security is furnished to the Owner as a guarantee that the agreement will be executed and all bonds required shall be furnished within ten (10) days after award of the Contract to the undersigned.

Bidder has submitted with this Bid Proposal the required signed and notarized Certifications as required by the laws of the Commonwealth of Kentucky. **Failure of the Bidder to comply with these provisions will make the Bid Non-Responsive and shall result in disqualification of the submitted Bid Proposal.**

If notice of the acceptance of this Bid is given to the Bidder within Sixty (60) days after the time of receipt of Bids, the Bidder agrees to execute and deliver a contract in the prescribed form and furnish the required bonds and insurance within ten (10) days after the contract is presented for signature.

Each Bidder understands that the right is reserved by the Owner to reject any and all Bids in accordance with the City of Paducah's Code of Ordinances and the Specifications.

ADDENDUM

The Bidder hereby acknowledges receipt of the following Addenda (if any) and is fully aware of the implications of the addendums on the Bid:

Addendum No(s) _____ Dated _____

BID PROPOSAL:

DESCRIPTION	QUANT.	UNIT	TOTAL AMOUNT
Pumper Truck in accordance with the Specifications	1	Each	$593,461.00

Bids shall include sales tax and all other applicable taxes and fees.

PROPOSED DELIVERY TIME: 11 Months

LOCATION OF MANUFACTURER FACILITY: Appleton, Wisconsion

Attachments to the Bid Proposal Required:

1. Bid Bond in the amount of 5% of the bid.
2. "Compliance with Technical Specifications" form. Bidder shall indicate compliance by checking "YES" or "NO" adjacent to each individual item. A "YES" indicates full compliance with the specification and a "NO" indicates an exception and/or variation to the specification.
3. All individual items marked by a "NO" on the "Compliance with Technical Specifications" form shall indicate the exception on a separate attached sheet.
4. Quality Management System ISO Certificate of Compliance.
5. Single Source Manufacturer documentation.
6. All Industry Standards Certification Documentation as required within the Technical Specifications.
7. One Copy of Full Manufacturer Specifications and Warranty information, including a detailed description of the equipment proposed and the conformance to the Owner's specifications. The manufacturer's specifications shall include information regarding size, type model and make of all component parts and equipment.
8. Bidder's Certificates signed and notarized.
9. Any additional information as required within the Technical Specifications.

GRADING CRITERIA

The Bidder is aware that the Owner will evaluate the Bids submitted based on the Criteria listed on the "**Owner Evaluation Form**". The Bidder will be evaluated individually by the Owner and given a Rated Value for each Criteria Item from 0 = the lowest value to 10 = the highest value. The calculation of the Rating x Weight will equal the Criterion Score. The sum of all Criterion Scores will equip the Overall Score of each bidder.

PREFERENCE TO KENTUCKY BIDDERS

In accordance with KRS 45A.365, prior to a contract being awarded, a resident bidder of the Commonwealth shall be given a preference against a non-resident bidder registered in any state that gives or requires a preference to bidders from that state. The preference shall be equal to the preference given or required by the state of the non-resident bidder.

Bidder is a resident of the following state: Ohio & Kentucky

If Bidder is a non-resident of the Commonwealth of Kentucky, indicate if any preference is given by the resident's state: _____

BID DOCUMENTS:

Bid Documents including the Bid Guaranty, shall be enclosed in an envelope clearly labeled with the words **"Bid Documents, Name of Project, Name of Bidder, and Date and Time of Bid Opening,"** in order to guard against premature opening of the bid. **Bids received late will be disqualified and returned to the sender unopened.**

The Bidder herein certifies that all specifications have been reviewed and that any variations to the said specifications, including exceptions to or enhancements to same, are clearly indicated as an attachment to this bid.

THE ABOVE PROPOSAL IS HEREBY RESPECTFULLY SUBMITTED BY:

BIDDER: Finley Fire Equipment Co., Inc.

SUBMITTED BY: John Baker

TYPED NAME: John Baker DATE: 10/15/2020

TITLE: Sales Representative

ADDRESS: 5255 N ST RT 60 NW
McConnelsville, OH 43756

PHONE: 740-962-4328 FAX: 740-962-5422

CELL PHONE: 859-221-9718 E-MAIL: john@bluegrassfire.com

FEDERAL TAXPAYER IDENTIFICATION NUMBER: 310816583

KENTUCKY STATE REGISTRATION NUMBER: 0541028

CITY OF PADUCAH BUSINESS LICENSE NUMBER: 00031856

SECTION 1

CITY OF PADUCAH

PUBLIC WORKS DEPARTMENT

REQUEST FOR BIDS

FOR ONE (1)

PUMPER TRUCK

FOR USE BY
THE PADUCAH FIRE DEPRTMENT

SEPTEMBER 2020

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ONE (1) PUMPER TRUCK

FOR USE BY
THE PADUCAH FIRE DEPARTMENT

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INVITATION TO BID

RECEIPT OF PROPOSALS: The City of Paducah, Kentucky will receive bids for **One (1) Pumper Truck for use by the City Fire Department** at **2:00 p.m., CST, on Thursday, October 22, 2020**. All Bids received will be publicly opened and read aloud in the Commission Chambers, Second Floor, City Hall, 300 South 5th Street, Paducah, Kentucky.

OBTAINING CONTRACT DOCUMENTS: Copies of specifications may be obtained at the office of the Public Works Fleet Department located at 1120 North 10th Street, Paducah, Kentucky.

BID SECURITY: A satisfactory Bid Bond executed by the bidder or a certified bank cashier's check in an amount equal to **five percent (5%)** of the bid shall be submitted with each bid. No other forms of security will be accepted. Failure to submit a bid bond or certified bank cashier's check will result in disqualification of the bid.

BID EVALUATION - AWARD OF CONTRACT

After reasonable consideration of all bids received, a Notice of Award will be given to the **responsible bidder** who submits the **responsive bid of the lowest evaluated bid price in accordance with the specifications.**

PREFERENCE TO KENTUCKY BIDDERS: In accordance with KRS 45A.365, prior to a contract being awarded, a resident bidder of the Commonwealth shall be given a preference against a non-resident bidder registered in any state that gives or requires a preference to bidders from that state. The preference shall be equal to the preference given or required by the state of the non-resident bidder.

EQUAL EMPLOYMENT OPPORTUNITY

The Vendor shall ensure that employees and applicants for employment are not discriminated against because of their race, religion, color, sex national origin, age or disability.

DRUG FREE WORKPLACE

The City of Paducah has adopted a Drug and Alcohol Free Workplace Policy in compliance with 803 KAR 25.280, in which drug and alcohol use and abuse in the workplace is prohibited. All Vendors and Sub-Vendors doing business for the City of Paducah shall adhere to this policy.

OWNER'S RIGHTS RESERVED:

The City reserves the right to reject any and all bids in accordance with the City of Paducah's Code of Ordinances and the Specifications.

INFORMATION FOR BIDDERS

BIDS

All sealed bids and purchasing procedures shall be in accordance with the City of Paducah's Code of Ordinances Chapter 2 Procurement, KRS 45A.345 – 45A.460, and the specifications contained herein.

All bids shall be submitted on forms supplied by the City of Paducah. Wording of the Bid Form or Bid Proposal shall not be altered, changed and/or modified. Bids submitted showing any alterations, changes, and/or modifications to the Bid Proposal shall be rejected. Unauthorized conditions, limitations, or provision attached to the proposal shall be cause for rejection of the proposal. Alterations by erasure or interlineations must be explained or noted in the bid over the signature of the bidder.

Bid Documents including the Bid Guaranty, shall be enclosed in an envelope clearly labeled with the words "**Bid Documents, Name of Project, Name of Bidder, and Date and Time of Bid Opening,**" in order to guard against premature opening of the bid. Each bid shall be addressed to the Public Works Director, and shall be delivered at the address given in the invitation to bid on or before the day and hour set for opening of bids. It is the sole responsibility of the bidder to see that his bid is received on time and is properly labeled. The Owner will not be responsible for premature opening of a bid not properly addressed and identified.

No electronic bid, faxed bid, telegraphic bid or telegraphic modifications of bid will be considered. No bids received after the time fixed for receiving bids will be considered. **Bids received late will be disqualified and returned to the sender unopened.**

BIDDER OF RECORD

Bidders shall be listed as a plan holder on the Owner's Official Plan Holder's list located in the Public Works Fleet Administration office at Public Works in order to be an "Official Bidder of Record". **Bids received from Bidders who are not listed on the Owner's Official Plan Holder's list will be rejected.**

INTERPRETATIONS

Any Bidder having questions regarding any portion of the specifications, or may be in doubt as to the true meaning of any part of the specifications, or finds discrepancies in or omissions from any part of the specifications, can submit a **WRITTEN** request **via EMAIL** for interpretation no later than **12:00 noon CST on Friday, October, 9, 2020,** to the Attention of:

Randy Crouch, Maintenance Superintendent
Public Works Department
VIA EMAIL to rcrouch@paducahky.gov

Following receipt of all comments on the aforementioned day, interpretations and/or corrections will be made by Addendum. The Addendums will be emailed to each bidder of record, with the Bidder being required to acknowledge receipt.

BIDDER'S QUALIFICATIONS

The City of Paducah (hereinafter referred to as Owner) shall have the right to take such steps necessary to determine the ability of the bidder to perform the obligations under the Contract. A Bidder may be required to furnish evidence of experience in the types of work to the Owner in order to assure completion of the Contract in a satisfactory manner. The Owner reserves the right to inspect the plant facilities and place of business of any Bidder participating in this bid.

The right is reserved to reject any bid where an investigation of the available evidence or information does not satisfy the Owner that the bidder is qualified to properly carry out the terms of the Contract.

CERTIFICATIONS

The Certifications required by the laws of the Commonwealth of Kentucky as contained within Section 00320 of these Specifications shall be signed, notarized and submitted with the Bid Proposal. **Failure of the Bidder to comply with these provisions will make the Bid Non-Responsive and shall result in disqualification of the submitted Bid Proposal.**

CONFLICTS, GRATUITIES AND KICKBACKS

The Owner adheres to the provision of KRS 45A.455 relative to conflicts of interests, gratuities, kickbacks, and use of confidential information in all bid offerings. During the bid process, Bidders shall not contact any employee of the Owner in reference to this Bid, with the exception of the Owner's designee(s). Failure to abide by this provision may serve as grounds for disqualification for award of this contract to the firm.

BID PRICES

The unit and/or lump sum price for each of the items in the Proposal of each bidder shall include its pro-rata share of overhead and profit so that the sum of the products obtained by multiplying the quantity shown for each item by the unit and/or the lump sum price represents the total bid. Bid Prices shall include any and all delivery transportation charges, fees, taxes, labor, materials, equipment, tools and services necessary for complete manufacture and delivery.

COMPLIANCE WITH SPECIFICATIONS

The Bidder shall accurately and fully complete the "Compliance with Technical Specifications" section and submit with the Bid Proposal. Bidder shall indicate compliance with each Technical Item by marking "YES" or "NO" with a check mark to indicate if the item being bid is exactly as specified. If the item is not being bid as exactly specified, the "NO" column must be checked and a **detailed description of the deviation shall be listed on a separate attached sheet**. All exceptions shall be stated no matter how seemingly minor. Any exceptions not shown shall be assumed by the Owner to be included in the proposal, regardless of the cost to the bidder.

Failure to accurately complete and submit the "Compliance with Technical Specifications" document, along with any and all deviations, shall be grounds for rejection of the bid. If no exceptions or deviations are shown, the bidder shall be required to furnish the material exactly as specified. The burden of proof for compliance with this specification shall be the responsibility of the Bidder.

EXCEPTIONS AND/OR VARIATIONS

Bidder shall list all information on a separate page regarding any and all exceptions and/or variations that are noted as a "NO" on the Technical Specifications.

ISO COMPLIANCE

The Bidder shall operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the "International Organization for Standardization (ISO)" specify the quality systems that shall be established by the manufacturer for design, manufacture, installation and service. **A copy of the certificate of compliance of the ISO shall be included with the bid.**

SINGLE SOURCE MANUFACTURER

Bids shall only be accepted from a single source apparatus manufacturer. The definition of single source is a manufacturer that designs and manufactures their products using an integrated approach, including the chassis, cab and body being fabricated and assembled on the bidder's premises. The warranties relative to the chassis and body design (excluding component warranties such as engine, transmission, axles, pump, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body and chassis). The bidder shall provide evidence that they comply with this requirement.

INDUSTRY STANDARDS

The Bidder shall comply fully with all industry standards (ISO, NFPA, etc.) as required in the Technical Specifications. **A copy of all required certificates noted in the Technical Specifications shall be included with the bid proposal**.

MANUFACTUR SPECIFICATIONS AND WARRANTIES

A set of manufacturer specifications and warranty information shall be included with the Bid Proposal. The manufacturer's specifications shall include a detailed description of the apparatus and equipment proposed and the conformance to the Owner's specifications. The manufacturer's specifications shall include information regarding size, type model and make of all component parts and equipment. All guarantees and warranty certificates required shall be furnished by the Vendor and delivered to the Owner before final payment of the contract is made.

EXAMINATION OF SPECIFICATIONS

Before submitting a bid, each bidder shall carefully examine specifications and be fully aware of the item proposed for receipt of bids. Each bidder shall be fully informed prior to bidding as to all existing conditions and limitations, and shall include all costs necessary to furnish and deliver and completely set-up the items as set forth in the specifications. No allowance will be made to any bidder due to lack of such examination or knowledge. The submission of a bid will be construed as conclusive evidence that the bidder has made such examination.

BID SECURITY

A Satisfactory Bid Bond or a Certified Bank Cashier's Check in an amount equal to **Five Percent (5%)** of the bid shall be submitted with each bid. No other forms of security will be accepted.

A Satisfactory Bid Bond shall be issued by an authorized representative of a Surety Company and shall be accompanied by a certified power of attorney dated on or before the date of bid. The Bid Bond shall include language, which assures that the bidder/principal shall give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract.

Failure to submit a Satisfactory Bid Bond or a certified bank cashier's check will result in disqualification of the Bid. The successful bidder's security will be retained until a contract has been signed and the required Labor and Materials Payment and Performance Bond submitted as specified. If any bidder refuses to enter into a contract, the owner will retain the Bid Bond as liquidated damages, but not as a penalty. The Bid Security of the remaining bidders will be returned as soon as practical. However, the Owner reserves the right to retain the security of the remaining bidders until 60 days after the bid opening.

OPENING OF BIDS

At the time and place fixed for the opening of bids, the Owner will publicly open and read aloud every bid received within the time set for receiving bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present in person or by representative. The time of bid opening shall be in accordance with the time stated in the Advertisement and Invitation to Bid. **The official time set for the opening of the Bids shall be established by the City of Paducah's synchronized computer time as shown digitally on the City Clerk's computer.**

WITHDRAWAL OF BIDS

Any Bidder may withdraw his submitted bid by written request 24 hours or more prior to the scheduled time for opening bids. No bidder may withdraw his bid for a period of **60** days after the date set for opening thereof, and all bids shall be subject to acceptance by the Owner during this period. However, under justifiable circumstances, the Owner may release a bid if the Bidder can demonstrate from worksheets or other documents that an obvious error was made while preparing the bid.

BID EVALUATION - AWARD OF CONTRACT

After reasonable consideration of all bids received, a Notice of Award will be given to the **responsible bidder** who submits the **responsive bid of the lowest evaluated bid price in accordance with the specifications**.

The **responsible bidder** shall have the capability in all respects to perform fully the contracts requirements, and the moral integrity and reliability of which to assure good faith performance. The

responsive bidder shall submit a bid that conforms in all material respects to the specifications without any deviations of the invitation for bids.

The **Evaluation Criteria** that will be utilized by the Owner to evaluate the bids received pursuant to objective measurable criteria, along with any formulas pertaining to how the contract shall be awarded has been listed on the **"Evaluation Form – Section 00330"** included with these specifications.

The Bidder to whom the award is made will be notified at the earliest possible date. The Owner reserves the right to reject any and all bids in accordance with the City of Paducah's Code of Ordinances and the Specifications.

FACTORY TRIPS

There shall be a total of three (3) factory trips provided by the successful Bidder; to include a pre-construction/drawing approval for four (4) fire department personnel; a mid-point inspection trip for four (4) fire department personnel, and a final inspection trip prior to delivery for four (4) fire department personnel. These trips shall include round trip transportation via commercial airline, meals, and lodging.

DELIVERY

The Bidder shall indicate the projected delivery time in the Bid Proposal. Delivery price shall be included in the Bid Price, and shall include all transportation, fees, taxes, labor, materials, equipment, tools and services necessary for complete manufacture and delivery.

The Pumper Truck shall be delivered under its own power - rail or truck freight shall not be acceptable. A qualified delivery engineer representing the Vendor shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in the proper maintenance required for proper operation under normal daily use.

The Pumper Truck shall be equipped with a full supply of fuel, oil and lubricants upon delivery. At the time of delivery, all equipment must meet or exceed federal, state and local safety, health, lighting and emission standards. Various Performance Tests and Operating Requirements are listed in the Technical Specifications and shall be strictly enforced upon delivery.

INSTRUCTION-TRAINING

Upon delivery, the successful Bidder shall provide a minimum of three (3) days training to properly instruct representatives of the Owner all methods associated with the proper operation and safe use of the Pumper Truck. This instruction shall include the service and maintenance required for proper operation under normal daily use.

PREFERENCE TO KENTUCKY BIDDERS

In accordance with KRS 45A.365, prior to a contract being awarded, a resident bidder of the Commonwealth shall be given a preference against a non-resident bidder registered in any state that gives or requires a preference to bidders from that state. The preference shall be equal to the preference given or required by the state of the non-resident bidder. **The bidder shall indicate the state of residence on the Bid Proposal. The non-resident bidder shall indicate also if any preference is given by the Bidder's state.** The determination of state residency of the non-resident Bidder, according to Kentucky Administrative Regulations:

- The state of residency shall be the principal office as identified in the Bidder's Certificate of Authority to transact business in Kentucky as filed with the Commonwealth of Kentucky, Secretary of State
- If the Bidder is not required to obtain a Certificate of Authority (by the Secretary of State) to transact business in Kentucky, the state of Residency shall be the mailing address provided in the Bid Proposal.

BONDS AND EXECUTION OF AGREEMENT

Subsequent to the award, and within **ten (10)** days after the prescribed forms are presented for signature, the successful bidder shall execute and deliver to the Owner a Contract Agreement in the form

included in the specifications, in such number of copies as the Owner may require. Additionally, a Performance Bond and a Labor and Material Payment Bond each in the amount of **100%** of the Contract as awarded shall be submitted within this ten (10) day time period. The bonds shall be used as security for the faithful performance of the Contract and shall be in the form included in the specifications.

The failure of the successful bidder to execute such Agreement and to supply the required Bonds within ten (10) days after the prescribed forms are presented for signature or within such extended period as the Owner may grant, based upon reasons determined sufficient by the Owner, shall constitute a default and the Owner may either award the contract to the next lowest responsible bidder or re-advertise for bids, and may charge against the bidder the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed provided that the amount thus due shall be limited to the amount of the Bid Bond. If a more favorable bid is received by re-advertising, the defaulting bidder shall have no claim against the Owner for any refund of the bid security or expense the Bidder incurred to develop the bid.

INSURANCE

Prior to commencing work, the Vendor shall furnish the Owner with a Certificate of Insurance showing that the required insurance as set forth in the specifications is in force and shall contain appropriate wording to the effect that the policies described cover the Vendor's operations under this contract.

TAX EXEMPT

The City of Paducah is exempt from the payment of any federal excise tax or any Commonwealth of Kentucky Sales Tax. The Bid Price must be net, exclusive of taxes for purchase of items by the City. The City of Paducah's tax exempt number is CT73-100.

LICENSE REQUIREMENT

All firms doing business in the City of Paducah are required to be licensed in accordance with the City of Paducah Code of Ordinances. Information regarding business license can be obtained at the City's website: www.paducahky.gov.

PERMITS, CERTIFICATES, LAWS, ORDINANANCES AND CODES

The Vendor shall, at his own expense, procure all permits, certificates and licenses required by the law for the execution of this project. He shall comply with all federal, state and local laws, ordinances or rules and regulations relating to the performance of the work. Information regarding State License requirements can be obtained at: http://revenue.ky.gov/business

EQUAL EMPLOYMENT OPPORTUNITY

The Vendor must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, age, sex or nation origin.

DRUG FREE WORKPLACE

The City of Paducah has adopted a Drug and Alcohol Free Workplace Policy in compliance with 803 KAR 25.280, in which drug and alcohol use and abuse in the workplace is prohibited. All Vendors and employees of the Vendor doing business for the City of Paducah shall adhere to this policy.

HEALTH AND SAFETY STANDARDS IN CONSTRUCTION CONTRACTS

It is a condition of this Contract, and shall be made a condition of each subcontract entered into pursuant to this Contract, that the Vendor and any Sub-Vendor shall not require any laborer or mechanic employed in performance of the contract work in surroundings or under working conditions which are unsatisfactory, hazardous, or dangerous to his health or safety, as determined under Construction Safety and Health Standards Title 29, CFR Part 1518, 36FR 7340, promulgated by the U.S. Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act, 82 Stat. 96. Additionally, the Vendor shall comply with all OSHA requirements in accordance with 23 CFR 634 and KRS 338.

REQUESTS FOR PAYMENT

Subsequent to satisfactory performance of the contract, delivery and testing in accordance with all of the provisions thereof, the Owner agrees to make Payment within **Thirty (30) days** after receipt of a properly completed invoice. The Owner reserves the right to withhold any of all payments or portions thereof if the Vendor fails to perform in accordance with the provisions of the contract or any modifications thereto. The Bidder may submit an alternative payment schedule that will include savings to the Owner.

REJECTION OF BIDS

The Owner reserves the right to reject any and all bids in accordance with the City of Paducah's Code of Ordinances and the Specifications.

APPEAL PROCESS

Any bidder may protest the decision of the Owner to refusal to allow withdraw of a bid, determination of non-responsibility, or the decision to award a contract by submitting a protest in writing to the City Manager no later than ten (10) days after the refusal to allow withdraw of a bid, determination of non-responsibility, or the award of contract. The written protest shall include the basis for the protest and the relief sought. The City Manager shall issue a decision in writing within ten (10) days of the receipt of the protest stating the reasons for the action taken.

CITY OF PADUCAH, KENTUCKY
BIDDER'S REQUIRED CERTIFICATIONS

The Bidder is hereby given notice that in accordance with the statutes of the Commonwealth of Kentucky, the Bidder is required to submit the following Certifications with the Bid Proposal. **Failure to comply with this requirement will make the Bid Non-Responsive and shall result in disqualification of the submitted Bid Proposal.**

1. **NON-COLLUSION**

The affiant does solemnly swear, under penalty of perjury under the Laws of the United States, that I, the undersigned Bidder, and/or any agents, officers, employees and/or Sub-Vendors employed, or that may be employed for any activity covered by the above Project have not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding in connection with this Bid Proposal.

2. **WORKERS' COMPENSATION AFFIDAVIT**

The affiant does solemnly swear, under penalty of perjury pursuant to KRS 198B.060(10), that I, the undersigned Bidder, and/or any agents, officers, employees and/or Sub-Vendors employed, or that may be employed, for any activity covered by the above Project shall be in full compliance with Kentucky's requirements for Workers' Compensation Insurance according to KRS 342, and Unemployment Insurance according to KRS Chapter 341.

The affiant acknowledges that failure on the affiant's part to comply with the foregoing assurances can result in a fine not to exceed four thousand dollars ($4,000.00) or an amount equal to the sum of all uninsured and unsatisfied claims that might be prosecuted under the provisions of KRS 342 or unemployment insurance claims that might be prosecuted under the provisions of KRS 341, whichever is greater.

3. **CAMPAIGN FINANCE LAWS**

The affiant does solemnly swear, under penalty of perjury, that in accordance with KRS 45A.395, that I, the undersigned Bidder, and/or any agents, officers, employees and/or Sub-Vendors employed, or that may be employed, for any activity covered by the above Project have not knowingly violated any provisions of the **Campaign Finance Laws** of the Commonwealth of Kentucky; and that the award of a Contract to the Bidder or the entity in which he/she represents will not violate any provisions of the **Campaign Finance Laws** of the Commonwealth. This information provided by the Bidder will be considered confidential and exempt from the Kentucky Open Records Law.

4. **KRS 45A.343**

The affiant does solemnly swear, under penalty of perjury, that I, the undersigned Bidder, and/or any agents, officers, employees and/or Sub-Vendors employed, or that may be employed, for any activity covered by the above Project are fully aware of the requirements and penalties outlined in KRS 45A.343 requiring the following:

(a) the Vendor and all Sub-Vendors performing the work under the Contract to reveal any final determination of a violation within the previous five (5) year period pursuant to KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to the Vendor or Sub-Vendor; and that

(b) the Vendor and all Sub-Vendors performing the work under the Contract to be in continuous compliance with the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to the Vendor or Sub-Vendor for the duration of the Vendor.

Failure to reveal a final determination of a violation or to comply with the statutes for the duration of the contract shall be grounds for cancellation of the contract and disqualification of the eligibility for future contracts for a period of two (2) years.

5. **KY DEPT OF REVENUE**
The affiant does solemnly swear, under penalty of perjury, that in accordance with KRS 45A.395, that I, the undersigned Bidder, and/or any agents, officers, employees and/or Sub-Vendors employed, or that may be employed, for any activity covered by the above Project are **duly registered with the Kentucky Department of Revenue** to collect and remit the sales and use tax imposed by KRS Chapter 139, and will remain registered for the duration of any contract awarded.

6. **STATE TAXES AND FEES**
The affiant does solemnly swear, under penalty of perjury, that in accordance with KRS 45A.395, that I, the undersigned Bidder, and/or any agents, officers, employees and/or Sub-Vendors employed, or that may be employed, for any activity covered by the above Project are **not delinquent on any state taxes or fees** owed to the Commonwealth of Kentucky and will remain in good standing for the duration of any contract awarded.

Therefore, as a duly authorized representative for the Bidder, I have fully informed myself regarding the accuracy of all statements made in this affidavit, and acknowledge the City of Paducah, Kentucky is reasonably relying upon these statements in making a decision for contract award and any failure to accurately disclose such information may result in contract termination, repayment of funds, and other available remedies under law.

Signature: _____
Printed Name: Bailey Buchanan
Title: Pierce Sales Manager
Company: Finley Fire Equipment Co., Inc.
Date: 10/15/2020

STATE OF Ohio)
COUNTY OF Morgan)

The foregoing instrument was sworn to and acknowledged before me this 16th day of October, 2020 by Bailey Buchanan, Sales Manager (title) of Finley Fire Equipment (Name of Company).

My commission expires: 5-18-2025.

Rebecca J Smith
Notary Public, State at Large

REBECCA J. SMITH
Notary Public, State of Ohio
My Commission Expires May 18, 2025

SEAL

OWNER EVALUATION FORM

PROJECT: **Purchase of One (1) Pumper Truck for use by the City of Paducah Fire Department**

BIDDER: _____ DATE: _____

Grading Criteria:

Evaluate the Bidder's Criteria on a rated value scale:
0 = the lowest value to 10 = the highest value for each item listed below.
Rating x Weighted Percent = Criterion Score
The Sum of all Criterion Scores shall be the Owner's basis of the Bidder's Overall Score.

GRADING CRITERIA

NO.	CRITERIA ITEMS	RATING VALUE (0- 10)	WEIGHTED - PERCENT	CRITERION SCORE
1.	Meets Dimensions on height requirements		15%	
2.	Stainless steel piping		5%	
3.	The bid will include the cost for 2 persons to attend factory training 2 times for 4 classes		15%	
4.	Hose capacity will be a minimum of 1000 feet of 5.00" large diameter hose.		10%	
5.	Heavy Duty Frame Rails		15%	
6.	Electrical Drawings		10%	
7.	Integrated information system with screen display		5%	
8.	Price		10%	
9.	Delivery Time		5%	
10.	Bid will include 3 factory visits. Prebuild, Midpoint and final inspection. 4 persons each.		10%	

BIDDER'S OVERALL TOTAL SCORE _____

PREFERENCE TO KENTUCKY BIDDERS

1. Bidder is a resident of the following state: _____
2. If Bidder is a non-resident of the Commonwealth of Kentucky, indicate if any preference is given by the resident's state: _____
3. Addition of any reciprocal preference for resident bidders: _____

CITY OF PADUCAH, KENTUCKY
PUBLIC WORKS DEPARTMENT

AGREEMENT FOR ONE (1) PUMPER TRUCK FOR USE BY THE FIRE DEPARTMENT

THIS AGREEMENT, made this _____ day of _____, 2020 by and between the **CITY OF PADUCAH**, hereinafter called the OWNER, and _____, hereinafter called the **VENDOR**, for the consideration hereinafter named, agree as follows:

ARTICLE 1. SCOPE OF WORK

The Vendor shall provide **One (1) Pumper Truck for use by the City Fire Department** in in full compliance with the Specifications as contained in the Bid Proposal Dated _____. The Pumper Truck supplied shall be in accordance with this Agreement, the Specifications and any Addendum(s) issued.

ARTICLE 2. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The Vendor hereby agrees to commence work under this and to fully complete the delivery of the Aerial Platform Truck by _____.

ARTICLE 3. THE CONTRACT SUM

The Owner shall pay the Vendor for the performance of the Contract, subject to additions and deductions provided therein: _____ ($_____) as quoted in the aforementioned Bid Proposal by the Vendor, which shall constitute full compensation for the work and services authorized herein.

ARTICLE 4. PAYMENTS

Payment will be made in full upon satisfactory delivery in accordance with the Contract Documents and the Specifications.

ARTICLE 5. THE CONTRACT DOCUMENTS

The Specifications and any addendum that may have been issued are fully a part of this Contract as if thereto attached or herein repeated.

IN WITNESS WHEREOF: The parties hereto have executed this Agreement, the day and year first above written.

VENDOR

BY _____

ADDRESS:
_____
_____

CITY OF PADUCAH, KENTUCKY

BY _____
Brandi Harless, Mayor

ADDRESS:
Post Office Box 2267
Paducah, Kentucky 42002-2267

FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we Finley Fire Equipment Co. Inc.
(Name of Principal - Bidder)

as Principal, hereinafter called the Principal, and Travelers Casualty and Surety Company of * (Name of Surety - Insurance Company)

a Corporation duly organized under the laws of the State of Connecticut (State)

as Surety, hereinafter called the Surety, are held and firmly bound unto the **CITY OF PADUCAH, KENTUCKY**, as Obligee, hereinafter called the Obligee, in the sum of:

$ Five Percent of Amount Bid (5%) Dollars and _____ Cents)

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid for One (1) Pierce Impel Pumper (Name of Project)

Dated 10/22/2020 to the **CITY OF PADUCAH, KENTUCKY**, Obligee.

NOW, THEREFORE:

If the Obligee shall accept the bid of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of such bid and give such bond or bonds as may be specified in the bidding or contract documents with good and sufficient surety for the faithful performance of such contract documents and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

PRINCIPAL: Signed and sealed this 22nd day of October 2020.

Finley Fire Equipment Co. Inc
(Principal - Bidder)

(Title)

(SEAL)

* America

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, Bailey Buchanan, certify that I am the Sales Manager Secretary of the Corporation named as Principal in the within Bond; that Bailey Buchanan who signed the said Bond on behalf of the Principal was then Sales Manager of said Corporation; that I knew his/her signature, and his/her signature thereto is genuine; and that said Bond was duly signed, sealed and attested to for and in behalf of said Corporation by authority of its governing body.

(Principal- Bidder Corporate Secretary)

(Corporate Seal)

SURETY: Signed and sealed this 22nd day of October 2020.

Travelers Casualty and Surety Company of America
(Surety - Insurance Company)

(Title) Sarah E. DeYoung (Attorney-in-Fact)

(SEAL)

Attach Surety Power of Attorney

TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company
Farmington Casualty Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, St. Paul Fire and Marine Insurance Company, and Farmington Casualty Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Sarah DeYoung** of **Milwaukee, WI**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law, including the following bond:

Surety Bond No.: Bid Bond
OR
Project Description: One (1) Pierce Impel Pumper

Principal: Finley Fire Equipment Co. Inc.
Obligee: City of Paducah

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **6th** day of **May, 2019.**

State of Connecticut

By: _____
Robert L. Raney, Senior Vice President

City of Hartford ss.

On this the **6th** day of **May, 2019**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June, 2021**

_____
Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 22nd day of October, 2020.

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-In-Fact and the details of the bond to which this Power of Attorney is attached.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/16/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER 1-414-443-0000 Hays Companies 1200 North Mayfair Road, Suite 100 Milwaukee, WI 53226	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: NATIONAL FIRE & MARINE INS CO	20079
INSURED Pierce Manufacturing Inc. P.O. Box 2017 Appleton, WI 54912-2017	INSURER B: BERKLEY NATL INS CO	38911
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** 60516805 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR			42-GLO-100190-06	04/01/20	04/01/21	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [ ] PRO-JECT [ ] LOC						GENERAL AGGREGATE	$
							PRODUCTS - COMP/OP AGG	$ 1,000,000
	OTHER:							$
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident)	$
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $			42-UMO-100191-06	04/01/20	04/01/21	EACH OCCURRENCE	$ 15,000,000
							AGGREGATE	$ 15,000,000
								$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [ ] N/A If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE OTH-ER	
							E.L. EACH ACCIDENT	$
							E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$
B	Excess Liability			CEX09600174-07	04/01/20	04/01/21	Ea Occ/Agg	10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

One (1) Pierce Impel Pumper

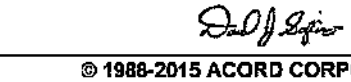
CERTIFICATE HOLDER

City of Paducah
[illegible] South 5th Street
[illegible]aducah, KY 42003
USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company
Farmington Casualty Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, St. Paul Fire and Marine Insurance Company, and Farmington Casualty Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Sarah DeYoung of Milwaukee, WI**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law, including the following bond:

Surety Bond No.: Bid Bond
OR
Project Description: One (1) Pierce Impel Pumper

Principal: Finley Fire Equipment Co. Inc.
Obligee: City of Paducah

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **6th** day of **May, 2019.**

State of Connecticut

By: _____
Robert L. Raney, Senior Vice President

City of Hartford ss.

On this the **6th** day of **May, 2019,** before me personally appeared **Robert L. Raney,** who acknowledged himself to be the **Senior** Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June, 2021**

_____
Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes,** the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 22nd day of October, 2020.

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which this Power of Attorney is attached.

LABOR AND MATERIAL PAYMENT BOND

BOND NO._____

KNOW ALL MEN BY THESE PRESENTS, that _____ as PRINCIPAL, and the _____ INSURANCE COMPANY, a Corporation duly organized under the laws of the State of _____, as Surety, are held and firmly bound unto the **CITY OF PADUCAH, KENTUCKY,** as Obligee, in the sum of:

$ _____ (_____ Dollars and _____ Cents)

which sum, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, on the _____ day of _____, 20____, the Principal entered into a contract with the **CITY OF PADUCAH, KENTUCKY**, for _____ Project, which contract is by reference made a part hereof and is hereafter referred to as the Contract:

NOW, THEREFORE, the Condition of this Obligation is such that, if the Principal shall pay all laborers, mechanics, subcontractors, materialmen and all persons who shall supply said Principal or said subcontractors with provisions and supplies for the carrying on of such work, then this obligation shall be null and void; otherwise to remain in full force and effect.

SURETY: Signed and sealed this _____ day of _____ 20___.

_____
(Surety - Insurance Company)

_____
(Title)

(SEAL)

By: _____
Attorney-in-Fact

Attach Surety Power of Attorney

PERFORMANCE BOND

BOND NO._____

KNOW ALL MEN BY THESE PRESENTS, that _____ as PRINCIPAL, and the _____ INSURANCE COMPANY, a Corporation duly organized under the laws of the State of _____, as Surety, are held and firmly bound unto the **CITY OF PADUCAH, KENTUCKY,** as Obligee, in the sum of:

$ _____ (_____ Dollars and _____ Cents) which sum, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, on the _____ day of _____, 20____, the Principal entered into a contract with the **CITY OF PADUCAH, KENTUCKY**, for _____ Project, which contract is by reference made a part hereof and is hereafter referred to as the Contract:

NOW, THEREFORE, the Condition of this Obligation is such that, if the Principal shall faithfully perform said contract according to its terms, covenants, and conditions, then this obligation shall be void; otherwise it shall remain in full force and effect.

SURETY: Signed and sealed this _____ day of _____ 20___.

_____
(Surety - Insurance Company)

_____
(Title)

(SEAL)

By: _____
Attorney-in-Fact

Attach Surety Power of Attorney

NOTICE OF AWARD

TO: **VENDOR**

PROJECT: ONE (1) PUMPER TRUCK

After consideration of all bids received for the above referenced **PROJECT**, you are hereby notified that your Bid dated _____, has been accepted as the responsive bid with the lowest evaluated bid price in accordance with the specifications. This Award is contingent upon final approval of the City of Paducah Board of Commissioners.

You are hereby required by the Information for Bidders to execute the Agreement and to furnish the required Bond(s) and Certificate of Insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said Bond(s) and Certificate of Insurance within the stipulated time period, said OWNER will be entitled to consider all your rights arising out of the OWNER'S acceptance of your bid as abandoned and as a forfeiture of your Bid Bond. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

OWNER
CITY OF PADUCAH, KY

By: _____
Public Works Director

Date: _____

ACCEPTANCE OF NOTICE

Receipt of this NOTICE is hereby acknowledged by: _____

of _____(Name of Company), this the ____ day of _____, 20__.

By _____

Title _____

NOTICE TO PROCEED

TO: **VENDOR**

PROJECT: ONE (1) PUMPER TRUCK

You are hereby notified to commence work in accordance with the Agreement dated _____, on or before _____, and you are to complete the WORK by _____. The contract completion date shall be adjusted for all documented shut down periods and approved extensions as outlined in the specifications.

OWNER
CITY OF PADUCAH, KY

By: _____
Public Works Director

Date: _____

ACCEPTANCE OF NOTICE

Receipt of this NOTICE is hereby acknowledged by: _____

of _____(Name of Company), this the ____ day of _____, 20___.

By _____

Title _____

CITY OF PADUCAH
PUBLIC WORKS DEPARTMENT
CHANGE ORDER

CHANGE ORDER NO: _____

DATE: _____

NAME OF PROJECT: One (1) Pumper Truck

OWNER: City of Paducah, Kentucky

VENDOR: _____

THE FOLLOWING CHANGES ARE HEREBY MADE TO THE CONTRACT DOCUMENTS:

ADDITIONS	$ _____
DEDUCTIONS	$ _____

CONTRACT PRICE DUE TO THIS CHANGE ORDER WILL BE INCREASED BY:	$ _____
ORIGINAL CONTRACT PRICE:	$ _____
CURRENT CONTRACT PRICE ADJUSTED BY PREVIOUS CHANGE ORDERS:	$ _____
NEW CONTRACT PRICE INCLUDING THIS CHANGE ORDER WILL BE:	$ _____
THE CONTRACT TIME WILL BE INCREASED BY:	XXX Days

APPROVALS REQUIRED:

_____ _____
VENDOR DATE

_____ _____
PUBLIC WORKS DIRECTOR DATE

_____ _____
MAYOR: DATE

INSURANCE AND LEGAL RESPONSIBILITY

The Vendor shall secure and maintain such insurance from an insurance company authorized to write casualty insurance in the state where the work is located as will protect himself, his Sub-Vendors, the Owner, including agents of the Owner, from claims for bodily injury, death or property damage, which may arise from operations under this Contract. The Vendor shall not commence work under this Contract until he has obtained all insurance required under this paragraph, and shall have filed the certificate of insurance or a certified copy of the insurance policy with the Owner. Each insurance policy shall contain a clause providing that it shall not be canceled by the insurance company without ten (10) days written notice to the Owner of intention to cancel.

The Vendor shall procure and maintain the following insurance in addition to the insurance required by law:

1. Commercial General Liability-Occurrence:
   a. $2,000,000 Minimum General Aggregate,
   b. $2,000,000 Products & Complete Aggregate,
   c. $1,000,000 Personal & Advertising,
   d. $1,000,000 each occurrence.

2. Automobile Liability: $1,000,000 per accident
   Liability shall include all owned, non-owned, and hired vehicles in connection with this project

3. Employers Liability:
   a. $1000,000 Each Accident Bodily Injury
   b. $500,000 Policy limit Bodily Injury by Disease
   c. $100,000 Each Employee bodily Injury by Disease

4. The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a. Policy contains no deductible clauses -or-
   b. Policy contains $_____deductible property damage clause; however, Company will pay claim and collect the deductible from the Insured.

5. Kentucky Workmen's Compensation Insurance: The Vendor shall furnish evidence of coverage of all employees by executing and delivering to the Owner the Form included in the specifications.

The cost of insurance is incidental to all contract items. All Sub-Vendors must meet the same minimum insurance requirements.

INDEMNITY

The Vendor shall indemnify and hold harmless the Owner and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting there from; and is caused in whole or in part by any negligent or willful act or omission of the Vendor, Sub-Vendor, his agents or employees, and/or anyone directly or indirectly employed by any of them or anyone for whose acts may be liable in the execution of the work or in guarding of it.

The Vendor shall obtain in the name of the Owner and shall maintain and pay the premiums for such insurance in such amount and with such provisions as will protect the Owner, its agents and employees, from contingent liability under this Contract and a copy of such insurance policy or policies shall be delivered to the Owner.

In any and all claims against the Owner, or any of their agents or employees, by any employee of the Vendor, Sub-Vendor and/or anyone directly or indirectly employed by any of them, or anyone for

whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Vendor or any Sub-Vendor under workmen's compensation acts, disability benefit acts or other employee benefits acts.

The obligation of the Vendor under this paragraph shall not extend to the liability of the Owner, his agents, or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications.

PERFORMANCE BOND AND LABOR AND MATERIALS PAYMENT BOND

The Vendor shall, at the time of execution of the contract, furnish a **Corporate Surety Performance Bond** and a **Labor and Materials Payment Bond** in the sums equal to **One Hundred Percent (100%)** of the Contract amount. The bonds shall be used as security for the faithful performance of the Contract and for the payment of all persons, firms or corporations to whom the Vendor may become legally indebted for labor, materials, tools, equipment, or services of any nature including utility and transportation services employed or used by him in performing the work. Such Bonds shall be in the form included in the specifications and shall bear a date the same as or subsequent to, the date of the Contract. The person who signs for the Surety Company shall attach the current Power-of-Attorney to the Bond. These Bonds shall be signed by a Guaranty of a Surety Company authorized to do business in Kentucky. The Bonds of individual Sureties and bonds issued by partnerships or corporations not in the Surety business are not acceptable.

The Performance Bond shall remain in full force and effect through the guarantee period of **One (1) Year** from the date of substantial completion. The Labor and Material Payment Bond shall continue in full force and effect for a period of **Seven (7) Months** after the last labor is performed and/or materials are furnished to the Project.

ACCIDENT PREVENTION

The Vendor shall exercise proper precaution at all times for the protection of persons and property. The safety provisions of all applicable laws and OSHA requirements shall be observed, and the Vendor shall take or cause to be taken such additional safety and health measures.

PERMITS, CERTIFICATES, LAWS, ORDINANCES, AND CODES

The Vendor shall, at his own expense, procure all permits, certificates and licenses required by the law for the execution of this project. In case of difference between building codes, specifications, state laws, local standards and ordinance, industry standards, utility company regulations and the Contract Documents, the most stringent shall govern. In case of difference between building codes, specifications, state laws, local standards and ordinance, industry standards, utility company regulations and the Contract Documents, the most stringent shall govern.

COMPLIANCE WITH ALL LAWS

The Vendor shall be familiar with and comply with all Federal, State, County and City laws, by-laws, ordinances, and regulations, which control the work, actions and operations of those engaged or employed in the work or which affect materials used. The Vendor shall comply with all aforementioned governs and shall relieve the City of any or all claims made against the Vendor arising from violations of any such governs by the Vendor, his employees or his or their action. The Vendor shall be in good standing with all governmental entities and not be delinquent on any Federal, State, Local or property taxes, including penalty and interest charges.

DRUG FEE WORK PLACE REQUIREMENTS

The Vendor, employees of the Vendor, Sub-Vendors, vendors or consultants shall have a substance abuse policy in accordance with OSHA and/or the U.S. Department of Transportation Safety Regulations.

GUARANTY

The Vendor shall warrant and guarantee, above and beyond the manufacturer warranties, for a period of **One (1) Year** from the date of final acceptance that the completed work is free from all defects due to faulty materials or workmanship. Additionally, the Vendor shall guarantee all materials, equipment furnished, and work performed for a period of **One (1) Year** from the date of final acceptance. The Owner will give notice of observed defects with reasonable promptness. Upon notice, the Vendor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts resulting from such defects. In the event that the Vendor should fail to make such repairs, adjustment, or other work that may be made necessary by such defects, the Owner may do so and charge the Vendor the cost thereby incurred.

MEDIATION

All claims, disputes, and other matters in question arising out of, or relating to, the contract documents or the breach thereof, except for the claims which have been waived by making an acceptance of final payment as provided herein, may be decided by mediation if the parties mutually agree. The award rendered by the mediators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

Notice of the request for mediation shall be filled in writing with the other party to the contract documents and a copy shall be filed with the Owner. Request for mediation shall in no event be made on any claim, dispute, or other matter in question which would be barred by the applicable statute of limitations.

The Vendor will carry on the work and maintain the progress schedule during any mediation proceedings, unless otherwise mutually agreed in writing.

OWNER'S RIGHT TO TERMINATE CONTRACT AND COMPLETE THE WORK

The Owner shall have the right to terminate the employment of the Vendor after giving five (5) days written notice of termination to the Vendor in the event of any default by the Vendor.

PROGRESS AND PAYMENT

CONTRACT TIME

Following the execution of the Agreement, the Vendor shall commence with the agreed Contract work regularly and uninterruptedly thereafter (unless otherwise directed in writing by the Owner) with such force as to secure the completion of the Contract in a responsible and timely manner as stated in the Agreement and in accordance with the specifications.

SCHEDULE OF COMPLETION

The Vendor shall submit, if requested by the Owner, schedules which shall show the order in which the Vendor proposes to carry on the work, with dates at which the Vendor will start the several parts of work, and estimated dates of completion of the several parts.

FAULTY MATERIALS OR WORK

Only materials conforming to the requirements and intent of the specifications will be used. Any materials found to be defective by the Owner shall be removed and replaced at the Vendor's expense. Failure or refusal by the Vendor to accomplish the removal and replacement of defective materials shall be grounds for Contract Termination.

CHANGES IN THE WORK

The Owner may, as the need arises, order changes in the work through additions, deletions and/or modifications without invalidating the Contract. Compensation affected by the change shall be adjusted at the time of ordering such change.

EXTRA WORK

New and unforeseen items of work found to be necessary and which cannot be covered by any item or combination of items for which there is a Contract price shall be classed as extra work. The Vendor shall do such extra work and furnish such materials as may be required for the proper completion or construction of the whole work contemplated upon a signed written Change Order from the Owner.

EXTENSION OF CONTRACT TIME

A delay beyond the Vendor's control occasioned by an Act of God, or act or omission on the part of the Owner, or by strikes, lockouts, fire, etc., may entitle the Vendor to an extension of time in which to complete the Contracted work as determined by the Owner, provided, however, that the Vendor shall within ten (10) days of such occurrence, give written notice to the Owner or cause of such delay and of his intention to request an extension of Contract time.

REQUESTS FOR PAYMENT

The Owner shall pay the Vendor upon completion of the Contract, subject to additions and deductions provided herein, the agreed contract amount, which shall constitute full compensation for the work and services authorized herein. The Owner reserves the right to withhold any payment or portions thereof if the Vendor fails to perform in accordance with the provisions of the contract or any modifications thereto.

OWNER'S ACTION ON A REQUEST FOR PAYMENT

Within **Thirty (30) days** from the date of receipt of a Request for Payment with all required documentation attached, the Owner will:

a. Pay the request for Payment upon approval of the work, or
b. Pay such other amount as may be decided is due the Vendor, informing the Vendor in writing of his reasons for paying the amended amount, or
c. Withhold payment, informing the Vendor of his reasons for withholding payment.

OWNER'S RIGHT TO WITHHOLD

The Owner may withhold payment in whole or in part to the extent necessary to protect from the loss on account of any of the following causes discovered subsequent to approval of a Request for Payment by the Owner.

a. Defective or incomplete work.

b. Evidence indicating the probable filing of claims by other parties against the Vendor.
c. Failure of the Vendor to make payments to sub-vendors, material supplier or labor.

CHANGES IN THE WORK

The Owner may, as the need arises, order changes in the work through additions, deletions or modifications without invalidating the Contract. Compensation affected by the change shall be adjusted at the time of ordering such change.

AFFIDAVITS OF PAYMENT

The Owner may request the Vendor at any time to furnish appropriate affidavits of payment, waivers and releases of liens from any supplier to the extent of the payment made for labor or materials furnished to the project.

TERMINATION OF VENDOR'S RESPONSIBILITY

The Contract will be considered complete subsequent to delivery as specified, inspection made by the Owner and complete payment made to the Vendor.

CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

The approval of the final Request for Payment by the Owner and the making of the final payment by the Owner to the Vendor shall not relieve the Vendor of responsibility for faulty materials or workmanship. The Owner will promptly give notice of faulty materials or workmanship and the Vendor shall promptly replace any such defects discovered within **One (1) Year** from the project completion date **or as guaranteed by Warranty.**

TECHNICAL SPECIFICATIONS
PUMPER TRUCK

INTENT

It shall be the intent of these specifications to cover the furnishing and delivery of a complete Pumper Truck for use by the City of Paducah Fire Department. These detailed specifications cover the requirements as to the type of construction and test to which the apparatus shall conform, together with certain details as to finish, equipment and appliances with which the successful Bidder shall conform. Minor details of construction and materials, which are not otherwise specified, are left to the discretion of the Vendor. The manufacturer shall provide loose equipment only when specified by the customer. Otherwise, in accordance with the current edition of NFPA 1901 standards, the proposal shall specify whether the fire department or apparatus dealership shall provide required loose equipment.

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 20 years. Further, Bidder shall maintain dedicated service facilities for the repair and service of products. Evidence of such a facility shall be included in the Bid Proposal.

Each Bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified and shall state the location of the factory where the apparatus is to be built. The Bidder shall also show that the company is in position to render prompt service and to furnish replacement parts.

Each bid shall be accompanied by a detailed set of Vendor'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.

QUALITY AND WORKMANSHIP

The design of the apparatus shall embody the latest approved automotive engineering practices. 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 which require periodic maintenance; ease of operation (including both pumping and driving); and symmetrical proportions. Construction shall be rugged and ample safety factors shall be provided to carry the loads specified and to meet both on and off road requirements and speed conditions as set forth under Performance Tests and Requirements.

Welding shall not be employed in the assembly of the apparatus in a manner that shall prevent the ready removal of any component part for service or repair. All steel welding shall follow American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding shall follow American Welding Society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding shall follow American Welding Society B2.1-2000 requirements for structural welding of sheet metal. Flux core arc welding to use alloy rods, type 7000, American Welding Society standards A5.20-E70T1. Employees classified as welders are tested and certified to meet American Welding Society codes upon hire and every three (3) years thereafter. The manufacturer shall be required to have an American Welding Society certified welding inspector in plant during working hours to monitor weld quality.

GENERAL CONSTRUCTION

The apparatus shall be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association.

ISO COMPLIANCE

The manufacturer shall operate a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the

quality systems that shall be established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance shall be included with the bid.

SINGLE SOURCE MANUFACTURER

Bids will only be accepted from a single source apparatus manufacturer. The definition of single source is a manufacturer that designs and manufactures their products using an integrated approach, including the chassis, cab and body being fabricated and assembled on the Bidder's premises. The warranties relative to the chassis and body design (excluding component warranties such as engine, transmission, axles, pump, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body and chassis). The Bidder shall provide evidence that they comply with this requirement.

NFPA 2016 STANDARDS

This unit shall comply with the NFPA standards effective January 1, 2016, except for fire department specifications that differ from NFPA specifications. These exceptions shall be set forth in the Statement of Exceptions.

Certification of slip resistance of all stepping, standing and walking surfaces shall be supplied with delivery of the apparatus.

A plate that is highly visible to the driver while seated shall be provided. This plate shall show the overall height, length, and gross vehicle weight rating.

The manufacturer shall have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company shall designate, in writing who is qualified to witness and certify test results.

NFPA COMPLIANCY

Apparatus proposed by the Bidder shall meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications shall be indicated in the proposal as "non-NFPA".

VEHICLE INSPECTION PROGRAM CERTIFICATION

The apparatus shall be third-party, independent, audit-certified through Underwriters Laboratory (UL) to the current edition of NFPA 1901 standards. The certification includes: all design, production, operational, and performance testing of the apparatus. (No exception)

APPROVAL DRAWING

A drawing of the proposed apparatus shall be provided for approval before construction begins. The sales representative shall also have a copy of the same drawing. The finalized and approved drawing shall become part of the contract documents. This drawing shall indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.
A "revised" approval drawing of the apparatus shall be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing.

ELECTRICAL WIRING DIAGRAMS

Two (2) electrical wiring diagrams, prepared for the model of chassis and body, shall be provided.

FACTORY TRIPS

There shall be a total of three (3) factory trips provided by the successful Bidder; to include a pre-construction/drawing approval for four (4) fire department personnel; a mid-point inspection trip for four

(4) fire department personnel, and a final inspection trip prior to delivery for four (4) fire department personnel. These trips shall include round trip transportation via commercial airline, meals, and lodging.

DELIVERY

The successful Bidder ("Vendor") shall deliver the vehicle to the Owner in care of the Public Works Department, Fleet Maintenance Division located at 1120 North 10th Street, Paducah, Kentucky 42001. The Apparatus, to insure proper break in of all components while still under warranty, shall be delivered under its own power - rail or truck freight shall not be acceptable. A qualified delivery engineer representing the Vendor shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in the proper operation under daily use.

The vehicle delivered shall be equipped with a full supply of fuel, oil and lubricants upon delivery. At the time of delivery, all equipment must meet or exceed federal, state and local safety, health, lighting and emission standards.

INSTRUCTION

Upon delivery, the Vendor shall provide a minimum of three (3) days training to properly instruct representatives of the Owner all methods associated with the proper operation and safe use of the Aerial Truck. This instruction shall include the service and maintenance required for proper operation under normal daily use.

INFORMATION REQUIRED

The manufacturer shall supply at time of delivery, **complete operation, maintenance and parts manuals covering the completed apparatus as delivered**. A permanent plate shall be mounted in the driver's compartment which specifies the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

SAFETY VIDEO

Documentation provided at the time of delivery shall also include an apparatus safety video, in DVD format. This video shall address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus. Safety procedures for the following shall be included: vehicle pre-trip inspection, chassis operation, pump operation, and maintenance.

PERFORMANCE TESTS AND REQUIREMENTS

A road test shall be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more shall be made under all driving conditions, during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle shall adhere to the following parameters:

A) The apparatus, when fully equipped and loaded, shall have not less than 25 percent nor more than 50 percent of the weight on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle.
B) The apparatus shall be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.
C) The service brakes shall be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system shall conform to Federal Motor Vehicle Safety Standards (FMVSS) 121.
D) The apparatus, fully loaded, shall be capable of obtaining a speed of 50 mph on a level concrete highway with the engine not exceeding its governed rpm (full load).

PUMP TEST

The pump shall be tested, approved, and certified by Underwriter's Laboratory at the manufacturer's expense. The test results and the pump manufacturer's certification of hydrostatic test;

the engine manufacturer's certified brake horsepower curve; and the manufacturer's record of pump construction details shall be forwarded to the Fire Department.

GENERATOR TEST

If the unit has a generator, the generator shall be tested, approved, and certified by Underwriters Laboratories at the manufacturer's expense. The test results shall be provided to the Fire Department at the time of delivery.

BREATHING AIR TEST

If the unit has breathing air, the apparatus manufacturer shall draw an air sample from the air system and certify that the air quality meets the requirements of NFPA 1989, *Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection.*

FAILURE TO MEET TEST

In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the Bidder within 30 days of the date of the first trial. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the Bidder of such changes, shall also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use by the purchaser during the above-specified period with the permission of the Bidder shall not constitute acceptance.

LIABILITY

The successful Bidder shall defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

AFTERMARKET SUPPORT WEBSITE

A Customer Service website shall provide authorized dealers access to comprehensive information pertaining to the maintenance and service of their customer's apparatus. This tool shall provide the authorized dealer the ability to service and support their customers to the best of their ability with factory support at their fingertips.
This website shall also be accessible to the end user through the guest login. Limited access is available and vehicle specific parts information accessible by entering a specific VIN number. All end users should see their local authorized dealer for additional support and service.

The website shall provide the following to the designated individuals:

- Authorized dealer only - ability to access truck detail information on the major components of the vehicle, warranty information, available vehicle photographs, vehicle drawings, sales options, applicable vehicle software downloads, etc.
- Authorized dealer and customer - parts look-up capability, with the aid of digital photographs, part drawings, and assembly drawings.
- Authorized dealer only - ability to electronically submit warranty claims directly to the factory for reimbursement.
- Authorized dealer only - accessibility to multiple dealer reports that allow the dealership to maintain communication with the customer on the status of orders, claims, and phone contacts.
- Authorized dealer and customer - access to all currently published Operation and Maintenance and Service publications.
- Authorized dealer only - access to manufacturer Service Bulletins and Work Instructions containing information on current service topics and recommendations provided.
- Authorized dealer and customer - access to upcoming training classes offered by the manufacturer.
- Authorized dealer only - access to interactive electronic learning modules (Operators Guides) covering the operation of major vehicle components.

- Authorized dealer only - access to customer service articles, corporate news, quarterly newsletters, and key contacts.

	Bidder Complies	
	Yes	No

SPECIFICATIONS FOR A TRIPLE COMBINATION PUMPER

GENERAL DESIGN AND CONSTRUCTION

The cab, chassis, pump module, and body are to be entirely designed, assembled and painted by the prime vehicle manufacturer, which minimizes third party involvement on engineering, design, service and warranty issues. ✓

All bidders will provide a list of the company, manufacturing location, and engineering source for each individual major component, including but not limited to the welded cab assembly, the pumphouse module assembly, the chassis assembly, body and electrical system. Apparatus using any subcontracted cab, chassis, pump module, electrical system or body will not be acceptable.

The apparatus will be designed with due consideration to distribution of load between the front and rear axles. Weight balance and distribution will be in accordance with the recommendations of the National Fire Protection Association.

The bidder will make accurate statements as to the apparatus weight and dimensions.

DELIVERY

Apparatus, to insure proper break in of all components while still under warranty, **will be delivered under its own power** - rail or truck freight will not be acceptable. A qualified delivery representative will deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered. ✓

MANUALS AND SERVICE INFORMATION

The manufacturer will supply at time of delivery, complete operation and maintenance manuals covering the complete apparatus as delivered. A permanent plate will be mounted in the drivers compartment which specifies the quantity and type of fluid required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle. ✓

SAFETY VIDEO

Since video is much more effective than written documentation and can be replayed for new personnel and as a refresher for existing personnel, an apparatus safety video, in DVD format will be provided at time of delivery. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus. Safety procedures for the following will be included on the video: vehicle pre trip inspection, chassis operation, pump operation and maintenance. ✓

PERFORMANCE TESTS AND REQUIREMENTS

A road test will be conducted with the apparatus fully loaded and a continuous run of ten (10) miles or more will be made under all driving conditions, during which time the apparatus will show no loss of power or overheating. The transmission drive shaft or shafts, and rear axle will ✓

	Bidder Complies	
	Yes	No
run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. Vehicle will adhere to the following parameters: A) The apparatus, when fully equipped and loaded, will have not less than 25 percent nor more than 50 percent of the weight on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. B) The apparatus will be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine. C) The service brakes will be capable of stopping a fully loaded vehicle in 35 feet at 20 mph on a level concrete highway. The air brake system will conform to Federal Motor vehicle Safety Standards (FMVSS) 121. D) The apparatus, fully loaded, will be capable of obtaining a speed of 50 mph on a level concrete highway with the engine not exceeding the governed rpm (full load).		
FAILURE TO MEET TEST In the event the apparatus fails to meet the test requirements of these specifications on the first trial, second trials may be made at the option of the bidder within 30 days of the date of the first trial. Such trials will be final and conclusive and failure to comply with these requirements will be cause for rejection. failure to comply with changes to conform to any clause of the specifications, within 30 days after notice is given to the bidder of such changes, will also be cause for rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the purchaser or its use by the purchaser during the above-specified period with the permission of the bidder will not constitute acceptance.	✓	
SINGLE SOURCE MANUFACTURER Bids will only be accepted from a single source apparatus manufacturer. The definition of single source is a manufacturer that designs and manufactures their products using an integrated approach, including the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body being designed, fabricated and assembled on the bidder's premises. The electrical system (hardwire or multiplex) will be both designed and integrated by the same apparatus manufacturer. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) must be from a single source manufacturer and not split between manufacturers (i.e. body, pumphouse, cab weldment and chassis). The bidder will provide evidence that they comply with this requirement. The bidder will state the location of the factory where the apparatus is to be built.	✓	

	Bidder Complies	
	Yes	No
NFPA 2016 STANDARDS This unit will comply with the NFPA standards effective January 1, 2016, except for fire department specifications that differ from NFPA specifications. These exceptions will be set forth in the Statement of Exceptions.	✓	
Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.		
All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required.Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.		
A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating.		
The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.		
An official of the company will designate, in writing, who is qualified to witness and certify test results.		
NFPA COMPLIANCY Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA".	✓	
VEHICLE INSPECTION PROGRAM CERTIFICATION To assure the vehicle is built to current NFPA standards, the apparatus, in its entirety, will be third-party, independent, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition of NFPA 1901. The certification includes: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus (no exception).	✓	
A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.		
PUMP TEST The pump will be tested, approved, and certified by Underwriter's Laboratory at the manufacturer's expense. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the manufacturer's record of pump construction details will be forwarded to the Fire Department.	✓	

	Bidder Complies	
	Yes	No
PERFORMANCE BOND NOT REQUESTED A performance bond will not be included. If requested at a later date, one will be provided to you for an additional cost and the following will apply:		
The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.	✓	
Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Bumper to Bumper warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed three (3) years from the date of such satisfactory acceptance and delivery, or the actual Bumper to Bumper warranty period, whichever is shorter.		
APPROVAL DRAWING A drawing of the proposed apparatus will be provided for approval before construction begins. The sales representative will also have a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.	✓	
A "revised" approval drawing of the apparatus will be prepared and submitted by the manufacturer to the purchaser showing any changes made to the approval drawing.		
ELECTRICAL WIRING DIAGRAMS Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.	✓	
CHASSIS The chassis provided will be a new, tilt type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility, eliminating any split responsibility. The chassis will be designed and manufactured for heavy duty service, with adequate strength and capacity for the intended load to be sustained and the type of service required.	✓	
WHEELBASE The wheelbase of the vehicle will be no greater than 197.00.	✓	
GVW RATING The gross vehicle weight rating will be a minimum of 48,500.	✓	

	Bidder Complies	
	Yes	No
FRAME The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus.	✓	
The side rails will have a 13.38" tall web over the front and mid sections of the chassis, with a continuous smooth taper to 10.75" over the rear axle.		
Each rail will have a section modulus of 25.992 cubic inches and a resisting bending moment (rbm) of 3,119,040 in-lb over the critical regions of the frame assembly, with a section modulus of 18.96 cubic inches with an rbm of 2,275,200 in-lb over the rear axle.		
The frame rails will be constructed of 120,000 psi yield strength heat-treated 0.38" thick steel with 3.50" wide flanges.		
FRONT AXLE The front axle will be a reverse "I" beam type with inclined king pins. It will be a Meritor™ axle, Model MFS-20, with a rated capacity of 21,500 lb.	✓	
The turning angle will be 45 degrees.		
A viewing window will be provided on each side of the axle for checking the oil level.		
FRONT SUSPENSION The front springs will be a Standens, three (3)-leaf, taper leaf design, 54.00" long x 4.00" wide, with a ground rating of 21,500 lb.	✓	
The two (2) top leaves will wrap the forward spring hanger pin. The top leaf will also wrap the rear spring hanger pin. Both the front and rear eyes will be Berlin style wraps that will place the eyes in the horizontal plane within the main leaf. This will reduce bending stress from acceleration and braking.		
A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.		
SHOCK ABSORBERS Monroe® Gas-Magnum® 65 heavy-duty telescoping shock absorbers will be provided on the front axle.	✓	
FRONT OIL SEALS Oil seals with viewing window will be provided on the front axle.	✓	
FRONT TIRES Front tires will be Goodyear® 425/65R22.50 radials, 20 ply G296 MSA tread, rated for 22,800 lb maximum axle load and 68 mph maximum speed.	✓	
The tires will be mounted on Alcoa 22.50" x 12.25" polished aluminum disc type wheels with a ten (10)stud, 11.25" bolt circle.		

	Bidder Complies	
	Yes	No
REAR AXLE The rear axle will be a Meritor™, Model RS-26-185, with a capacity of 27,000 lb.	✓	
TOP SPEED OF VEHICLE A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph.	✓	
REAR SUSPENSION The rear suspension will be Standens, semi-elliptical, 3.00" wide x 53.00" long, 12-leaf pack with a ground rating of 27,000 lb. The spring hangers will be castings. The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger. To reduce bending stress due to acceleration and braking, the front eye will be a berlin eye that will place the front spring pin in the horizontal plane within the main leaf. A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.	✓	
REAR OIL SEALS Oil seals will be provided on the rear axle(s).	✓	
REAR TIRES Rear tires will be four (4) Goodyear® 12R22.50 radials, 16 ply all season G622 RSD tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed. The tires will be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud 11.25" bolt circle.	✓	
TIRE BALANCE All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.	✓	
TIRE PRESSURE MANAGEMENT There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of six (6) tires. The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi. Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.	✓	
FRONT HUB COVERS Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.	✓	

	Bidder Complies	
	Yes	No
REAR HUB COVERS A pair of stainless steel high hat hub covers will be provided on rear axle hubs.	✓	
CHROME LUG NUT COVERS Chrome lug nut covers will be supplied on front and rear wheels.	✓	
MUD FLAPS Mud flaps will be installed behind the front and rear wheels of the apparatus.	✓	
WHEEL CHOCKS There will be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks with easy-grip handle provided.	✓	
WHEEL CHOCK BRACKETS There will be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets will be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets will be mounted below the left side rear compartment.	✓	
ANTI-LOCK BRAKE SYSTEM The vehicle will be equipped with a Meritor WABCO 4S4M, anti-lock braking system. The ABS will provide a 4-channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit will then reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.	✓	
BRAKES The service brake system will be full air type by Meritor™. Front brakes will be Model EX225 Disc Plus, disc type with automatic pad wear adjustment and 17.00" ventilated rotors for improved stopping distance. The rear brakes will be Meritor™ 16.50" x 7.00" cam operated with automatic slack adjusters. Dust shields will be provided.	✓	
BRAKE SYSTEM AIR COMPRESSOR The air compressor will be a Cummins/WABCO with 18.7 cubic feet per minute output.	✓	
BRAKE SYSTEM The brake system will include: • Bendix® dual brake treadle valve • Heated automatic moisture ejector on air dryer		

	Bidder Complies	
	Yes	No
• Total air system capacity of 4,362 cubic inches • Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi • Spring set parking brake system • Parking brake operated by a push-pull style control valve • A parking "brake on" indicator light on instrument panel • Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi • A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa) • 1/4 turn drain valve on each air tank The air tank will be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets (no exception).		
BRAKE SYSTEM AIR DRYER The air dryer will be WABCO System Saver 1200 with spin-on coalescing filter cartridge and 100 watt heater.	✓	
BRAKE LINES Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom where necessary in the chassis.	✓	
AIR INLET One (1) air inlet with 3D series male coupling will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will be located forward in the driver side lower step well of cab. A check valve will be provided to prevent reverse flow of air. The inlet will discharge into the "wet" tank of the brake system. A mating female fitting will also be provided with the loose equipment.	✓	
ADDITIONAL AIR TANK An additional air tank with 1,454 cubic inch displacement will be provided to increase the capacity of the air system. This tank will be dedicated for air horn use. The air tank will be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets (no exception). The output flow of the engine air compressor varies with engine rpm. Full compressor output is only achieved at governed engine speed. Engine speed may be limited by generators, pumps and other PTO driven options.	✓	
ENGINE The chassis will be powered by an electronically controlled engine as described below:	✓	

	Bidder Complies	
	Yes	No

Make:	Cummins
Model:	L9
Power:	450 hp at 2100 rpm
Torque:	1250 lb-ft at 1400 rpm
Governed Speed:	2200 rpm
Emissions Level:	EPA 2017
Fuel:	Diesel
Cylinders:	Six (6)
Displacement:	543 cubic inches (8.9L)
Starter:	Delco 39MT™
Fuel Filters:	Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter.

The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected.

HIGH IDLE

A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm. A switch will be installed, at the cab instrument panel, for activation/deactivation.

The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided, adjacent to the switch. The light will illuminate when the above conditions are met. The light will be labeled "OK to Engage High Idle."

ENGINE BRAKE

A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.

The driver will be able to turn the engine brake system on/off and have a high, medium and low setting.

The engine brake will activate when the system is on and the throttle is released.

The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine.

	Bidder Complies	
	Yes	No
The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated. The ABS system will automatically disengage the auxiliary braking device, when required.		
CLUTCH FAN A Horton® fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and fully engaged in "Pump" position.	✓	
ENGINE AIR INTAKE An air intake with an ember separator (to prevent road dirt, burning embers, and recirculating hot air from entering the engine) will be mounted at the front of the apparatus, on the passenger side of the engine. The ember separator will be mounted in the air intake with flame retardant, roto-molded polyethylene housing. It will be easily accessible by the hinged access panel at the front of the vehicle.	✓	
EXHAUST SYSTEM The exhaust system will be stainless steel from the turbo to the engine's aftertreatment device, and will be 4.00" in diameter. The exhaust system will include a single module aftertreatment device to meet current EPA standards. An insulation wrap will be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device . The exhaust will terminate horizontally ahead of the right side rear wheels. A tailpipe diffuser will be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.	✓	
RADIATOR The radiator and the complete cooling system will meet or exceed NFPA and engine manufacturer cooling system standards. For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The core will be made of aluminum fins, having a serpentine design, brazed to aluminum tubes. The tubes will be brazed to aluminum headers. No solder joints or leaded material of any kind will be acceptable in the core assembly. The radiator core will have a minimum frontal area of 1434 square inches. Supply tank made of glass-reinforced nylon and a return tank of cast aluminum alloy will be crimped on to the core assembly using header tabs and a compression gasket to complete the radiator core assembly. The radiator will be compatible with commercial antifreeze solutions. There will be a full steel frame around the entire radiator core assembly. The radiator core assembly will be isolated within the steel frame by rubber inserts to enhance cooling system durability and reliability. The radiator will be mounted in such a manner as to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven	✓	

	Bidder Complies	
	Yes	No
ground. The radiator assembly will be isolated from the chassis frame rails with rubber isolators. The radiator assembly will include an integral deaeration tank permanently mounted to the top of the radiator framework, with a readily accessible remote-mounted overflow tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap. A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system. A heavy-duty fan will draw in fresh, cool air through the radiator. Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.		
COOLANT LINES Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by the chassis manufacturer. Hose clamps will be stainless steel "constant torque type" to prevent coolant leakage. They will react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.	✓	
FUEL TANK A 65 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps (no exception). A 0.75" drain plug will be provided in a low point of the tank for drainage. A fill inlet will be located on the left hand side of the body and be covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only." A 0.50" diameter vent will be provided running from top of tank to just below fuel fill inlet. The tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume. All fuel lines will be provided as recommended by the engine manufacturer.	✓	
DIESEL EXHAUST FLUID TANK A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body forward of the rear axle. A 0.50" drain plug will be provided in a low point of the tank for drainage.	✓	

	Bidder Complies	
	Yes	No
A fill inlet will be located on the driver's side of the body and be covered with a hinged, spring loaded, polished stainless steel door that is marked "Diesel Exhaust Fluid Only". The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing. The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.		
FUEL SHUTOFF A fuel line shutoff valve will be installed on both the inlet and outlet of the primary fuel filter.	✓	
TRANSMISSION An Allison 5th generation, Model EVS 3000P, electronic torque converting automatic transmission will be provided. The transmission will be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display will indicate when service is due. Two (2) PTO openings will be located on both sides of converter housing (positions 4 o'clock and 8 o'clock) as viewed from the rear. A transmission temperature gauge with red light and audible alarm will be installed on the cab dash.	✓	
TRANSMISSION SHIFTER A five (5)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation. The transmission ratio will be: 1st 3.49 to 1.00 2nd 1.86 to 1.00 3rd 1.41 to 1.00 4th 1.00 to 1.00 5th 0.75 to 1.00 R 5.03 to 1.00	✓	
TRANSMISSION COOLER A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.	✓	
DRIVELINE Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1710 universal joints. The shafts will be dynamically balanced before installation.	✓	

	Bidder Complies	
	Yes	No
A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.		
STEERING A Ross, Model TAS-85, steering gear, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and an Eaton, Model VN20, hydraulic pump with integral pressure and flow control. All power steering lines will have wire braided lines with crimped fittings. A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.	✓	
STEERING ASSIST CYLINDER ON FRONT AXLE The front axle will be equipped with a Ross power assist cylinder to aid in the steering of the apparatus.	✓	
STEERING WHEEL The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.	✓	
LOGO AND CUSTOMER DESIGNATION ON DASH The dash panel will have an emblem containing the fire apparatus manufacturer's logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row. The first row of text will be: PADUCAH The second row of text will be: FIRE The third row of text will be: DEPARTMENT	✓	
BUMPER A one (1) piece, ten (10) gauge, 304-2B type polished stainless steel bumper, a minimum of 10.00" high, will be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength. The bumper will be extended 19.00" from front face of cab. Documentation will be provided, upon request to show that the options selected have been engineered for fit-up and approval for this modular bumper extension. A chart will be provided to indicate the option locations and will include, but not be limited to the following options: air horns, mechanical sirens, speakers, hose trays (with hose capacities), winches, lights, discharge, and suction connections.	✓	

	Bidder Complies	
	Yes	No
GRAVEL PAN A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face. The gravel pan will be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.	✓	
CENTER HOSE TRAY A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 150' of 1.75" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.	✓	
CENTER HOSE TRAY COVER A bright aluminum treadplate cover will be provided over the center hose tray. The cover will be attached with a stainless steel hinge. One (1) D-ring latch will secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position.	✓	
LIFT AND TOW MOUNTS Mounted to the frame extension will be lift and tow mounts. The lift and tow mounts will be designed and positioned to adapt to certain tow truck lift systems. The lift and tow mounts with eyes will be painted the same color as the frame.	✓	
TOW HOOKS No tow hooks are to be provided. This truck will be equipped with a lift and tow package with integral tow eyes.	✓	
CAB The cab will be designed specifically for the fire service and will be manufactured by the chassis builder. To provide quality at the source and single source customer support, the cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises (no exception). For reasons of structural integrity and enhanced occupant protection, the cab will be of heavy duty design, constructed to the following minimal standards. The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts) and rear wall areas. The A-pillar will be constructed of 0.25" heavy wall extrusions joined by a solid A356-T6 aluminum joint casting. The B-pillar and C-pillar will also be constructed from 0.25" heavy wall extrusions. The rear wall will be constructed of two (2) 4.00" x 2.00" outer aluminum extrusions and two (2) 3.00" x 2.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 7.50" x 3.50" x 0.125" thick roof extrusions to provide a cage-like structure with the A-pillar and	✓	

	Bidder Complies	
	Yes	No
roof extrusions being welded into a 0.75" thick corner casting at each of the front corners of the roof assembly.	✓	
The front of the cab will be constructed of a 0.25" thick firewall, covered with a 0.125" front skin (for a total thickness of 0.38"), and reinforced with 24.50" wide x 10.00" deep x 0.50" thick supports on each side of the engine tunnel. The cross-cab support will be welded to the A-pillar, 0.25" firewall, and engine tunnel, on the left and right sides.		
The cab floors will be constructed of 0.1875" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.44" of structural material at the front floor area. The front floor area will also be supported with three (3) 0.50" plates bolted together that also provides the mounting point for the cab lift. This tubing will run from the front of the cab to the 0.1875" thick engine tunnel, creating the structure to support the forces created when lifting the cab.		
The cab will be a full-tilt style. A three (3)-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.		
The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.		
The forward cab section will have an overall height (from the cab roof to the ground) of approximately 102.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 112.00". The raised portion will start at the most forward point of the B-pillar and continue rearward to the back of the cab. The overall height listed will be calculated based on a truck configuration with the lowest suspension weight ratings, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed.		
The cab will have an interior width of not less than 93.50". The driver and passenger seating positions will have a minimum 24.00" clear width at knee level.		
To reduce injuries to occupants in the seated positions, proper head clearance will be provided. The floor-to-ceiling height inside the forward cab will be no less than 60.25". The floor-to-ceiling height inside the crew cab will be no less than 62.95" in the center position and 68.75" in the outboard positions.		
The crew cab will measure a minimum of 57.50" from the rear wall to the backside of the engine tunnel (knee level) for optimal occupant legroom.		
INTERIOR CAB INSULATION The cab walls, ceiling and engine tunnel will be insulated in all strategic locations to maximize acoustic absorption and thermal insulation. The cab will be insulated with 2.00" insulation in the rear wall, 3.00" insulation in the side walls, and 1.50" insulation in the ceiling.	✓	

	Bidder Complies	
	Yes	No
FENDER LINERS Full-circular, aluminum inner fender liners in the wheel wells will be provided.	✓	
FAST SERVICE ACCESS FRONT TILT HOOD A full-width access hood will be provided for convenient access to engine coolant, steering fluid, wiper fluid, cab lift controls, headlight power modules, and ember separator. The hood will also provide complete access to the windshield wiper motor and components. The hood will be contoured to provide a sleek, automotive appearance. The hood will be constructed of two (2) fiberglass panels bonded together and will include reinforcing ribs for structural integrity. The hood will include air cylinders to hold the hood in open and closed positions, and a heavy duty latch system that will meet FMVSS 113 (Hood Latch System). The spring-loaded hood latch will be located at the center of the hood with a double-action release lever located behind the upper grille. The two (2)-step release requires the lever first be pulled to the driver side until the hood releases from the first latch (primary latch) then to the passenger side to fully release the hood (secondary latch).	✓	
ENGINE TUNNEL To provide structural strength, the engine tunnel sidewalls will be constructed of 0.50" aluminum plate that is welded to both the 0.25" firewall and 0.38" heavy wall extrusion under the crew cab floor. To maximize occupant space, the top edges will be tapered. The back of the engine tunnel will be no higher than 16.25" off the crew cab floor (no exception). The engine tunnel will be insulated on both sides for thermal and acoustic absorption. The underside of the tunnel will be covered with 1.00" thick polyether foam that is reinforced with an aluminized face. Thermal rating for this insulation will be -40 degrees Fahrenheit to 300 degrees Fahrenheit. The insulation will keep noise (dBA) levels at or lower than the specifications in the current edition of the NFPA 1901 standards.	✓	
CAB REAR WALL EXTERIOR COVERING The exterior surface of the rear wall of the cab will be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.	✓	
CAB LIFT A hydraulic cab lift system will be provided, consisting of an electric-powered hydraulic pump, fluid reservoir, dual lift cylinders, remote cab lift controls and all necessary hoses and valves. The hydraulic pump will have a backup manual override, for use in the event of an electrical failure. The cab lift controls will be located at the driver side front of the cab, easily accessible under the full width front access hood. The controls will include a permanently mounted raise/lower switch. For enhanced visibility during cab tilt operations, a remote control tether with on/off switch will be supplied on a coiled cord that will extend from 2.00' (coiled) to 6.00' (extended).	✓	

	Bidder Complies	
	Yes	No
The cab will be capable of tilting 42 degrees and 80 degrees with crane assist to accommodate engine maintenance and removal. The cab pivots will be located 46.00" apart to provide stability while tilting the cab. The rear of the cab will be locked down by a two (2)-point, automatic, hydraulic, double hook mechanism that fully engages after the cab has been lowered (self-locking). The dual 2.25" diameter hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the cab is in the tilt position. For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the driver side between the chassis and cab frame when cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered.		
Cab Lift Interlock The cab lift safety system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.	✓	
GRILLE A grille painted with an American flag screen, inserted behind a formed bright finished grille surround, will be provided on the front center of the cab, and will serve as an air intake to the radiator.	✓	
DOOR JAMB SCUFFPLATES All cab door jambs will be furnished with a polished stainless steel scuffplate, mounted on the striker side of the jamb.	✓	
FRONT CAB TRIM A band of 22 gauge polished stainless steel trim will be installed across the front of the cab, from door hinge to door hinge. The trim band will be centered on the head lights and applied with two (2)-sided tape. A 0.625" self adhesive trim strip will be applied around the perimeter of the trim band. There will be polished stainless steel corner covers provided over the painted cab corner where the cab turn signals are located.	✓	
SIDE OF CAB MOLDING Chrome molding will be provided on both sides of cab.	✓	
MIRRORS One (1) Ramco, Model 6000-PCHR, polished aluminum mirror will be mounted on each of the cab doors. The mirrors will be 9.25" wide x 13.50" high with a convex section. The mirror head will have a highly polished aluminum finish.	✓	

	Bidder Complies	
	Yes	No
The flat glass in each mirror will be heated and adjustable, with remote controls that are convenient to the driver. The convex section in each mirror will be heated and adjustable, with remote controls that are convenient to the driver. **CAB DOORS** The forward cab and crew cab doors will be the half-height style door. To enhance entry and egress to the cab, the forward cab doors will be a minimum of 43.59" wide x 64.71" high. The crew cab doors will measure a minimum of 37.87" wide x 73.75" high. The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.125". The exterior door skins will be constructed from 0.090" aluminum. The forward cab door windows will include a 7.50" high x 10.00" wide drop area at the front to enhance visibility. A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands. Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands. The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed. A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit. A chrome grab handle will be provided on the inside of each cab and crew cab door. A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted. The cab steps at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab. **Door Panels** The inner cab door panels will be constructed out of brushed stainless steel. The cab door panels will be removable.	✓ ✓	

	Bidder Complies	
	Yes	No
ELECTRIC WINDOW CONTROLS Each cab entry door will be equipped with an electrically operated tempered glass window. A window control panel will be located on the door panel within easy reach of the respective occupant. Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second. The driver control panel will contain a control switch for each cab door's window. All other door control panels will contain a single switch to operate the window within that door. The window switches will be connected directly to the battery power. This allows the windows to be raised and lowered when the battery switch is in the off position.	✓	
DUAL STEPS A dual step will be provided below each cab and crew cab door. The steps will be designed with a grip pattern punched into bright aluminum treadplate material providing support, slip resistance, and drainage. The steps will be a bolt-on design and provide a 24.00" wide x 7.00" deep stepping surface. The step design raises the middle step higher and closer to the cab floor, resulting in a 12.00" distance from the step to cab floor in the cab and a 13.50" distance from the step to cab floor in the crew cab. Stepping distances from the ground to first step will be 16.50" and from first step to middle step will be 12.00". The first step will be lit by a white 12 volt DC LED light provided on the step.	✓	
CAB EXTERIOR HANDRAILS A Hanson knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress. Each handrail will be will be provided with color choice backlit LED lights. The lights will be activated when the parking brake is applied.	✓	
STEP LIGHTS For reduced overall maintenance costs compared to incandescent lighting, there will be four (4) white LED step lights provided. The lights will be installed at each cab and crew cab door, one (1) per step. The lights will be located in the driver side front doorstep, driver side crew cab doorstep, passenger side front doorstep and passenger side crew cab doorstep. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The lights will be activated when the adjacent door is opened.	✓	
FENDER CROWNS Stainless steel fender crowns will be installed at the cab wheel openings. The fender crowns will have a radius outside corner that allows the fender crown to extend beyond the side wall of the front tires and also allow the crew cab doors to open fully.	✓	

	Bidder Complies	
	Yes	No
CREW CAB WINDOWS One (1) fixed window with tinted glass will be provided on each side of the cab, to the rear of the front cab door. The windows will be sized to enhance light penetration into the cab interior. The windows will measure 20.00" wide x 20.50" high.	✓	
WINDOWS, REAR The rear wall of the crew cab will have two (2) windows, each being 11.25" wide x 18.00" high.	✓	
MOUNTING PLATE ON ENGINE TUNNEL Equipment installation provisions will be installed on the engine tunnel. A .188" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will be located to the left of the officer and on the rear of the tunnel. It will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel 1.00" to allow for wire routing below the plate. The mounting surface will be painted to match the cab interior.	✓	
CAB INTERIOR With safety as the primary objective, the wrap-around style cab instrument panel will be designed with unobstructed visibility to instrumentation. The dash layout will provide the driver with a quick reference to gauges that allows more time to focus on the road. The center console will be a high impact ABS polymer and will be easily removable for access to the defroster. The center console will include louvers strategically located for optimal air flow and defrost capability to the windshield. The passenger side dashboard will be constructed of painted aluminum for durability and low maintenance. For enhanced versatility, the passenger side dash will include a flat working surface. To provide optional (service friendly) control panels, switches and storage modules, a painted aluminum overhead console will also be provided. To complete the cab front interior design, painted aluminum modesty panels will be provided under the dash on both sides of the cab. The driver side modesty panel will provide mounting for the battery switch and diagnostic connectors, while the passenger side modesty panel provides a glove box, and ground access to the main electrical distribution panel via quick quarter turn fasteners. To provide a deluxe automotive interior, the engine tunnel will be covered by leather grain vinyl that is resistant to oil, grease, and mildew. For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum. The headliner will be installed in both forward and rear cab sections. The headliner panel will be a composition of an aluminum panel covered with a sound barrier and upholstery.	✓	

	Bidder Complies Yes	Bidder Complies No
The cab structure will include designated raceways for electrical harness routing from the front of the cab to the rear upper portion of the cab. Raceways will be extruded in the forward door frame, floor, walls and overhead in the area where the walls meet the ceiling. The raceways located in the floor will be covered by aluminum extrusion, while the vertical and overhead raceways will be covered by painted aluminum covers. The raceways will improve harness integrity by providing a continuous harness path that eliminates wire chafing and abrasion associated with exposed wiring or routing through drilled metal holes. Harnesses will be laid in place. Routing through holes in tubing will not be accepted due to chaffing that installation causes.		
CAB INTERIOR UPHOLSTERY The cab interior upholstery will be 36 oz black vinyl. All cab interior materials will meet FMVSS 302 (flammability of interior materials).	✓	
CAB INTERIOR PAINT The following metal surfaces will be painted red, vinyl textured paint: • Modesty panel in front of driver • Vertical surface of dash in front of the officer (not applicable for recessed dash) • Glove box in front of the officer (if applicable) • Power distribution in front of the officer • Rear heater vent panels The remaining cab interior metal surfaces will be painted fire smoke gray, vinyl texture paint.	✓	
CAB FLOOR The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler. The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.	✓	
CAB DEFROSTER To provide maximum defrost and heating performance, a 54,961 BTU heater-defroster unit with 558 SCFM of air flow will be provided inside the cab. The defroster unit will be strategically located under the center forward portion of the instrument panel. For easy access, a removable metal cover will be installed over the defroster unit. The defroster will include an integral aluminum frame air filter, high performance dual scroll blowers, and ducts designed to provide maximum defrosting capabilities for the 1-piece windshield. The defroster ventilation will be built into the design of the cab dash instrument panel and will be easily removable for maintenance. The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build	✓	

	Bidder Complies	
	Yes	No
up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.		
CAB/CREW CAB HEATER Two (2) 36,702 BTU auxiliary heaters with 276 SCFM (each unit) of air flow will be provided inside the crew cab, one (1) in each outboard rear facing seat riser. The heaters will include high performance dual scroll blowers, one (1) for each unit. Outlets for the heaters will be located below each rear facing seat riser and below the fronts of the driver and passenger seats, for efficient airflow. An extruded aluminum plenum will be incorporated in the cab structure that will transfer heat to the forward cab seating positions.	✓	
The heater/defroster and crew cab heaters will be controlled by an integral electronic control panel. The heater control panel will allow the driver to control heat flow to the front and rear independently. The control panel will include variable adjustment for temperature and fan control, and be conveniently located on the dash in clear view of the driver. The control panel will include highly visible, progressive LED indicators for both fan speed and temperature.		
AIR CONDITIONING Due to the large space inside the cab, a high-performance, customized air conditioning system will be furnished. A 19.10 cubic inch compressor will be installed on the engine.	✓	
The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 64 degrees Fahrenheit in the forward section of the cab, and 69 degrees Fahrenheit in the rear section of the cab, at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.		
A roof-mounted condenser with a 63,000 BTU output that meets and exceeds the performance specification will be installed on the cab roof. Mounting the condenser below the cab or body would reduce the performance of the system and will not be acceptable. The condenser cover and mounting legs to be painted white as provided by the A/C manufacturer.		
The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include two (2) high performance cores and plenums with multiple outlets, one (1) plenum directed to the front and one (1) plenum directed to the rear of the cab.		
The evaporator unit will have a 49,000 BTU (4.08 tons) rating that meets and exceeds the performance specifications.		
Adjustable air outlets will be strategically located on the evaporator cover per the following: • Four (4) will be directed towards the drivers location • Four (4) will be directed towards the officers location • Eight (8) will be directed towards crew cab area		
The air conditioner refrigerant will be R-134A and will be installed by a certified technician.		

	Bidder Complies	
	Yes	No
The air conditioner will be controlled by dual zone integral electronic control panels for the heater, defroster and air conditioner. The cab control panel will be located in the center console. For ease of operation, the control panels will include variable adjustment for temperature and fan control.		
INTERIOR CAB INSULATION The cab walls, ceiling and engine tunnel will be insulated in all strategic locations to maximize acoustic absorption and thermal insulation. The cab will be insulated with 2.00" insulation in the rear wall, 3.00" insulation in the side walls, and 1.50" insulation in the ceiling. Headliners will be constructed from a 0.20" high density polyethylene corrugated material. Each headliner will be wrapped with a 0.25" thick foil faced poly damp low emissivity foam insulation barrier for acoustic and thermal control. Designed for maximum sound absorption and thermal insulation, the rear cab wall will be insulated with a 1.50" thick open cell acoustical foam. The thermal protection of the foam will provide and R-value of 4 per 1.00" thickness.	✓	
SPECIAL DRAIN TUBES Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan.	✓	
SUN VISORS Two (2) smoked Lexan™ sun visors provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab. There will be no retention bracket provided to help secure each sun visor in the stowed position.	✓	
GRAB HANDLE A black rubber covered grab handle will be mounted on the door post of the driver side cab door to assist in entering the cab. The grab handle will be securely mounted to the post area between the door and windshield. A long rubber grab handle will be mounted on the dash board in front of the officer.	✓	
ENGINE COMPARTMENT LIGHTS There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination. These light(s) will be activated automatically when the cab is raised.	✓	
ACCESS TO ENGINE DIPSTICKS For access to the engine oil and transmission fluid dipsticks, there will be a door on the engine tunnel, inside the crew cab. The door will be on the rear wall of the engine tunnel, on the	✓	

vertical surface. The door will be 17.75" wide x 12.75" high and be flush with the wall of the engine tunnel.

The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling. An additional port will be provided for filling the engine oil.

The door will have a rubber seal for thermal and acoustic insulation. One (1) flush latch will be provided on the access door.

CAB SAFETY SYSTEM

The cab will be provided with a safety system designed to protect occupants in the event of a side roll or frontal impact, and will include the following: ✓

- A supplemental restraint system (SRS) sensor will be installed on a structural cab member behind the instrument panel. The SRS sensor will perform real time diagnostics of all critical subsystems and will record sensory inputs immediately before and during a side roll or frontal impact event.
- A slave SRS sensor will be installed in the cab to provide capacity for eight (8) crew cab seating positions.
- A fault-indicating light will be provided on the vehicle's instrument panel allowing the driver to monitor the operational status of the SRS system.
- A driver side front air bag will be mounted in the steering wheel and will be designed to protect the head and upper torso of the occupant, when used in combination with the 3-point seat belt.
- A passenger side knee bolster air bag will be mounted in the modesty panel below the dash panel and will be designed to protect the legs of the occupant, when used in combination with the 3-point seat belt.
- Air curtains will be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall.
- Suspension seats will be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event.
- Seat belts will be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event.

FRONTAL IMPACT PROTECTION

The SRS system will provide protection during a frontal or oblique impact event. The system will activate when the vehicle decelerates at a predetermined G force known to cause injury to the occupants. The cab and chassis will have been subjected, via third party test facility, to a crash impact during frontal and oblique impact testing. Testing included all major chassis and cab components such as mounting straps for fuel and air tanks, suspension mounts, front suspension components, rear suspensions components, frame rail cross members, engine and transmission and their mounts, pump house and mounts, frame extensions and body mounts. The testing provided configuration specific information used to optimize the timing for firing the ✓

	Bidder Complies	
	Yes	No
safety restraint system. The sensor will activate the pyrotechnic devices when the correct crash algorithm, wave form, is detected (no exception). The SRS system will deploy the following components in the event of a frontal or oblique impact event: • Driver side front air bag • Passenger side knee bolster air bag • Air curtains mounted in the outboard bolster of outboard seat backs • Suspension seats will be retracted to the lowest travel position • Seat belts will be pre-tensioned to firmly hold the occupant in place		
SIDE ROLL PROTECTION The SRS system will provide protection during a fast or slow 90 degree roll to the side, in which the vehicle comes to rest on its side. The system will analyze the vehicle's angle and rate of roll to determine the optimal activation of the advanced occupant restraints. The SRS system will deploy the following components in the event of a side roll: • Air curtains mounted in the outboard bolster of outboard seat backs • Suspension seats will be retracted to the lowest travel position • Seat belts will be pre-tensioned to firmly hold the occupant in place	✓	
SEATING CAPACITY The seating capacity in the cab will be four (4).	✓	
DRIVER SEAT A seat will be provided in the cab for the driver. The seat design will be a cam action type with air suspension. For increased convenience, the seat will include electric controls to adjust the rake (15 degrees), height (1.75" travel) and horizontal (7.00" travel) position. Electric controls will be located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have a reclining back, adjustable from 20 degrees back to 45 degrees forward. Providing for maximum comfort, the seat back will be a high back style with manual lumbar adjustment lever, for lower back support, and will include minimum 7.50" deep side bolster pads for maximum support. The lumbar adjustment lever will be easily located at the lower outboard position of the seat cushion. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control). The seat will include the following features incorporated into the side roll protection system: • Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position. • A suspension seat safety system will be included. When activated in the event of a side roll, this system will pretension the seat belt and retract the seat to its lowest travel position.	✓	

	Bidder Complies	
	Yes	No
The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.		
OFFICER SEAT A seat will be provided in the cab for the passenger. The seat will be a cam action type with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control). To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not belted.	✓	
The seat back will be an SCBA back style with 7.5 degree fixed recline angle, and will include minimum 4.50" wide x 7.50" deep side bolster pads for maximum support. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.		
The seat will include the following features incorporated into the side roll protection system:		
Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.		
A suspension seat safety system will be included. When activated, this system will pretension the seat belt and then retract the seat to its lowest travel position.		
The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.		
FORWARD FACING DRIVER SIDE OUTBOARD SEAT There will be one (1) rear facing seat provided at the driver side outboard position in the crew cab. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control). To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle. It will activate an alarm indicating a seat is occupied but not buckled.	✓	
The seat back will be an SCBA back style with 7.5 degree fixed recline angle, and will include minimum 4.50" wide x 7.50" deep side bolster pads for maximum support. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.		
The seat will include the following features incorporated into the side roll protection system: • Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.		

- A seat safety system will be included. When activated, this system will pretension the seat belt around the occupant to firmly hold them in place in the event of a side roll.

The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

FORWARD FACING PASSENGER SIDE OUTBOARD SEAT

There will be one (1) rear facing seat provided at the passenger side outboard position in the crew cab. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control). To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.

The seat back will be an SCBA back style with 7.5 degree fixed recline angle, and will include minimum 4.50" wide x 7.50" deep side bolster pads for maximum support. The SCBA cavity will be adjustable from front to rear in 1.00" increments to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt and firmly hold the occupant in the event of a side roll.

The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

REAR FACING LEFT SIDE CABINET

A forward facing cabinet will be provided in the crew cab located at the left side outboard position.

will be 40.50" High

The cabinet will be 21.00" wide x ~~60.00"~~ high x 14.00" deep with one (1) Amdor rollup door with anodized finish, non-locking. The frame to frame opening of the cabinet will be 18.50" wide x 54.75" high. The minimum clear door opening will be 15.75" wide x 48.87" high.

The cabinet will include two (2) infinitely adjustable shelves with a 0.75" up-turned lippainted to match the cab interior.

The cabinet will include no louvers.

The cabinet will be constructed of smooth aluminum and painted to match the cab interior.

The cabinet will have a multiplug 110 volt system that will receive power when truck is plugged into shore power.

	Bidder Complies	
	Yes	No

CABINET LIGHT

There will be one (1) red Amdor LED strip light installed on the left side of the interior cabinet door opening and one (1) red Amdor LED strip light installed on the right side of the interior cabinet door opening. The lighting will be controlled by an automatic door switch.

FORWARD FACING CENTER CABNIET

Center facing cabinet will go from floor to ceiling. The compartment will have LED lighting and webbing ✓

The cabinet will include two (2) infinitely adjustable shelves with a 0.75" up-turned lip painted to match the cab interior.

The cabinet will include no louvers.

The cabinet will be constructed of smooth aluminum and painted to match the cab interior.

REAR FACING RIGHT SIDE CABINET

A forward facing cabinet will be provided in the crew cab located at the right side outboard position.

will be 40.50" High

The cabinet will be 21.00" wide x ~~60.00~~" high x 14.00" deep with one (1) Amdor rollup door with anodized finish, non-locking. The frame to frame opening of the cabinet will be 18.50" wide x 54.75" high. The minimum clear door opening of the cabinet will be 15.75" wide x 48.87" high.

The cabinet will include two (2) infinitely adjustable shelves with a 0.75" up-turned lippainted to match the cab interior.

The cabinet will include no louvers.

The cabinet will be constructed of smooth aluminum, and painted to match the cab interior.

Cabinet Light

There will be one (1) white Amdor LED strip light installed on the left side of the interior cabinet door opening and one (1) white Amdor LED strip light installed on the right side of the interior cabinet door opening. The lighting will be controlled by an automatic door switch.

REAR FACING OVERHEAD STORAGE COMPARTMENT

There will be two (2) overhead rear facing storage compartments installed at the raised roof within the crew cab, on each side of the air conditioner. The compartments will be approximately 22.00" wide x 10.00" high x 34.00" deep at the bottom. ✓

Each compartment will include one (1) lift up compartment door. Non-locking latch, paddle handle, and gas operated stay arms will be provided.

The compartment will be constructed of smooth aluminum and painted to match the cab interior.

	Bidder Complies	
	Yes	No
COMPARTMENT LIGHT The storage compartment lighting will consist of one (1) white Amdor LED strip light installed horizontally above each compartment door opening.	✓	
SEAT UPHOLSTERY All seat upholstery will be leather grain 36 oz black vinyl resistant to oil, grease and mildew. The cab will have four (4) seating positions.	✓	
AIR BOTTLE HOLDERS All SCBA type seats in the cab will have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket will include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp will constrain the SCBA bottle in the seat and will exceed the NFPA standard of 9G. Bracket designs with manual restraints (belts, straps, buckles) that could be inadvertently left unlocked and allow the SCBA to move freely within the cab during an accident, will not be acceptable. There will be a quantity of three (3) SCBA brackets.	✓	
SEAT BELTS All seating positions in the cab, crew cab and tiller cab (if applicable) will have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards. The 3-point shoulder type seat belts will also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location.	✓	
SHOULDER HARNESS HEIGHT ADJUSTMENT All seating positions furnished with 3-point shoulder type seat belts will include a height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. A total of six (6) seating positions will have the adjustable shoulder harness.	✓	
HELMET STORAGE PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.	✓	

	Bidder Complies	
	Yes	No
CAB DOME LIGHTS There will be four (4) dual LED dome lights with black bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed and located, one (1) on each side of the crew cab. The color of the LED's will be red and white. The white LED's will be controlled by the door switches and the lens switch. The color LED's will be controlled by the lens switch. In order to ensure exceptional illumination, each white LED dome light will provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.	✓	
CAB SPOTLIGHT There will be two (2) Golight® Stryker™, Model 30**4, white LED spotlights located on the cab roof, Each side of cab roof, final location at drawing approval. The spotlights will be mounted to the surface of the cab roof. These lights may be load managed when the parking brake is applied.	✓	
SPOTLIGHT CONTROLLER There will be one (1) wired dash mounted remote provided for each spotlight.	✓	
SPOTLIGHT CONTROLLER LOCATIONS The remotes to control the spotlights will be located one (1) within reach of the driver and one (1) within reach of the officer.	✓	
PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, section 5.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus. The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.	✓	
CAB INSTRUMENTATION The cab instrument panel will consist of gauges, an LCD display, telltale indicator lights, alarms, control switches, and a diagnostic panel. The function of instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section directly forward of the driver. Gauge and switch panels will be designed to be removable for ease of service and low cost of ownership.	✓	

	Bidder Complies	
	Yes	No
GAUGES The gauge panel will include the following ten (10) black gauges with black bezels to monitor vehicle performance: Voltmeter gauge (Volts) Low volts (11.8 VDC) Amber indicator on gauge assembly with alarm High volts (15 VDC) Amber indicator on gauge assembly with alarm Very low volts (11.3 VDC) Amber indicator on gauge assembly with alarm Very high volts (16 VDC) Amber indicator on gauge assembly with alarm Tachometer (RPM) Speedometer (Primary (outside) MPH, Secondary (inside) Km/H) Fuel level gauge (Empty - Full in fractions) Low fuel (1/8 full) Amber indicator on gauge assembly with alarm Very low fuel (1/32) fuel Amber indicator on gauge assembly with alarm Engine oil pressure gauge (PSI) Low oil pressure to activate engine warning lights and alarms Red indicator on gauge assembly with alarm Front air pressure gauge (PSI) Low air pressure to activate warning lights and alarm Red indicator on gauge assembly with alarm Rear air pressure gauge (PSI)	✓	

	Bidder Complies	
	Yes	No
Low air pressure to activate warning lights and alarm		
Red indicator on gauge assembly with alarm		
Transmission oil temperature gauge (Fahrenheit)		
High transmission oil temperature activates warning lights and alarm	✓	
Amber indicator on gauge assembly with alarm		
Engine coolant temperature gauge (Fahrenheit)		
High engine temperature activates an engine warning light and alarm		
Red indicator on gauge assembly with alarm		
Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions)		
Low fluid (1/8 full)		
Amber indicator on gauge assembly with alarm		
All gauges and gauge indicators will perform prove out at initial power-up to ensure proper performance.		
INDICATOR LAMPS To promote safety, the following telltale indicator lamps will be integral to the gauge assembly and are located above and below the center gauges. The indicator lamps will be "dead-front" design that is only visible when active. The colored indicator lights will have descriptive text or symbols.	✓	
The following amber telltale lamps will be present:		
Low coolant		
Trac cntl (traction control) (where applicable)		
Check engine		
Check trans (check transmission)		
Aux brake overheat (Auxiliary brake overheat)		
Air rest (air restriction)		
Caution (triangle symbol)		
Water in fuel		
DPF (engine diesel particulate filter regeneration)		

	Bidder Complies	
	Yes	No
Trailer ABS (where applicable)		
Wait to start (where applicable)		
HET (engine high exhaust temperature) (where applicable)		
ABS (antilock brake system)	✓	
MIL (engine emissions system malfunction indicator lamp) (where applicable)		
SRS (supplemental restraint system) fault (where applicable)		
DEF (low diesel exhaust fluid level)		
The following red telltale lamps will be present:		
Warning (stop sign symbol)		
Seat belt		
Parking brake		
Stop engine		
Rack down		
The following green telltale lamps will be provided:		
Left turn		
Right turn		
Battery on		
The following blue telltale lamp will be provided:		
High beam		
ALARMS Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.	✓	
Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.		
Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms will intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still		

	Bidder Complies	
	Yes	No
exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.		
INDICATOR LAMP AND ALARM PROVE-OUT Telltale indicators and alarms will perform prove-out at initial power-up to ensure proper performance.	✓	
CONTROL SWITCHES For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver.	✓	
Emergency master switch: A molded plastic push button switch with integral indicator lamp will be provided. Pressing the switch will activate emergency response lights and siren control. A green lamp on the switch provides indication that the emergency master mode is active. Pressing the switch again disables the emergency master mode.		
Headlight / Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking lights and the headlights. The second switch position will activate the parking lights. The third switch position will activate the headlights.		
Panel backlighting intensity control switch: A three (3)-position momentary rocker switch will be provided. The first switch position decreases the panel backlighting intensity to a minimum level as the switch is held. The second switch position is the default position that does not affect the backlighting intensity. The third switch position increases the panel backlighting intensity to a maximum level as the switch is held.		
The following standard controls will be integral to the gauge assembly and are located below the right hand gauges. All switches have backlit labels for low light applications.		
High idle engagement switch: A two (2)-position momentary rocker switch with integral indicator lamp will be provided. The first switch position is the default switch position. The second switch position will activate and deactivate the high idle function when pressed and released. The "Ok To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.		
"Ok To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.		
The following standard controls will be provided adjacent to the cab gauge assembly within easy reach of the driver. All switches will have backlit labels for low light applications.		
Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will deactivate vehicle ignition. The second switch position will activate vehicle ignition. The third momentary position will disable the Command Zone audible alarm if		

	Bidder Complies	
	Yes	No
held for three (3) to five (5) seconds. A green indicator lamp will be activated with vehicle ignition.		
Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.		
4-way hazard switch: A two (2)-position maintained rocker switch will be provided. The first switch position will deactivate the 4-way hazard switch function. The second switch position will activate the 4-way hazard function. The switch actuator will be red and includes the international 4-way hazard symbol.		
Heater, defroster, and optional air conditioning control panel: A control panel with membrane switches will be provided to control heater/defroster temperature and heater, defroster, and air conditioning fan speeds. A green LED status bar will indicate the relative temperature and fan speed settings.		
Turn signal arm: A self-canceling turn signal with high beam headlight and windshield wiper/washer controls will be provided. The windshield wiper control will have high, low, and intermittent modes.		
Parking brake control: An air actuated push/pull park brake control valve will be provided.		
Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.		
CUSTOM SWITCH PANELS The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the overhead console on the driver's side, up to four (4) switch panels in the engine tunnel console facing the driver, up to four (4) switch panels in the overhead console on the officer's side and up to two (2) switch panels in the engine tunnel console facing the officer. All switches will have backlit labels for low light applications.	✓	
DIAGNOSTIC PANEL A diagnostic panel will be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist. The diagnostic panel will include the following:	✓	
Engine diagnostic port		
Transmission diagnostic port		
ABS diagnostic port		

	Bidder Complies	
	Yes	No
SRS diagnostic port (where applicable) USB diagnostic port ABS diagnostic switch (blink codes flashed on ABS telltale indicator) Diesel particulate filter regeneration switch (where applicable) Diesel particulate filter regeneration inhibit switch (where applicable)		
CAB LCD DISPLAY A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel. The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function. The upper left section will display the outside ambient temperature. The upper right section will display odometer, trip mileage, PTO hours, fuel consumption, engine hours, and other configuration specific information. The bottom section will display INFO, CAUTION, and WARNING messages. Text messages will automatically activate to describe the cause of an audible caution or warning alarm. The LCD will be capable of displaying multiple text messages should more than one caution or warning condition exist.	✓	
AIR RESTRICTION INDICATOR A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.	✓	
OFFICER SPEEDOMETER A Class I digital display speedometer will be recessed into the instrument panel Determined at drawing approval.	✓	
"DO NOT MOVE APPARATUS" INDICATOR A flashing red indicator light, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On." The same circuit that activates the Do Not Move Apparatus indicator will activate a pulsing alarm when the parking brake is released.	✓	
DO NOT MOVE TRUCK MESSAGES Messages will be displayed on the gauge panel LCD located forward of the steering wheel directly in front of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged). The following messages will be displayed (where applicable): • Do Not Move Truck • DS Cab Door Open (Driver's Side Cab Door Open)	✓	

- PS Cab Door Open (Passenger's Side Cab Door Open)
- DS Crew Cab Door Open (Driver's Side Crew Cab Door Open)
- PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open)
- DS Body Door Open (Driver's Side Body Door Open)
- PS Body Door Open (Passenger's SIde Body Door Open)
- Rear Body Door Open
- DS Ladder Rack Down (Driver's Side Ladder Rack Down)
- PS Ladder Rack Down (Passenger's Side Ladder Rack Down)
- Deck Gun Not Stowed
- Lt Tower Not Stowed (Light Tower Not Stowed)
- Hatch Door Open
- Fold Tank Not Stowed (Fold-A-Tank Not Stowed)
- Aerial Not Stowed (Aerial Device Not Stowed)
- Stabilizer Not Stowed
- Steps Not Stowed
- Handrail(s) Not Stowed

Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.

SWITCH PANELS

The emergency light switch panel will have a master switch for ease of use plus individual switches for selective control. Each switch panel will contain eight (8) membrane-type switches each rated for one million (1,000,000) cycles. Panels containing less than eight (8) switch assignments will include non-functioning black appliqués. Documentation will be provided by the manufacturer indicating the rated cycle life of the switches. The switch panel(s) will be located in the overhead position above the windshield on the driver side overhead to allow for easy access. ✓

Additional switch panel(s) will be located in the overhead position(s) above the windshield or in designated locations on the lower instrument panel layout.

The switches will be membrane-type and also act as an integral indicator light. For quick, visual indication the entire surface of the switch will be illuminated white whenever back lighting is activated and illuminated green whenever the switch is active. An active illuminated switch will flash when interlock requirements are not met or device is actively being load managed. For ease of use, a two (2)-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed in the center of the switch. The label will allow light to pass through the letters for ease of use in low light conditions.

WIPER CONTROL

For simple operation and easy reach, the windshield wiper control will be an integral part of the directional light lever located on the steering column. The wiper control will include high and low ✓

	Bidder Complies	
	Yes	No
wiper speed settings, a one (1)-speed intermittent wiper control and windshield washer switch. The control will have a "return to park" provision, which allows the wipers to return to the stored position when the wipers are not in use.		
SPARE CIRCUIT There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus.	✓	
The above wires will have the following features:		
The positive wire will be connected directly to the ignition switched power.		
The negative wire will be connected to ground.		
Wires will be protected to 15 amps at 12 volts DC.		
Power and ground will terminate Passenger forward area of engine tunnel.		
Termination will be with 15 amp, power point plug with rubber cover.		
Wires will be sized to 125% of the protection.		
This circuit(s) may be load managed when the parking brake is set.		
CUSTOMER SUPPLIED RADIO WIRING There will be one (1) 12 volt combination wiring leads of which each will include one (1) battery switched, one (1) ignition and one (1) negative for use with radio equipment.		
Each lead will be 18.00" long and be provided Officer Dash. The leads will be clearly marked in a coil and terminate with butt splices.	✓	
A breaker rated for 30 amps will be provided for circuit protection of the battery switched lead with a minimum of 10 gauge wire.		
A breaker rated for 7.5 amps will be provided for circuit protection of the ignition lead.		
The wires will be colored coded as follows: • red for battery switched • yellow for ignition • black for ground		
INFORMATION CENTER A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area. The LCD display will be programmed to read US Customary.	✓	

	Bidder Complies	
	Yes	No

VEHICLE DATA RECORDER

There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided. ✓

The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.

The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs:

- Vehicle Speed - MPH
- Acceleration - MPH/sec
- Deceleration - MPH/sec
- Engine Speed - RPM
- Engine Throttle Position - % of Full Throttle
- ABS Event - On/Off
- Seat Occupied Status - Yes/No by Position
- Seat Belt Buckled Status - Yes/No by Position
- Master Optical Warning Device Switch - On/Off
- Time - 24 Hour Time
- Date - Year/Month/Day

Seat Belt Monitoring System

A seat belt monitoring system (SBMS) will be provided. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following: ✓

- Seat Occupied & Buckled = Green LED indicator illuminated
- Seat Occupied & Unbuckled = Red LED indicator with audible alarm
- No Occupant & Buckled = Red LED indicator with audible alarm
- No Occupant & Unbuckled = No indicator and no alarm

The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.

RADIO ANTENNA MOUNT

There will be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed on the right side on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the instrument panel area. A weatherproof cap will be installed on the mount. ✓

VEHICLE CAMERA SYSTEM

There will be a color vehicle camera system provided with the following: ✓

	Bidder Complies	
	Yes	No

- One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse.

The camera image will be displayed on a 7.00" LCD display located in view of the driver in the custom dash, per instrument panel layout. The display will include manual camera activation capability and audio from the active camera.

The following components will be included:

- One (1) MO700136DC, display
- One (1) SV-CW134639CAI, camera
- All necessary cables

ELECTRICAL POWER CONTROL SYSTEM ✓

The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible.

Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership.

Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA.

SOLID-STATE CONTROL SYSTEM ✓

A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic modules located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices.

Factory and field re programmable to accommodate changes to the vehicle's operating parameters

For increased reliability and simplified use the control system modules will include the following attributes:

- Green LED indicator light for module power

	Bidder Complies	
	Yes	No
• Red LED indicator light for network communication stability status • Control system self test at activation and continually throughout vehicle operation • No moving parts due to transistor logic • Software logic control for NFPA mandated safety interlocks and indicators • Integrated electrical system load management without additional components • Integrated electrical load sequencing system without additional components • Customized control software to the vehicle's configuration • Factory and field reprogrammable to accommodate changes to the vehicle's operating parameters • Complete operating and troubleshooting manuals • USB connection to the main control module for advanced troubleshooting		
To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules will meet the following specifications: • Module circuit board will meet SAE J771 specifications • Operating temperature from -40C to +70C • Storage temperature from -40C to +70C • Vibration to 50g		
IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter)		
Operating voltage from eight (8) volts to 16 volts DC		
The main controller will activate status indicators and audible alarms designed to provide warning of problems before they become critical.		
CIRCUIT PROTECTION AND CONTROL DIAGRAM Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information.	✓	
ON-BOARD ELECTRICAL SYSTEM DIAGNOSTICS Advanced on-board diagnostic messages will be provided to support rapid troubleshooting of the electrical power and control system. The diagnostic messages will be displayed on the information center located at the driver's position.	✓	
The on-board information center will include the following diagnostic information: • Text description of active warning or caution alarms • Simplified warning indicators • Amber caution indication with intermittent alarm • Red warning indication with steady tone alarm		

	Bidder Complies	
	Yes	No
TECH MODULE WITH WIFI An in cab module will provide WiFi wireless interface and data logging capability (no exception). The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will provide an external antenna connection allowing a line of site communication range of up to 300 feet with a roof mounted antenna. The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone™, control and information system. The data logging capability will record faults from the engine, transmission, ABS and Command Zone, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data logger will provide up to 2 Gigabytes of data storage. A USB connection will be provided on the Tech Module. It will provide a means to download data logger information and update software in the device.	✓	
PROGNOSTICS A software based vehicle tool will be provided to predict remaining life of the vehicles critical fluid and events (no exception). The system will send automatic indications to the Command Zone, color display and/or wireless enabled device to proactively alert of upcoming service intervals. Prognostics will include: • Engine oil and filter • Transmission oil and filter • Pump oil (if equipped) • Foam oil (if equipped) • Aerial oil and filter (if equipped)	✓	
ADVANCED DIAGNOSTICS An advanced, Windows-based, diagnostic software program will be provided for this control system. The software will provide troubleshooting tools to service technicians equipped with a Windows-based computer or wireless enabled device. The service and maintenance software will be easy to understand and use and have the ability to view system input/output (I/O) information.	✓	
INDICATOR LIGHT AND ALARM PROVE-OUT SYSTEM A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.	✓	

	Bidder Complies	
	Yes	No
VOLTAGE MONITOR SYSTEM A voltage monitoring system will be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system will provide visual and audible warning when the system voltage is below or above optimum levels. The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.	✓	
DEDICATED RADIO EQUIPMENT CONNECTION POINTS There will be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment. The studs will consist of the following: • 12-volt 40-amp battery switched power • 12-volt 60-amp ignition switched power • 12-volt 60-amp direct battery power There will also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.	✓	
ENHANCED SOFTWARE The solid-state control system will include the following software enhancements: All perimeter lights and scene lights (where applicable) will be deactivated when the parking brake is released. Cab and crew cab dome lights will remain on for ten (10) seconds for improved visibility after the doors close. The dome lights will dim after ten (10) seconds or immediately if the vehicle is put into gear. Cab and crew cab perimeter lights will remain on for ten (10) seconds for improved visibility after the doors close. The dome lights will dim after ten (10) seconds or immediately if the vehicle is put into gear.	✓	
EMI/RFI PROTECTION To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source. The apparatus will have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system will meet, without exceptions, electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10Khz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets	✓	

	Bidder Complies	
	Yes	No
SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10Khz-1GHz to 100 Volts/Meter requirements. Component and partial (incomplete) vehicle testing is not adequate as overall vehicle design can impact test results and thus is not acceptable by itself. EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. The electrical system will be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI/RFI susceptibility. **ELECTRICAL** All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Electrical wiring and equipment will be installed utilizing the following guidelines: 1. All holes made in the roof will be caulked with silicon, rope caulk is not acceptable. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof. 2. Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body. 3. Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work. 4. Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug). 5. All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area. 6. All electrical terminals in exposed areas will have silicon (1890) applied completely over the metal portion of the terminal. All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.	✓	

	Bidder Complies	
	Yes	No
An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order. The results of the tests will be recorded and provided to the purchaser at time of delivery.		
BATTERY SYSTEM There will be four (4) 12 volt Exide®, Model 31S950X3W, batteries that include the following features will be provided: • 950 CCA, cold cranking amps • 190 amp reserve capacity • High cycle • Group 31 • Rating of 3800 CCA at 0 degrees Fahrenheit • 760 minutes of reserve capacity • Threaded stainless steel studs Each battery case will be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover will be manifold vented with a central venting location to allow a 45 degree tilt capacity. The inside of each battery will consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.	✓	
BATTERY SYSTEM There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.	✓	
MASTER BATTERY SWITCH There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system. An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.	✓	
BATTERY COMPARTMENTS The batteries will be stored in well-ventilated compartments that are located under the cab and bolted directly to the chassis frame. The battery compartments will be constructed of 3/16" steel plate and be designed to accommodate a maximum of three (3) group 31 batteries in each compartment. The compartments will include formed fit heavy-duty roto-molded polyethylene battery tray inserts with drains on each side of the frame rails. The batteries will be mounted inside of the roto-molded trays.	✓	
JUMPER STUDS One (1) set of battery jumper studs with plastic color-coded covers will be installed on the battery box on the driver's side. This will allow enough room for easy jumper cable access.	✓	

	Bidder Complies	
	Yes	No
BATTERY CHARGER There will be an IOTA™, Model DSL 75, battery charger with IQ4, controller provided. The battery charger will be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger. There will be a Kussmaul™, Model #091-94-12, remote indicator included. The battery charger will be located in the left body compartment mounted on the left wall as high as possible. The battery charger indicator will be located near the driver's seat riser with special bracketry.	✓	
AUTO EJECT FOR SHORELINE There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus. The shoreline inlet(s) will include red weatherproof flip up cover(s). There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting. The shoreline(s) will be connected to the battery charger. There will be a mating connector body supplied with the loose equipment. There will be a label installed near the inlet(s) that state the following: • Line Voltage • Current Ratting (amps) • Phase • Frequency The shoreline receptacle will be located on the driver side of cab, above wheel.	✓	
ALTERNATOR There will be a C.E Niehoff, Model C531 or C537 alternator provided. It will have a rated output current of 360 amps, as measured by SAE method J56. It will have a custom three (3)-set point voltage regulator, manufactured by C. E. Niehoff. The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.	✓	
ELECTRONIC LOAD MANAGER An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system.	✓	

	Bidder Complies	
	Yes	No

For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed.

The system will include the following features:

- System voltage monitoring.
- A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off.
- Sixteen available electronic load shedding levels.
- Priority levels can be set for individual outputs.
- High Idle to activate before any electric loads are shed and deactivate with the service brake.
    - If enabled:
        - "Load Man Hi-Idle On" will display on the information center.
        - Hi-Idle will not activate until 30 seconds after engine start up.
- Individual switch "on" indicator to flash when the particular load has been shed.
- The information center indicates system voltage.

The information center, where applicable, includes a "Load Manager" screen indicating the following:

- Load managed items list, with priority levels and item condition.
- Individual load managed item condition:
    - ON = not shed
    - SHED = shed

SEQUENCER

A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator. ✓

For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed.

Emergency light sequencing will operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation.

	Bidder Complies	
	Yes	No
When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order. Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals: • Cab Heater and Air Conditioning • Crew Cab Heater (if applicable) • Crew Cab Air Conditioning (if applicable) • Exhaust Fans (if applicable) • Third Evaporator (if applicable)		
HEADLIGHTS There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights mounted in the front quad style, chrome housing on each side of the cab grille: • the outside light on each side will contain a part number 055***1 low beam module • the inside light on each side will contain a part number 055***1 high beam module • the headlight to include chrome bezels The low beam lights will be activated when the headlight switch is on. The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.	✓	
DIRECTIONAL LIGHTS There will be two (2) Whelen® 600 series, LED combination directional/marker lights provided. The lights will be located on the outside cab corners, next to the headlights. The color of the lenses will be the same color as the LED's.	✓	
INTERMEDIATE LIGHT There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.	✓	
CAB CLEARANCE/MARKER/ID LIGHTS There will be seven (7) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations: • Three (3) amber LED identification lights will be installed in the center of the cab above the windshield. • Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield. • Two (2) amber LED marker lights will be installed, one (1) on each side above the cab doors.	✓	

	Bidder Complies	
	Yes	No

REAR CLEARANCE/MARKER/ID LIGHTING

There will be a three (3) LED light bar used as identification lights located at the rear of the apparatus per the following: ✓

- As close as practical to the vertical centerline
- Centers spaced not less than 6.00" or more than 12.00" apart
- Red in color
- All at the same height

There will be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:

- To indicate the overall width of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the rear
- All at the same height

There will be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following:

- To indicate the overall length of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the side
- All at the same height

There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

Per FMVSS 108 and CMVSS 108 requirements.

REAR FMVSS LIGHTING

The rear stop/tail and directional LED lighting will consist of the following: ✓

- Two (2) Whelen®, Model M6BTT, red LED stop/tail lights
- Two (2) Whelen, Model M6T, amber LED arrow turn lights

	Bidder Complies	
	Yes	No
The lights will be provided with color lenses. The lights will be mounted in a polished combination housing. There will be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing. **LICENSE PLATE BRACKET** There will be one (1) license plate bracket mounted on the rear of the body. A white LED light will illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear. **LIGHTING BEZEL** There will be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights. **BACK-UP ALARM** A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels. **CAB PERIMETER SCENE LIGHTS** There will be four (4) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" white LED strip lights provided, one (1) for each cab door. These lights will be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights. **PUMP HOUSE PERIMETER LIGHTS** There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, one (1) each side. If the combination of options in the vehicle does not permit clearance for a 20.00" light, a 12.00" version of the Amdor light will be installed. The lights will be controlled by the same means as the body perimeter lights. **BODY PERIMETER SCENE LIGHTS** There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens, 20.00" long, white LED's, 12 volt DC lights provided at the rear step area of the body, one (1) each side shining to the rear. The perimeter scene lights will be activated when the parking brake is applied.	✓ ✓ ✓ ✓ ✓	

	Bidder Complies	
	Yes	No
STEP LIGHTS Four (4) white LED step lights will be provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. These step lights will be actuated with the pump panel light switch. All other steps on the apparatus will be illuminated per the current edition of NFPA 1901.	✓	
12 VOLT LIGHTING There will be two (2) HiViz FIRETECH, Model FT-B-46-*, 46.00" 12 volt DC LED light(s) with with a combination of flood and spot optics and adjustable mounting brackets mounted One on each side of crew cab. The color of the light housing(s) and brackets will be white. The light(s) selected above will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel. These light(s) may be load managed when the parking brake is applied.	✓	
12 VOLT LIGHTING There will be one (1) HiViz FIRETECH, Model FT-B-46-*, 46.00" 12 volt DC LED light(s) with with a combination of flood and spot optics and adjustable mounting brackets mounted One on each side of upper body rear most location. The color of the light housing(s) and brackets will be painted parts of the light housing and brackets to be white, and internal optic holder to be black chrome. The light(s) selected above will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel. These light(s) may be load managed when the parking brake is applied.	✓	
12 VOLT LIGHTING – Providing a Ridgid bar as per page 92 There will be a HiViz Model FT-B-54-2PKIT-*, 2.49" high x 54.60" long x 2.45" deep 12 volt DC dual light kit with 15,745 effective lumens and white LEDs provided, on the cab roof located, one (1) on the driver's side and one (1) on the passenger's side. The painted parts of the light housing and brackets to be black. The light will be activated by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel. The light may be load managed when the parking brake is applied.	✓	X

	Bidder Complies	
	Yes	No
DECK LIGHTS There will be two (2) Whelen, Model PFBP12C, 12 volt DC LED floodlights with swivel mount provided at the rear of the hose bed, one (1) each side. The lights will be activated by a control from a switch at the rear of the truck.	✓	
HOSE BED LIGHT There will be two (2) Amdor Model AY-LB-12HW040, 700 lumens, 40.00" LED light located each side of hose bed near top. The light(s) will be activated when the battery switch is on, and by a cup switch at the rear of the apparatus no more than 72.00" from the ground.	✓	
REAR SCENE LIGHT(S) There will be two (2) Whelen®, Model M9LZC, LED scene light(s) with chrome trim bezel(s) installed at the rear of the apparatus, one (1) high on the driver's side rear body bulkhead and one (1) high on the passenger's side rear body bulkhead . The light(s) will be controlled by a switch at the driver's side switch panel and by a cup switch at the driver's side rear bulkhead. The light(s) may be load managed when the parking brake is applied.	✓	
WALKING SURFACE LIGHT There will be Model FRP, 4" round black 12 volt DC LED floodlight(s) with bolt mount provided to illuminate the entire designated walking surface on top of the body. The light(s) will be activated when the body step lights are on.	✓	
WATER TANK Booster tank will have a capacity of 750 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated. The tank will be designed to achieve a low hose bed. Tank design will be a stepped design with the forward section of the tank higher than the section of the tank that is below the hose bed. Tank joints and seams will be nitrogen welded inside and out. Tank will be baffled in accordance with NFPA Bulletin 1901 requirements. Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments. Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding. Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover.	✓	

	Bidder Complies	
	Yes	No
All partitions will interlock and will be welded to the tank bottom and sides.		
Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions.		
Tank top will be sufficiently supported to keep it rigid during fast filling conditions.		
Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.		
A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank.		
Sump will include a drain plug and the tank outlet.		
Tank will be installed in a fabricated cradle assembly constructed of structural steel.		
Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing.		
Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on.		
Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle.		
Mounting system will be approved by the tank manufacturer.		
Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long.		
Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover.		
An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.		
SLEEVE, PLUMBING, THROUGH TANK One (1) sleeve will be provided in the water tank for a 3.00" pipe to the rear.	✓	
WATER TANK RESTRAINT A heavy-duty water tank restraint will be provided.	✓	
HOSE BED The hose bed will be fabricated of 0.125"-5052 aluminum with a nominal 38,000 psi tensile strength.	✓	

	Bidder Complies	
	Yes	No
The hose bed will be as low as practical.		
Upper and rear edges of side panels will have a double break for rigidity, a split tube finish will not be acceptable.	✓	
The upper inside area of the beavertails will be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.		
Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.		
A cross divider will be provided at the front of the hose bed before the tank transitions from the lower section to the upper section. The divider will run from the top of the side sheet down below the hose bed grating.		
Hose bed will accommodate 1000 ft of 5" rubber hose, 400 ft of 1.75 hose poly, and 600 ft 3" poly hose.		
HOSE BED DIVIDER		
Three (3) adjustable hosebed dividers will be furnished for separating hose.	✓	
Each divider will be constructed of a .125" brushed aluminum sheet fitted and fastened into a slotted, 1.50" diameter radiused extrusion along the top, bottom, and rear edge.		
Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed.		
Divider will be held in place by tightening bolts, at each end.		
Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.		
HOSE BED HOSE RESTRAINT		
The hose in the hose bed will be restrained by a black nylon Velcro® strap at the top of the hose bed. At the rear of the hose bed, 2.00" black nylon webbing with a 1.50" x 4.00" box pattern will attach at the top rear outside corners with seat belt buckle fasteners. The webbing will have straps connected with seat belt buckle fasteners located at the rear body sheet below the hose bed.	✓	
A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheet.	✓	
RUNNING BOARDS		
Running boards will be fabricated of .125" bright aluminum treadplate.		
Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure.		
Running boards will be 12.75" deep and spaced .50" away from the pump panel.		

	Bidder Complies	
	Yes	No
A splash guard will be provided above the running board treadplate.		
TAILBOARD The tailboard will also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.	✓	
The tailboard area will be 16.00" deep.		
The exterior side will be flanged down and in for increased rigidity of tailboard structure.		
REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL The rear facing surfaces of the center rear wall will be smooth aluminum.	✓	
The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body.		
Any inboard facing surfaces below the height of the hosebed will be aluminum diamondplate .		
TOW BAR A tow bar will be installed under the tailboard at center of truck.	✓	
Tow bar will be fabricated of 1.00" CRS bar rolled into a 3.00" radius.		
Tow bar assembly will be constructed of .38" structural angle. When force is applied to the bar, it will be transmitted to the frame rail.		
Tow bar assembly will be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle.		
Tow bar design will have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.		
RUNNING BOARD HOSE RESTRAINT A pair of 2.00" wide black nylon straps with Velcro fasteners will be provided for each hose tray to secure the hose during travel. There will be One (1) hose tray located in the left side running board.	✓	
HOSE TRAY One (1) hose tray will be recessed in the left hand side running board.	✓	
Capacity of the tray will be 25.00' of 5.00" soft suction hose.		
Rubber matting will be installed on the floor of the tray to provide proper ventilation.		
COMPARTMENTATION Body and compartments will be fabricated of .125", 5052-H32 aluminum.	✓	
Side compartments will be an integral assembly with the rear fenders.		

Circular fender liners will be provided for prevention of rust pockets and ease of maintenance.

Side compartment flooring will be of the sweep out design with the floor higher than the compartment door lip.

The side compartment door opening will be framed by flanging the edges in 1.75" and bending out again .75" to form an angle.

Drip protection will be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate or polished stainless steel.

The top of the compartment will be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers will have the corners welded.

Side compartment covers will be separate from the compartment tops.

Front facing compartment walls will be covered with bright aluminum treadplate.

All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury.

UNDERBODY SUPPORT SYSTEM

Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load will be provided. ✓

The backbone of the support system will be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads.

The support system will include .375" thick steel vertical angle supports bolted to the chassis frame rails with .625" diameter bolts.

Attached to the bottom of the steel vertical angles will be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.

A steel frame will be mounted on the top of these supports to create a floating substructure which will result in a 500 lb equipment support rating per lower compartment.

The floating substructure will be separated from the horizontal members with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body.

Isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.

The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.

	Bidder Complies	
	Yes	No
A design with body compartments hanging on the chassis in an unsupported fashion will not be acceptable.		
AGGRESSIVE WALKING SURFACE All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards.	✓	
LOUVERS Louvers will be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they will be formed into the metal and not added to the compartment as a separate plate.	✓	
TESTING OF BODY DESIGN Body structural analysis will be fully tested. Proven engineering and test techniques such as finite element analysis, stress coating and strain gauging will be performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure.	✓	
Body will be tested while loaded to its greatest in-service weight.		
The criteria used during the testing procedure will include: • Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb. • Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions. • Driving the vehicle at 35 mph on a washboard road. • Driving the vehicle at 55 mph on a smooth road. • Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement.		
Evidence of actual testing techniques will be made available upon request.		
LEFT SIDE COMPARTMENTATION The left side compartmentation will consist of three rollup door compartments.	✓	
A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 44.00" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 38.25" wide x 56.88" high.		
A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high.		

	Bidder Complies	
	Yes	No
A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.	✓	
The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.		
Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.		
RIGHT SIDE COMPARTMENTATION The right side compartmentation will consist of three rollup door compartments.		
A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 44.00" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 38.25" wide x 56.88" high.	✓	
A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high.	✓	
A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.	✓	
The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.		
Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.		
SIDE COMPARTMENT ROLLUP DOOR(S) There will be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors.	✓	
Door(s) will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide		

	Bidder Complies	
	Yes	No
maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement. Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingression. The doors will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials. Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands. A polished stainless steel lift bar to be provided for each roll-up door. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals. All injection molded rollup door wear components will be constructed of Type 6 nylon. Each rollup door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door. A garage door style will not acceptable. The header for the rollup door assembly will not exceed 4.00". A heavy-duty magnetic switch will be used for control of open compartment door warning lights. **REAR COMPARTMENTATION** A roll-up door compartment above the rear tailboard will be provided. The interior dimensions of this compartment will be 40.00" wide x 33.63" high x 25.88" deep. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartment will be calculated with the compartment door closed. A louvered, removable access panel will be furnished on the back wall of the compartment. The rear compartment will be open into the rear side compartments. The clear door opening of this compartment will be a minimum of 33.25" wide x 23.88" high. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand. **ROLLUP REAR COMPARTMENT DOOR** The rear compartment will have a rollup door.	✓	

	Bidder Complies	
	Yes	No
The door will be double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors.		
The door will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement.	✓	
Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingression.		
The door will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.		
Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.		
A polished stainless steel lift bar to be provided for each roll-up door. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.		
All injection molded rollup door wear components will be constructed of Type 6 nylon.		
The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door (garage door style) will not acceptable.		
The header for the rollup door assembly will not exceed 4.00".		
A heavy-duty magnetic switch will be used for control of open compartment door warning lights.		
DOOR GUARD There will be seven (7) compartment doors that will include a guard/drip pan designed to protect the rollup door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed left side rearward compartment, left side over the wheel compartment, left side forward compartment, right side rearward compartment, right side over the wheel compartment, right side forward compartment and rear compartment.	✓	

	Bidder Complies	
	Yes	No
COMPARTMENT LIGHTING There will be seven (7) compartments with Amdor, Model AY-9220, white 12 volt DC LED compartment light strips. The lights will be mounted with mechanical fasteners.	✓	
There will be two (2) strip lights installed vertically in each compartment opening per the latest NFPA requirements.		
The lights will be activated when the battery switch is on and the respective compartment door is opened.		
MOUNTING TRACKS There will be seven (7) sets of tracks for mounting shelf(s) in LS1, LS2, LS3, RS1, RS2, RS3 and B1. These tracks will be installed vertically to support the adjustable shelf(s), and will be full height of the compartment. The tracks will be painted to match the compartment interior.	✓	
ADJUSTABLE SHELVES There will be seven (7) shelves with a capacity of 500 lb provided.		
The shelf construction will consist of .188" aluminum painted spatter gray with 2.00" sides.	✓	
Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track.		
The shelves will be held in place by .12" thick stamped plated brackets and bolts.		
The location(s) will be determined at a later date.		
SLIDE-OUT FLOOR MOUNTED TRAY There will be three (3) floor mounted slide-out tray(s) provided.	✓	
Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position.		
Each tray will be constructed of aluminum painted spatter gray		
There will be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides will have a safety factor rating of 2.		
To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.		
To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request.		
Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.		

	Bidder Complies	
	Yes	No
The location(s) will be B1.		
SWING OUT TOOLBOARD A swing out aluminum toolboard will be provided.		
It will be a minimum of .188" thick with .281" diameter holes in a pegboard pattern with 1.00" centers between holes.	✓	
A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard.		
The board will be mounted on a pivoting device at the back of the compartment on the top and bottom to allow easy movement in and out of the compartment. The maximum tool load will be 400 pounds.		
The board will have positive lock in the stowed and extended position.		
The board will be mounted on adjustable tracks from front to back within the compartment.		
There will be One (1) toolboard(s) provided. The toolboard(s) will be spatter gray painted and installed RS2.		
COMPARTMENT FLOOR SCUFFPLATE Aluminum treadplate will be provided on the floor of three (3) compartments. The locations will be, to be determined.	✓	
The edges of the treadplate will be completely caulked before installation to prevent corrosion.		
RUB RAIL Bottom edge of the side and rear of the body compartments will be trimmed with a bright aluminum extruded rub rail.	✓	
Trim will be 2.12" high with 1.38" flanges turned outward for rigidity.		
The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.		
BODY FENDER CROWNS Polished stainless steel fender crowns will be provided around the rear wheel openings with a dielectric barrier will be provided between the fender crown and the fender sheet metal to prevent corrosion.	✓	
The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting will be provided between the body and crown.		

	Bidder Complies	
	Yes	No
BODY FENDER LINER A painted fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.	✓	
HARD SUCTION HOSE Hard suction hose will not be required.	✓	
HANDRAILS The handrails will be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails. Handrails will be provided to meet NFPA 1901 section 15.8 requirements. The handrails will be installed as noted on the sales drawing.	✓	
HANDRAILS One (1) vertical handrail will be located on each rear beavertail. One (1) horizontal black rubber-covered handrail will be provided above the hose bed at the rear of the apparatus. The hose bed dividers will be tied to the upper handrail or cross bar in order to provide sufficient reinforcement. • Four (4) handrails will be provided and mounted to be determined.		
AIR BOTTLE STORAGE (DOUBLE) A quantity of three (3) air bottle compartments, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the left side forward of the rear wheels, on the left side rearward of the rear wheels, on the right side forward of the rear wheels and on the right side rearward of the rear wheels . A polished stainless steel door with a Southco raised trigger C2 chrome lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, black rubber matting and "W" shaped insert formed of composite materials will be provided. A total of 6 to 8 spare bottles will be carried.	✓	
EXTENSION LADDER There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.	✓	
ROOF LADDER There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.	✓	

	Bidder Complies	
	Yes	No
LADDER STORAGE The ladders will be stored between the water tank and the right side compartments.	✓	
The ladders will extend into the pump compartment just to the rear of the water pump discharges.		
The ladder storage area will be enclosed as practical by means of sheet metal to protect the ladders from road dirt. The ladders that extend into the pump house will also be enclosed. A black rubber boot will be provided to enclose the ladders in the gap between the pump house and the body.		
Each ladder will be stored vertically in a separate stainless steel storage trough. Each stainless steel trough will be lined with Dura-Surf nylon slides.		
An aluminum enclosure will be provided at the rear of the body to properly contain the ladders. This enclosure will extend to the rear of the side body compartments.		
The enclosure will also include a vertically hinged smooth aluminum door with a D-handle latch to access the ladders.		
FOLDING LADDER One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed in a U-shaped trough inside the ladder storage compartment.	✓	
PIKE POLE PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 8 ft or longer pike pole mounted in a bracket fastened to the apparatus.	✓	
The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike pole.		
The pike pole(s) will be a Duo-Safety 10' pike pole.		
6' PIKE POLE PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 6' pike pole or plaster hook mounted in a bracket fastened to the apparatus.	✓	
The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike pole.		
The pike pole(s) will be a Duo-Safety 6' pike pole.		
PIKE POLE STORAGE Aluminum tubing will be used for the storage of two (2) pike poles and will be located in ladder storage compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate will be provided.	✓	

	Bidder Complies	
	Yes	No
REAR FOLDING STEPS Bright finished, non-skid folding steps with a black coating will be provided at the rear. Each step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand. Four (4) additional folding steps, Eberhard, will be located To be determined at drawing approval.. **PUMP** Pump will be a Waterous CSU, 1500 gpm single (1) stage midship mounted centrifugal type. Pump will be the class "A" type. Pump will deliver the percentage of rated discharge at pressures indicated below: - 100% of rated capacity at 150 psi net pump pressure. -70% of rated capacity at 200 psi net pump pressure. -50% of rated capacity at 250 psi net pump pressure. Pump body will be close-grained gray iron, bronze fitted, and horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly (including wear rings). Pump will be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping. Pump case halves will be bolted together on a single horizontal face to minimize chance of leakage and facilitate ease of reassembly. No end flanges will be used. Discharge manifold of the pump will be cast as an integral part of the pump body assembly and will provide a minimum of three (3) 3.50" openings for flexibility in providing various discharge outlets for maximum efficiency. The three (3) 3.50" openings will be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold. Impeller shaft will be stainless steel, accurately ground to size. It will be supported at each end by sealed, anti-friction ball bearings for rigid precise support. Impeller will have flame plated hubs assuring maximum pump life and efficiency despite any presence of abrasive matter in the water supply. Bearings will be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings will be used.	✓ ✓	

	Bidder Complies	
	Yes	No
PUMP PACKING Stuffing boxes will be of the conventional two (2) piece, split-gland type, to permit adjustment or replacement of Grafoil packing without disturbing the pump. Water will be fed into stuffing box lantern rings for proper lubrication and cooling when the pump is operating. Lantern rings will be located at the inner ends of the stuffing boxes, to avoid having to remove them when replacing pump packing. Wear rings will be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.	✓	
PUMP TRANSMISSION The pump transmission will be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump will be through a high strength Morse HY-VO silent drive chain. By the use of a chain rather than gears, 50% of the sprocket will be accepting or transmitting torque, compared to two (2) or three (3) teeth doing all the work. Drive shafts will be 2.35" diameter hardened and ground alloy steel and supported by ball bearings. The case will be designed to eliminate the need for water cooling.	✓	
PUMPING MODE An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.	✓	
AIR PUMP SHIFT Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control will also be located on the left side pump panel. Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump". The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements. The pump shift control in the cab will be illuminated to meet NFPA requirements.	✓	
TRANSMISSION LOCK-UP The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.	✓	

	Bidder Complies	
	Yes	No
AUXILIARY COOLING SYSTEM A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. Heat exchanger will be cylindrical type and will be a separate unit. It will be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger will be plumbed to the master drain valve.	✓	
INTAKE RELIEF VALVE - PUMP There will be One (1) Elkhart Style 40 relief valve(s) installed on the suction side of the pump preset at 125 psig. The relief valve(s) will have a working range of 75 psi to 250 psi. The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag. The relief valve pressure control will be located behind the right side pump panel with a stainless steel access door .	✓	
PRESSURE CONTROLLER A pressure governor will be provided. A pressure transducer will be installed in the water discharge manifold on the pump. The display panel will be located at the pump operator's panel.	✓	
PRIMING PUMP The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. One (1) priming control will open the priming valve and start the pump primer.	✓	
PUMP MANUALS There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.	✓	
PLUMBING, STAINLESS STEEL AND HOSE All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness.	✓	

	Bidder Complies	
	Yes	No
Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings.		
Plumbing manifold bodies will be ductile cast iron or stainless steel.		
All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame.		
All water carrying gauge lines will be of flexible polypropylene tubing.		
All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.		
MAIN PUMP INLETS A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.	✓	
MAIN PUMP INLET CAP The main pump inlets will have National Standard Threads with a long handle chrome cap.	✓	
The cap will incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).		
SHORT SUCTION TUBE(S) The suction tube(s) on the water pump will have short suction tube(s) installed to allow for installation of adapters, elbows or intake valves without excessive overhang.	✓	
VALVES All ball valves will be Akron® Brass in-line valves. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.	✓	
Valves will have a **ten (10) year** warranty.		
LEFT SIDE INLET There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 3.231x6 hose thread adapter.	✓	
The auxiliary inlet will be provided with a strainer, chrome swivel and plug.		
The location of the valve for the one (1) inlet will be recessed behind the pump panel.		
INLET CONTROL The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.		

	Bidder Complies	
	Yes	No
INLET BLEEDER VALVE A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.	✓	
TANK TO PUMP The booster tank will be connected to the intake side of the pump with stainless steel piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.	✓	
TANK REFILL A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.	✓	
LEFT SIDE DISCHARGE OUTLETS There will be One (1) discharge outlet with a 2.50" valve on the left side of the apparatus, terminating with a 3.231x6 hose thread adapter.	✓	
RIGHT SIDE DISCHARGE OUTLETS There will be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 3.231x6 hose thread adapter.	✓	
LARGE DIAMETER DISCHARGE OUTLET There will be a 4.00" discharge outlet with a 3.50" Waterous valve installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet will be actuated with a handwheel control at the pump operator's control panel. An indicator will be provided to show when the valve is in the closed position.	✓	
FRONT DISCHARGE OUTLET There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located on the top of the right side of the front bumper. Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the	✓	

	Bidder Complies	
	Yes	No
plumbing where appropriate. The piping will terminate with a 1.50" NST with 90-degree stainless steel swivel. A hose tray built into the front bumper will hold 150' 1 ¾" hose. There will be automatic drains provided at all low points of the piping. **REAR DISCHARGE OUTLET** There will be Two (2) discharge outlets piped to the rear of the hose bed, left and right side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel, terminating with a 3.231x6 hose thread adapter. **DISCHARGE CAPS/ INLET PLUGS** Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets. Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size. The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception). **OUTLET BLEEDER VALVE** A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application. The valves will be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders will be routed below the chassis frame rails. **LEFT SIDE OUTLET ELBOWS** The 2.50" discharge outlets located on the left side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow,terminating with a 3.231x6 hose thread adapter. The elbow will incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception). **RIGHT SIDE OUTLET ELBOWS** The 2.50" discharge outlets located on the right side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow, terminating with a 3.231x6 hose thread adapter.	✓ ✓ ✓ ✓	

	Bidder Complies	
	Yes	No
The elbow will incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).		
REAR OUTLET ELBOWS The 2.50" discharge outlets located at the rear of the apparatus will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow, terminating with a 3.231x6 hose thread adapter.	✓	
The elbow will incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).		
LARGE DIAMETER OUTLET ELBOWS The 4.00" outlet(s) will be furnished with one (1) 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.	✓	
DISCHARGE OUTLET CONTROLS The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve.	✓	
If a handwheel control valve is used, the control will be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.		
DELUGE RISER A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel.	✓	
TELESCOPIC PIPING The deluge riser piping will include an 18.00" Task Force Model XG18 Extend-A-Gun extension.	✓	
This extension will be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation.		
A position sensor will be provided on the telescopic piping that will activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.		
The deluge riser will have male National Pipe Threads for mounting the monitor.		
CROSSLAY HOSE BEDS Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed hose and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.	✓	
Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.		
The crosslay controls will be at the pump operator's panel.		

	Bidder Complies	
	Yes	No
The center crosslay dividers will be fabricated of 0.25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. Vertical scuffplates,constructed of stainless steel will be provided at the front and rear ends of the bed on each side of vehicle. Crosslay bed flooring will consist of removable perforated brushed aluminum.		
2.50" CROSSLAY HOSE BED One (1) crosslay with 2.50" outlets will be provided. This bed to be capable of carrying 200' of 2.50" double jacketed hose and will be plumbed with 2.50" i.d. pipe and gated with a 2.50" quarter turn ball valve. Outlet to be equipped with a 2.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus, terminating with a 3.231x6 hose thread adapter. The crosslay control will be at the pump operator's panel. The center crosslay dividers will be fabricated of 0.25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. The remainder of the crosslay bed will be painted job color. Stainless steel vertical scuffplates will be provided at hose bed ends (each side of vehicle). Bottom of hose bed ends (each side) will also be equipped with a stainless steel scuffplate. Crosslay bed flooring will consist of removable perforated brushed aluminum.	✓	
CROSSLAY/DEADLAY HOSE RESTRAINT Cargo netting will be provided across the ends of two (2) crosslay/deadlay opening(s) to secure the hose during travel.	✓	
CROSSLAY 8.00" LOWER THAN STANDARD The crosslays will be lowered 8.00" from standard.	✓	
FOAM SYSTEM A foam system will not be required on this apparatus.	✓	
PUMP COMPARTMENT The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. The pump compartment will be constructed of the same material as the body compartmentation. The pump compartment substructure will be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.	✓	

	Bidder Complies	
	Yes	No
The pump compartment will be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist. Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly. **PUMP MOUNTING** Pump will be mounted to a substructure which will be mounted to the chassis frame rail using rubber isolators. The mounting will allow chassis frame rails to flex independently without damage to the fire pump. **LEFT SIDE PUMP CONTROL PANEL** All pump controls and gauges will be located at the left (driver's) side of the apparatus and properly identified. Layout of the pump control panel will be ergonomically efficient and systematically organized. The pump operator's control panel will be removable in two (2) main sections for ease of maintenance: The upper section will contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels will be removable from the face of the pump panel for ease of maintenance. Below the sub panels will be located all valve controls and line pressure gauges. The lower section of the panel will contain all inlets, outlets, and drains. All push/pull valve controls will have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods will be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls will be capable of locking in any position. The control rods will pull straight out of the panel and will be equipped with universal joints to eliminate binding. **IDENTIFICATION TAGS** The identification tag for each valve control will be recessed in the face of the tee handle. All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge. All line pressure gauges will be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting will be removable from the face of the pump panel for ease of maintenance. The casting will be color coded to correspond with the discharge identification tag. All remaining identification tags will be mounted on the pump panel in chrome plated bezels.	✓ ✓ ✓	

The pump panel on the right (passenger's) side will be removable with lift and turn type fasteners.

Trim rings will be installed around all inlets and outlets.

PUMP PANEL CONFIGURATION
The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation. ✓

PUMP AND GAUGE PANEL
The pump and gauge panels will be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding will be provided around each panel. ✓

The right side pump panel will be removable and fastened with swell type fasteners.

PUMP COMPARTMENT LIGHT
There will be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the pump compartment. ✓

There will be a switch accessible through a door on the pump panel included with this installation.

Engine monitoring graduated LED indicators will be incorporated with the pressure controller.

Also provided at the pump panel will be the following:

- Master Pump Drain Control

OK TO PUMP INDICATOR LIGHT

There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode. ✓

VACUUM AND PRESSURE GAUGES
The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©. ✓

The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel.

Test port connections will be provided at the pump operator's panel. One (1) will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will

have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They will be marked with a label.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

PRESSURE GAUGES

The individual "line" pressure gauges for the discharges will be interlube filled and manufactured by Class 1©. ✓

They will be a minimum of 2.00" in diameter and will have white faces with black lettering.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

Gauges will have a pressure range of 30"-0-400#.

The individual pressure gauge will be installed as close to the outlet control as practical.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

WATER LEVEL GAUGE

There will be an electronic water level gauge provided on the operator's panel that registers water level by means of five (5) colored LED lights. The lights will be durable, ultra-bright five (5) LED design viewable through 180 degrees. The water level indicators will be as follows: ✓

- 100 percent = Green
- 75 percent = Yellow
- 50 percent = Yellow
- 25 percent = Yellow
- Refill = Red

The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the water tank is empty.

The level measurement will be based on the sensing of head pressure of the fluid in the tank.

The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from water and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level.

LIGHT SHIELD

There will be a polished, 16 gauge stainless steel light shield will be installed over the pump operators panel.

- There will be three (3) On Scene Solutions Night Axe, Model 70005, 18.00" LED lights installed under the stainless steel light shield to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house.
- One (1) pump panel light will come on when the pump is in ok to pump mode.

There will be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel.

AIR HORN SYSTEM

There will be two (2) Grover air horns recessed in the front bumper. The horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed in-line to prevent loss of air in the air brake system.

Air Horn Location

The air horns will be located on each side of the bumper, towards the outside.

AIR HORN CONTROL

The air horns will be actuated by a chrome push button located on the officer's side of the engine tunnel and by the horn button in the steering wheel. The driver will have the option to control the air horns or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

ELECTRONIC SIREN

A Whelen®, Model 295SLSA1, electronic siren with noise canceling microphone will be provided.

This siren to be active when the battery switch is on and that emergency master switch is on.

Electronic siren head will be recessed in the driver side center switch panel.

The electronic siren will be controlled on the siren head only. No horn button or foot switches will be required.

SPEAKER

There will be one (1) Whelen®, Model SA315P, black nylon composite, 100-watt, speaker with through bumper mounting brackets and polished stainless steel grille provided. The speaker will be connected to the siren amplifier.

The speaker(s) will be recessed in the center of the front bumper.

	Bidder Complies	
	Yes	No

AUXILIARY MECHANICAL SIREN

A Federal Q2B® siren will be furnished. A siren brake button will be installed on the switch panel. ✓

The control solenoid will be powered up after the emergency master switch is activated.

The mechanical siren will be mounted on the bumper deck plate. It will be mounted on the left side. The siren mounting will include a reinforcement plate.

The mechanical siren will be actuated by a chrome push button located on the officer side of the engine tunnel and by the horn button in the steering wheel.

The driver will have the option to control the siren or the chassis horn from the horn button by means of a selector switch located on the instrument panel.

A momentary chrome push button switch will be included in the right side dash panel to activate the siren brake.

FRONT ZONE UPPER WARNING LIGHTS

There will be one (1) 81.00" Whelen Freedom IV LED lightbar mounted on the cab roof. ✓

The lightbar will include the following:

- One (1) red flashing LED module in the driver's side rear corner position.
- Open in the driver's side end position.
- One (1) red flashing LED module in the driver's side front corner position.
- Open in the driver's side first front position.
- One (1) red flashing LED module in the driver's side second front position.
- Open in the driver's side third front position.
- Open in the driver's side fourth front position.
- One (1) red flashing LED module in the driver's side fifth front position.
- Open in the driver's side sixth front position.
- Open in the driver's side seventh position.
- Open in the passenger's side seventh position.
- Open in the passenger's side sixth front position.
- One (1) red flashing LED module in the passenger's side fifth front position.
- Open in the passenger's side fourth front position.
- Open in the passenger's side third front position.
- One (1) red flashing LED module in the passenger's side second front position.
- Open in the passenger's side first front position.
- One (1) red flashing LED module in the passenger's side front corner position.
- Open in the passenger's side end position.
- One (1) red flashing LED module in the passenger's side rear corner position.

There will be clear lenses included on the lightbar.

	Bidder Complies	
	Yes	No
There will be a switch installed in the cab on the switch panel to control the lightbar. The four (4) red flashing LED modules in the front positions may be load managed when the parking brake is applied. **CAB FACE WARNING LIGHTS** There will be four (4) Whelen®, Model M6*C, LED flashing warning lights installed on the cab face, above the headlights, mounted in a common bezel. • The driver's side front outside warning light to be red • The driver's side front inside warning light to be red • The passenger's side front inside warning light to be red • The passenger's side front outside warning light to be red All four (4) lights will include a clear lens. There will be a switch located in the cab, on the switch panel, to control the four (4) lights. The inside lights may be load managed if colored or disabled if white, when the parking brake is set. **HEADLIGHT FLASHER** The high beam headlights will flash alternately between the left and right side. There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on. The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set. **SIDE ZONE LOWER LIGHTING** There will be six (6) Whelen®, Model M6*C, flashing LED warning lights with chrome trim installed per the following: • Two (2) lights, one (1) each side on the bumper extension. The side front lights to be red. • Two (2) lights, one (1) each side of cab rearward of crew cab doors. The side middle lights to be red. • Two (2) lights, one (1) each side located between the tandems. The side rear lights to be red. • The lights will include clear lenses. There will be a switch in the cab on the switch panel to control the lights. **REAR ZONE LOWER LIGHTING** There will be two (2) Whelen®, Model M6*C, LED flashing warning lights located at the rear of the apparatus.	✓ ✓ ✓ ✓	

- The driver's side rear light to be red
- The passenger's side rear light to be red

Both lights will include a lens that is clear.

There will be a switch located in the cab on the switch panel to control the lights.

REAR/SIDE ZONE UPPER WARNING LIGHTS

There will be two (2) Whelen®, Model L31H*FN, LED warning beacons provided at the rear of the truck, located one (1) each side. There will be a switch located in the cab on the switch panel to control the beacons. ✓

The color of the lights will be red LEDs with both domes clear.

The rear warning lights will be mounted on top of the compartmentation with all wiring totally enclosed. The rear deck lights will be mounted on the beavertails as high as possible.

TRAFFIC DIRECTING LIGHT

There will be one (1) Whelen®, Model TAL65, 36.00" long x 2.87" high x 2.25" deep, amber LED traffic directing light installed at the rear of the apparatus. ✓

The Whelen, Model TACTL5, control head will be included with this installation.

The controller will be energized when the battery switch is on.

The auxiliary flash not activated.

This traffic directing light will be recessed with a stainless steel trim plate at the rear of the apparatus as high as practical.

The traffic directing light control head will be located in the driver side overhead switch panel in the right panel position.

LOOSE EQUIPMENT

The following equipment will be furnished with the completed unit:

- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit ✓

NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT

The following loose equipment as outlined in NFPA 1901, 2016 edition, section 5.9.3 and 5.9.4 will be provided by the fire department. ✓

- 800 ft (60 m) of 2.50" (65 mm) or larger fire hose.
- 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose.
- One (1) handline nozzle, 200 gpm (750 L/min) minimum.
- Two (2) handline nozzles, 95 gpm (360 L/min) minimum.

	Bidder Complies	
	Yes	No
• One (1) smoothbore of combination nozzle with 2.50" shutoff that flows a minimum of 250 gpm. • One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer. • One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s). • One (1) first aid kit. • Four (4) combination spanner wrenches. • Two (2) hydrant wrenches. • One (1) double female 2.50" (65 mm) adapter with National Hose threads. • One (1) double male 2.50" (65 mm) adapter with National Hose threads. • One (1) rubber mallet, for use on suction hose connections. • Two (2) salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m). • One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, *Standard for High Visibility Public Safety Vests*, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front. • Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band. • Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. • One (1) automatic external defibrillator (AED). • Four (4) ladder belts meeting the requirements of NFPA 1983, *Standard on Fire Service Life Safety Rope and System Components* (if equipped with an aerial device). • If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, will be carried mounted in brackets fastened to the apparatus. • If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side will be carried. Any intake connection larger than 3.00" (75 mm) will include a pressure relief device that meets the requirements of 16.6.6. • If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake will be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake. • If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters will be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.		

SOFT SUCTION HOSE
There will be a 15' length of 6.00" soft suction hose provided with a 6.00" long handle swivel coupling on one (1) end and a 4.50" long handle swivel coupling on the other.

DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT
NFPA 1901, 2016 edition, section 5.9.4 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus.

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT
NFPA 1901, 2016 edition, section 5.9.4 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus.

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT
NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) flathead axe mounted in a bracket fastened to the apparatus.

The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT
NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus.

The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

PAINT
The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows:

1. Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.
2. Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for

Bidder Complies	
Yes	No

steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse will be applied to all metal surfaces.

3. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.
4. Finish Sanding - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.
5. Sealer Primer - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated.
6. Basecoat Paint - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment.
7. Clear Coat - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacture.

Each batch of basecoat color will be checked for a proper match before painting of the and the body. After the cab and body are painted, the color will verified again to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications will be used to determine the color match. A Delta E reading will be used to determine a good color match within each family color.

All removable items such as brackets, compartment doors, door hinges, and trim will be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly.

The paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) are to meet or exceed Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels are to meet or exceed the #6 A.C.T.standard in critical areas. These requirements must be met in order for the exterior paint finish to be considered acceptable. The manufacture's written paint standards will be available upon request.

	Bidder Complies	
	Yes	No
The cab will be two-tone, with the upper section painted #10 white along with a shield design on the cab face and lower section of the cab and body painted #90 red.	✓	
PAINT - ENVIRONMENTAL IMPACT Contractor will meet or exceed all current State regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions: • Topcoats and primers will be chrome and lead free. • Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals. • Particulate emission collection from sanding operations will have a 99.99% efficiency factor. • Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98.00%. Water wash systems will be 99.97% efficient • Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean. • Paint wastes are disposed of in an environmentally safe manner. • Empty metal paint containers will be to recover the metal. • Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse.	✓	
Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his State EPA rules and regulations.		
PAINT CHASSIS FRAME ASSEMBLY The chassis frame assembly will be finished with a single system black top coat before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc. Components treated with epoxy E-coat protection prior to paint: • Two (2) C-channel frame rails Components that are included with the chassis frame assembly that will be painted not e-coated are: • Cross members • Axles • Suspensions • Steering gear • Battery boxes	✓	

	Bidder Complies	
	Yes	No

- Bumper extension weldment
- Frame extensions
- Body mounting angles
- Rear Body support substructure (front and rear)
- Pump house substructure
- Air tanks
- Steel fuel tank
- Castings
- Individual piece parts used in chassis and body assembly

The E-coat process will meet the technical properties shown.

COMPARTMENT INTERIOR PAINT ✓

The interior of all compartments will be painted with a gray spatter type paint.

REFLECTIVE STRIPES ✓

Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" white stripe at the top with a 1.00" gap then a 6.00" white stripe with a 1.00" gap and a 1.00" white stripe on the bottom.

The reflective band provided on the cab face will be below the headlights on the fiberglass. ✓

REAR CHEVRON STRIPING ✓

There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered.

The colors will be red and fluorescent yellow green diamond grade.

Each stripe will be 6.00" in width.

This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.

CHEVRON STRIPING ON CAB AND CREW CAB DOOR EDGE ✓

There will be alternating chevron striping located on the inside of each cab and crew cab door edge. The design will be either DOT pattern or standard chevron design. Width will be determined by available space. The striping will consist of the following colors:

The first color will be red diamond grade

The second color will be fluorescent yellow green diamond grade

BROKEN RIBBON IN STRIPE ✓

A pair of reflective stripe splits will be placed one (1) at each side of the vehicle. This will appear as a broken ribbon type split. Room will be left within the split for an emblem and/or lettering.

	Bidder Complies	
	Yes	No
REFLECTIVE STRIPE OUTLINE A black outline will be applied on the top and the bottom of the reflective band. There will be seven (7) set of outline stripes required.	✓	
STRIPE ON REAR ACCESS DOORS There will be alternating striping located on the rear access doors. The colors will be red and fluorescent yellow green diamond grade. The stripes will be 6.00" in width and will match the chevron pattern on the rear body.	✓	
"Z" RIBBON IN REFLECTIVE STRIPE "Z" type ribbon(s) will be added to the reflective stripe. Areas adjacent to the "Z" portion of the stripe will be shaded and highlighted with an air brush to give it a ribbon affect. There will be seven (7) pair on the vehicle.	✓	
CAB DOOR REFLECTIVE STRIPE A 6.00" x 16.00" chevron reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel. This stripe will meet the NFPA 1901 requirement.	✓	
LETTERING One (1) to twenty (20) non-reflective vinyl lettering, 4.00" high, outlining and shading will be provided.	✓	
LETTERING There will be reflective lettering, 12.00" high, with no outline or shade provided. There will be four (4) letters provided.	✓	
LETTERING There will be reflective lettering, 16.00" high, with no outline or shade provided. There will be 14 letters provided.	✓	
LETTERING There will be genuine gold leaf lettering, 12.00" high, with outline and shade provided. There will be 14 letters provided.	✓	
LETTERING, REFLECTIVE, "DIAL 911" There will be one (1)8.00" high white reflective decal, "Dial 911", will be installed at To be determined.	✓	
MALTESE CROSS INSTALLATION There will be three (3) maltese crosses, comprised of printed effect gold leaf material, provided and installed To be determined at drawing/graphic approval..	✓	

	Bidder Complies	
	Yes	No
FIRE APPARATUS PARTS MANUAL There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided. The manual(s) will contain the following: • Job number • Part numbers with full descriptions • Table of contents • Parts section sorted in functional groups reflecting a major system, component, or assembly • Parts section sorted in alphabetical order • Instructions on how to locate parts Each manual will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.	✓	
SERVICE PARTS INTERNET SITE The service parts information included in these manuals are also available on the factory website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.	✓	
CHASSIS SERVICE MANUALS There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit. The manual will contain the following sections: • Job number • Table of contents • Troubleshooting • Front Axle/Suspension • Brakes • EngineTires • Wheels • Cab • Electrical, DC • Air Systems • Plumbing • Appendix The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.	✓	

	Bidder Complies	
	Yes	No
CHASSIS OPERATION MANUAL The chassis operation manual will be provided on one (1) USB flash drive.		
ONE (1) YEAR MATERIAL AND WORKMANSHIP Each new piece of apparatus will be provided with a minimum **one (1) year** basic apparatus material and workmanship limited warranty. The warranty will cover such portions of the apparatus built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	
THREE (3) YEAR MATERIAL AND WORKMANSHIP The new chassis will be provided with a three (3) year material and workmanship limited warranty. The warranty will cover such portions of the chassis built by the manufacturer as being free from structural failures caused by defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	
ENGINE WARRANTY A Cummins **five (5) year** limited engine warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.	✓	
STEERING GEAR WARRANTY A TRW **one (1) year** limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.	✓	
FIFTY (50) YEAR STRUCTURAL INTEGRITY The chassis frame and crossmembers will be provided with a fifty (50) year material and workmanship limited warranty. The warranty will cover the chassis frame and crossmembers as being free from defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	
FRONT AXLE TWO (2) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor™ Axle **two (2) year** limited warranty will be provided.	✓	
REAR AXLE TWO (2) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor™ Axle **two (2) year** limited warranty will be provided.	✓	
ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor Wabco™ ABS brake system **three (3) year** limited warranty will be provided.	✓	
TEN (10) YEAR STRUCTURAL INTEGRITY The new cab will be provided with a **ten (10) year** material and workmanship limited warranty. The warranty will cover such portions of the cab built by the manufacturer as being free from	✓	

	Bidder Complies	
	Yes	No
structural failures caused by defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package (no exception).		
TEN (10) YEAR PRO-RATED PAINT AND CORROSION Each new piece of apparatus will be provided with a **ten (10) year** pro-rated paint and corrosion limited warranty on the apparatus cab. The warranty will cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	
FIVE (5) YEAR MATERIAL AND WORKMANSHIP The electronic modules and display(s) will be provided with a five (5) year material and workmanship limited warranty. The warranty will cover electronic modules to be free from failures caused by defects in material and workmanship. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	
CAMERA SYSTEM WARRANTY A fifty four (54) month warranty will be provided for the camera system.	✓	
COMPARTMENT LIGHT WARRANTY The compartment lights will not offer an extended warranty.	✓	
TRANSMISSION WARRANTY The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty is to be provided by Allison Transmission and not the apparatus builder.	✓	
TRANSMISSION COOLER WARRANTY The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed $10,000 per occurrence. A copy of the warranty certificate will be submitted with the bid package.	✓	
WATER TANK WARRANTY The UPF poly water tank will be provided with a lifetime material and workmanship limited warranty. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	
TEN (10) YEAR STRUCTURAL INTEGRITY Each new piece of apparatus will be provided with a **ten (10) year** material and workmanship limited warranty on the apparatus body. The warranty will cover such portions of the apparatus	✓	

	Bidder Complies	
	Yes	No
built by the manufacturer as being free from defects in material and workmanship that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package (no exception).		
ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of **ten (10) years**. A **five (5) year** limited warranty will be provided on painted roll up doors. A copy of the warranty certificate will be submitted with the bid package.	✓	
PUMP WARRANTY The Waterous pump will be provided with a **five (5) year** material and workmanship limited warranty. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	
TEN (10) YEAR PUMP PLUMBING WARRANTY The stainless steel plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system will be warranted for a period of **ten (10) years or 100,000 miles.** This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of delivery. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	
TEN (10) YEAR PRO-RATED PAINT AND CORROSION Each new piece of apparatus will be provided with a **ten (10) year** pro-rated paint and corrosion limited warranty on the apparatus body. The warranty will cover painted exterior surfaces of the body to be free from blistering, peeling, corrosion, or any other adhesion defect caused by defective manufacturing methods or paint material selection that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	
ONE (1) YEAR MATERIAL AND WORKMANSHIP The graphic lamination will be provided with a one (1) year material and workmanship limited warranty. The warranty will cover the graphic lamination as being free from defects in material, workmanship, fading, and deterioration that would arise under normal use and service. A copy of the warranty certificate will be submitted with the bid package (no exception).	✓	

	Bidder Complies	
	Yes	No
VEHICLE STABILITY CERTIFICATION The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification will be provided at the time of bid.	✓	
ENGINE INSTALLATION CERTIFICATION The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of bid.	✓	
POWER STEERING CERTIFICATION The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification will be provided at the time of bid.	✓	
CAB INTEGRITY CERTIFICATION The fire apparatus manufacturer will provide a cab integrity certification with this proposal. The certification will state that the cab has been tested and certified by an independent third-party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state-licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below: • European Occupant Protection Standard ECE Regulation No.29. • SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. • SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.	✓	
Roof Crush The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria and is equivalent to the front axle rating up to a maximum of 10 metric tons.		
Additional Roof Crush The same cab will be subjected to a roof crush force of 100,000 lbs. This value exceeds the ECE 29 criteria by nearly 4.5 times.		
Side Impact The same cab will be subjected to dynamic preload where a 13,275 lb moving barrier slams into the side of the cab at 5.5 mph at a force of 13,000 ft-lbs. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident.		
Frontal Impact The same cab will withstand a frontal impact of 32,600 ft-lbs of force using a moving barrier in accordance with SAE J2420.		

	Bidder Complies Yes	No
Additional Frontal Impact The same cab will withstand a frontal impact of 65,200 ft-lbs of force using a moving barrier, (twice the force required by SAE J2420). The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area. There will be no exception to any portion of the cab integrity certification. Nonconformance will lead to immediate rejection of bid.	✓	
CAB DOOR DURABILITY CERTIFICATION Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.	✓	
WINDSHIELD WIPER DURABILITY CERTIFICATION Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 *Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles*. The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.	✓	
ELECTRIC WINDOW DURABILITY CERTIFICATION Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.	✓	
SEAT BELT ANCHOR STRENGTH Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.	✓	
SEAT MOUNTING STRENGTH Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.	✓	

	Bidder Complies	
	Yes	No
CAB DEFROSTER CERTIFICATION Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.	✓	
CAB HEATER CERTIFICATION Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. The cab heaters will warm the cab 75 F from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify that a substantially similar cab has been tested and has met these criteria.	✓	
CAB AIR CONDITIONING PERFORMANCE CERTIFICATION Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 67 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar air conditioning system has been tested and has met these criteria. The certification will be available at the time of delivery.	✓	
AMP DRAW REPORT The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.	✓	

The manufacturer of the apparatus will provide the following:
• Documentation of the electrical system performance tests.
• A written load analysis, which will include the following:
  o The nameplate rating of the alternator.
  o The alternator rating under the conditions specified per:
  ▪ Applicable NFPA 1901 or 1906 (Current Edition).
  o The minimum continuous load of each component that is specified per:
  ▪ Applicable NFPA 1901 or 1906 (Current Edition).
  o Additional loads that, when added to the minimum continuous load, determine the total connected load.
  o Each individual intermittent load.
All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).		

SPECIAL NOTES: A 54" "Ridgid" curved LED light bar will be used as forward-facing light bar.	✓	

	Bidder Complies	
	Yes	No
Stainless steel trim will be located at the back of all cab doors to protect paint from chipping.	✓	
A distance of 86" from center of rear axle to back of body and a truck height of no more than 9' 7" must be maintained.	✓	
A set of two LED fog lights will be mounted under the front bumper.	✓	
Lower back cab corners will have a ~~36~~ 30" inch tall compartment with a pan style door and D handle latch system. will be 30" high	✓	X
There will be a 6" wide diamond plate compartment that is full cab height on each side of the cab.		X
The monitor nozzle will be a TFT Crossfire with combination and smoothbore tips.	✓	
The bid shall include the cost of 3 trips to factory. 1. 3 people to prebuild 2. 3 people to mid 3. 4 to final		
The bid shall include 2 trips for 2 people to attend 4 classes(2 each trip) for mechanics.	✓	

SECTION 2

Proposal Option List

10/15/2020

Customer:	PADUCAH FIRE DEPARTMENT	**Bid Number:**	1149
Representative	Puckett, Keith	**Job Number:**	
Organization:	Finley Fire Equipment Co, Inc	**Number of Units:**	1
Requirements Manager:		**Bid Date:**	10/01/2020
Description:	Paducah Pumper	**Stock Number:**	
Body:	Pumper, Long, Aluminum, 2nd Gen	**Price Level:**	39 (Current: 39)
Chassis:	Impel Chassis, 2010	**Lane:**	

Line	Option	Type	Option Description	Qty
1	0766611		Boiler Plates, Pumper	1
			Fire Department/Customer - Paducah Fire Department Operating/In conjunction W-Service Center - Operating Miles - 200 Miles Number of Fire Dept/Municipalities - 2 Bidder/Sales Organization - Finley Fire Equipment Delivery - Delivery representative Dealership/Sales Organization, Service - Finley Fire Equipment	
2	0661794		Single Source Compliance	1
3	0584456		Manufacture Location, Appleton, Wisconsin	1
4	0584452		RFP Location: Appleton, Wisconsin	1
5	0588609		Vehicle Destination, US	1
6	0610784		Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	1
7	0533347		Pumper/Pumper with Aerial Device Fire Apparatus	1
8	0588611		Vehicle Certification, Pumper	1
9	0661778		Agency, Apparatus Certification, Pumper/Tanker, U.L.	1
10	0000114		Inspection Trip(s)	3
			Qty, - 03 Fill in Blank - TBD	
11	0537375		Unit of Measure, US Gallons	1
12	0529326		Bid Bond, 10%, Pierce Built Chassis	1
13	0050066		Performance Bond, 100% Req'd (Statement by Rep)	1
14	0000007		Approval Drawing	1
15	0002928		Electrical Diagrams	1
16	0597579		Impel Chassis, 2010	1
17	0000110		Wheelbase	1
			Wheelbase - 197.00	
18	0000070		GVW Rating	1
			GVW rating - 48,500	
19	0000203		Frame Rails, 13.38 x 3.50 x .375, Qtm/AXT/Imp/Vel/DCF	1
20	0020018		Frame Liner Not Req'd	1
21	0641600		Axle, Front, Meritor MFS-20 21,500 lb, w/assist, Imp/Vel	1
22	0199681		Suspension, Front, Standens, Taper Leaf, 21,500 lb, Imp/Vel/Enf	1
23	0000319		Shock Absorbers on Front Axle, Qtm/AXT/Imp/Vel	1
24	0000322		Oil Seals, Front Axle	1
25	0594821		Tires, Front, Goodyear, G296 MSA, 425/65R22.50, 20 ply	1
26	0019611		Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Hub Pilot	1
27	0530466		Axle, Rear, Meritor RS26-185, 27,000 lb, Imp/Vel/Dash CF	1
28	0544253		Top Speed of Vehicle, 68 MPH	1
29	0122075		Suspen, Rear, Standens, Spring, 27,000 lb, Imp/Vel/Dash CF	1
30	0000485		Oil Seals, Rear Axle	1
31	0587216		Tires, Rear, Goodyear, G622 RSD, 12R22.50, 16 ply, Single	1
32	0019625		Wheels, Rear, Alcoa, 22.50" x 8.25", Aluminum, Hub Pilot, Single	1
33	0568081		Tire Balancing, Counteract Beads	1
34	0620570		Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	1
			Qty, Tire Pressure Ind - 6	
35	0003245		Axle Hub Covers w/center hole, S/S, Front Axle	1
36	0001960		Axle Hub Covers, Rear, S/S, High Hat (Pair)	1
37	0057936		Covers, Lug Nut, Chrome	1
38	0002045		Mud Flap, Front and Rear, Pierce Logo	1

Line	Option	Type	Option Description	Qty
39	0544802		Chocks, Wheel, SAC-44-E, Folding	1
			Qty, Pair - 01	
40	0544806		Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	1
			Qty, Pair - 01	
			Location, Wheel Chocks - Left Side Rear Compt	
41	0010670		ABS Wabco Brake System, Single rear axle	1
42	0508676		Brakes, Meritor, EX225, 17", Disc Plus, Front	1
43	0000730		Brakes, Meritor, Cam, Rear, 16.50 x 7.00"	1
44	0020784		Air Compressor, Brake, Cummins/Wabco 18.7 CFM	1
45	0000785		Brake Reservoirs, Three	1
46	0568012		Air Dryer, Wabco System Saver 1200, Heater, 2010	1
47	0000790		Brake Lines, Nylon	1
48	0000854		Air Inlet, w/Disconnect Coupling	1
			Location, Air Coupling(s) - a) DS Step Well, Forward	
			Qty, Air Coupling (s) - 1	
49	0014130		Air Tank, Additional for Extra Air Horn Capacity	1
50	0736447		Engine, Cummins L9, 450 hp, 1250 lb-ft, W/OBD, EPA 2021, Imp/Vel	1
51	0001244		High Idle w/Electronic Engine, Custom	1
52	0687994		Engine Brake, Jacobs Compression Brake, Cummins Engine	1
			Switch, Engine Brake - e) ISC/ISM/ISL9/ISX Hi Med Lo	
53	0552334		Clutch, Fan, Air Actuated, Horton Drive Master	1
54	0123135		Air Intake, w/Ember separator, Imp/Vel	1
55	0794761		Exhaust System, 4", 2017 L9 Engine, Horizontal, Right Side	1
56	0787999		Radiator, Impel/Velocity	1
57	0511425		Cooling Hoses, Rubber	1
58	0001125		Fuel Tank, 65 Gallon, Left Side Fill	1
59	0001129		Lines, Fuel	1
60	0595087		DEF Tank, 4.5 Gallon, DS Fill, Forward of Rear Axle	1
			Door, Material & Finish, DEF Tank - Polished Stainless	
61	0552793		Not Required, Fuel Priming Pump	1
62	0582243		Shutoff Valves, Fuel Line @ Primary Filter, Cummins	1
63	0699437		Cooler, Chassis Fuel, Not Req'd.	1
64	0690880		No Selection Required From This Category	1
65	0642572		Trans, Allison 5th Gen, 3000 EVS P, w/Prognostics, Imp/Vel/DCF/SFR/Enf	1
66	0625329		Transmission, Shifter, 5-Spd, Push Button, 3000 EVS	1
67	0684459		Transmission Oil Cooler, Modine, External	1
68	0001370		Driveline, Spicer 1710	1
69	0669989		Steering, Ross TAS-85 w/tilt, Eaton Pump, w/ Cooler	1
70	0001545		Steering Assist Cylinder on Front Axle	1
71	0621843		Steering Wheel, 4 Spoke without Controls, Impel	1
72	0690274		Logo/Emblem, on Dash	1
			Text, Row (1) One - PADUCAH	
			Text, Row (2) Two - FIRE	
			Text, Row (3) Three - DEPARTMENT	
73	0123625		Bumper, 19" Extended, Imp/Vel	1
74	0616492		Tray, Hose, Center, 19" Bumper, Outside Air Horns, Imp/Vel	1
			Grating, Bumper extension - Grating, Rubber	
			Capacity, Bumper Tray - 21) 150' of 1.75"	
75	0630813		Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray	1
			Stay arm, Tray Cover - b) Pneumatic Stay Arm	
76	0510226		Lift & Tow Package, Imp/Vel, AXT, Dash CF	1
77	0522573		Tow Hooks Not Required, Due to Lift and Tow Package	1
78	0709257		Lights, Fog, PIAA RF6 07210 White LED, pair, Below Bumper	1
79	0668322		Cab, Impel FR, 7010 Raised Roof	1
80	0668309		Engine Tunnel, ISL and DD13, Impel/Velocity FR	1
81	0677478		Rear Wall, Exterior, Cab, Aluminum Treadplate	1
82	0122466		Cab Lift, Elec/Hyd, w/Manual Override, Imp/Vel	1
83	0123176		Grille, Bright Finished, Front of Cab, Impel/Velocity	1
84	0002224		Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	1
			Material Trim/Scuffplate - c) S/S, Polished	
85	0527034		Trim, S/S Band, Across Cab Face, Rect Lights, Impel	1
			Material Trim/Scuffplate - c) S/S, Polished	

Line	Option	Type	Option Description	Qty
85			Turnsignal Covers - Polished S/S Covers	
86	0087357		Molding, Chrome on Side of Cab	1
87	0032189		Mirrors, Ramco, 6000PCHR, Heated/Remote, w/Heated/Remote Convex, Door Mount	1
88	0667942		Door, Half-Height, Impel FR 4-Door Cab, Raised Roof	1
			Key Model, Cab Doors - 751	
89	0655511		Door Panel, Brushed Stainless Steel, Impel/Velocity 4-Door Cab	1
90	0667905		Storage Pockets w/ Elastic Cover, Recessed, Impel/Velocity FR	1
91	0667902		Controls, Electric Windows, All Cab Doors, Impel/Velocity FR	1
92	0555486		Steps, 4-Door Cab, Dual, Imp/Vel	1
			Light, Step, Additional - P25 LED	
93	0770200		Handrail, Exterior, Hansen, Knurled, Alum, LED Backlit, 4-Door Cab	1
			Color, Handrail Light - Red	
			Control, Handrail Light - Headlight Switch & Parking Brake	
94	0509649		Lights, Cab and Crew Cab Access Steps, P25, LED w/Bezel, 1Lt Per Step	1
95	0005772		Fenders, S/S on cab, w/Radius corner, 2.00" wide	1
96	0592071		No Windows, Side of Crew Cab, Vel/Imp	1
97	0568605		Not Required, Interior Trim, No Cab Side Windows	1
98	0012090		Not Required, Windows, Front/Side of raised roof	1
99	0603142		Windows, Rear CC, (2) 11.25" x 18", Impel	1
100	0553197		Not Required, Trim, Cab Rear Windows, Impel	1
101	0640055		Compt, Storage, 10.71 W x 30 H x 14 D, (1) Ea Side C/C, Sgl Pan, D-Ring, Imp/Vel	1
			Light, Aux Cab Compartments - Amdor, Red Hinged Side	
			Finish, Exterior Cab Compt - Spatter Gray	
			Door, Exterior Stop - 2-Chain	
102	0663383		Mounting Provisions, 3/16" Alum, Full Engine Tunnel, Vel/Imp	1
			Mounting Provision Spacing - 1.00"	
			Material Finish, Cab Interior - Painted	
103	0748680		Cab Interior, Vinyl, Painted Walls, Imp/Vel FR, CARE	1
			Color, Cab Interior Vinyl/Fabric - Endure Vinyl - Black	
			Cab Interior Rear Wall Material - Painted Aluminum	
104	0667943		Cab Interior, Paint Color, Impel/Velocity FR	1
			Color, Cab Interior Paint - i) fire smoke gray	
105	0509532		Floor, Rubber Padded Cab & Crew Cab, Imp/Vel, Dash CF	1
106	0741239		HVAC, Impel/Velocity FR, CARE	1
			Paint Color, A/C Condenser - Painted by OEM	
			HVAC System, Filter Access - Removable Panel	
			Auxiliary Cab Heater - Both	
107	0639675		Sun Visor, Smoked Lexan, AXT, Dash CF, Imp/Vel, Saber FR/Enforcer	1
			Sun Visor Retention - No Retention	
108	0543257		Grab Handles, Driver Door Post & Passenger Dash Panel, Imp/Vel	1
109	0583938		Lights, Engine Compt, Custom, Auto Sw, Win 3SC0CDCR, 3" LED, Trim	1
			Qty, - 01	
110	0122516		Fluid Check Access, Imp/Vel	1
111	0583042		Side Roll and Frontal Impact Protection	1
112	0622619		Seating Capacity, 4 Seats	1
113	0697005		Seat, Driver, Pierce PS6, Premium, Air Ride, High Back, Safety	1
114	0696994		Seat, Officer, Pierce PS6, Premium, Air Ride, SCBA, Safety	1
115	0002517		Not Required, Radio Compartment	1
116	0771857		Cabinet, Rear Facing, LS, 21 W x 40.5 H x 30.5 D, Roll, Imp/Vel	1
			Light, Short Cabinet - Amdor H2O, Interior, Left Side	
			Material Finish, Shelf - Painted - Cab Interior	
			Shelf/Tray, Cabinet - (2) Shelves, Adjustable, 0.75" Up-Turned Lip	
			Door, Cab Interior Cabinet - Rollup, Amdor, Anodized, Non-Locking	
			Louvers, Cabinet - 0-No Louvers and Louvers, Back	
117	0102783		Not Required, Seat, Rr Facing C/C, Center	1
118	0767672		Cabinet, Rear Facing, RS, 19 W x 40.5 H x 26.5 D, Roll, Imp/Vel	1
			Light, Short Cabinet - Amdor H2O, Interior, Right Side	
			Material Finish, Shelf - Painted - Cab Interior	
			Shelf/Tray, Cabinet - (2) Shelves, Adjustable, 0.75" Up-Turned Lip	
			Door, Cab Interior Cabinet - Rollup, Amdor, Anodized, Non-Locking	
			Louvers, Cabinet - Louvers, Back	
119	0122717		Seat, Forward Facing C/C, DS Outboard, Pierce PS6, Base, SCBA, Safety	1

Line	Option	Type	Option Description	Qty
120	0783657		Cabinet, Forward Facing, Center, 42 W x 58 H x 24 D, Roll, Imp/Vel	1
			False Floor, EMS Cabinet - False Floor, Sweep Out Style	
			Material Finish, Shelf - Painted - Cab Interior	
			Shelf/Tray, Cabinet - (2) Shelves, Adjustable, 1.25" Up-Turned Lip	
			Door, Cab Interior Cabinet - Rollup, Amdor, Anodized, Non-Locking	
			Light, Tall Cabinet - Amdor H2O, Interior, Left Side and Amdor H2O, Interior, Right Side	
			Louvers, Cabinet - 0-No Louvers and Louvers, Left Side	
121	0122730		Seat, Forward Facing C/C, PS Outboard, Pierce PS6, Base, SCBA, Safety	1
122	0646614		Compt, Storage, (2) Rear Facing, Overhead, 22 W x 10 H x 34 D, Imp/Vel FR	1
			Latch, Storage Compt - a) Non Locking	
			Light, Overhead Compt - Amdor, White, Horizontal Mounted	
123	0766467		Upholstery, Seats In Cab, All Vinyl, Seats Inc, CARE	4
			Color, Cab Interior Vinyl/Fabric - Endure Vinyl - Black	
			Qty, - 04	
124	0543991		Bracket, Air Bottle, Hands-Free II, Cab Seats	3
			Qty, - 03	
125	0603867		Seat Belt, ReadyReach	1
			Seat Belt Color - Red	
126	0604863		Seat Belt Height Adjustment, 6 Seats, Imp/Vel, Dash CF	1
127	0602464		Helmet Storage, Provided by Fire Department, NFPA 2016	1
128	0647647		Lights, Dome, FRP Dual LED 4 Lts	1
			Color, Dome Lt - Red & White	
			Color, Dome Lt Bzl - Black	
			Control, Dome Lt White - Door Switches and Lens Switch	
			Control, Dome Lt Color - Lens Switch	
129	0631776		Not Required, Overhead Map Lights	1
130	0650352		Spotlight, Golight Stryker, Model 30**4, LED, 2 Lts	1
			Location - Each side of cab roof, final location at drawing approval	
			Color, GoLt - White	
			Bracket, Spotlight - No Bracket	
131	0650059		Controller, Spotlight, Golight Stryker, Wired Dash Mount, 2 Lts	1
132	0649967		Location, Spotlight Controller, Driver and Officer, 2 Lts	1
133	0602637		Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016 Classification	1
134	0594554		Cab Instruments, Blk Gags, Blk Bez, Impel 2010	1
135	0509511		Air Restriction Indicator, Imp/Vel, AXT, Dash CF, Enf MUX	1
136	0535457		Speedometer, Class 1 w/LED, Officer Recessed Into Dashboard, Location	1
			location - Determined at drawing approval	
137	0543751		Light, Do Not Move Apparatus	1
			Alarm, Do Not Move Truck - Pulsing Alarm	
138	0614619		Messages, Open Door/Do Not Move Truck, MUX w/LCD Gauge Cluster Only	1
139	0611681		Switching, Cab, Membrane, Impel/Velocity/Quantum, Dash CF, AXT WiFi MUX	1
			Location, Emerg Sw Pnls - Driver's Side Overhead	
140	0555915		Wiper Control, 2-Speed with Intermittent, MUX, Impel/Velocity	1
141	0548006		Wiring, Spare, 15 A 12V DC 2nd	2
			Qty, - 02	
			12vdc power from - Ignition power	
			Wire termination - 15 amp power point plug	
			Location - Passenger forward area of engine tunnel	
142	0686687		Wiring, Spare, 37.5 A 12V DC, Customer Install Radio, 30A Sw Bat, 7.5A Ign Grnd	1
			Qty, - 01	
			Location - Officer Dash	
143	0511422		Vehicle Information Center, LCD On Gauge Cluster Only	1
			System Of Measurement - US Customary	
144	0734857		Collision Mitigation, HAAS Alert (R2V), HA5	1
			Subscription, HAAS R2V - R2V - 5 Year Data Plan Subscription	
145	0610240		Vehicle Data Recorder w/Seat Belt Monitor	1
146	0696439		Antenna Mount, Custom Chassis, Cable Routed to Instrument Panel Area	1
			Qty, - 01	
			Location, Antenna Mount - Right Side	
147	0653533		Camera, Pierce, 7" LCD, Rear Camera Only	1
			Location, Camera Monitor - Driver Side In Custom Dash	
148	0615106		Pierce Command Zone, Advanced Electronics & Control System, Impel, WiFi	1

Line	Option	Type	Option Description	Qty
149	0624255		Electrical System, Impel	1
150	0079166		Batteries, (4) Exide Grp 31, 950 CCA ea, Threaded Stud	1
151	0008621		Battery System, Single Start, All Custom Chassis	1
152	0123174		Battery Compartment, Imp/Vel	1
153	0614406		Charger, Sngl Sys, IOTA, DSL-75, 75 Amp, Kussmaul 091-94-12 Ind, AXT/DCF/Vel/Imp	1
154	0012782		Location, Charger, Front Left Side Body Compartment	1
			Location, Battery Chrgr/Cmpr - High On Left Wall	
155	0531403		Location, Bat Chrg Ind, Driver's Seat with Bracket	1
156	0016857		Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	1
			Qty, - 01	
			Color, Kussmaul Cover - b) red	
			Shoreline Connection - Battery Charger	
157	0026800		Shoreline Location	1
			Location, Shoreline(s) - DS Cab Side	
158	0658019		Alternator, 360 amp, Niehoff C531/C537	1
159	0092582		Load Manager/Sequencer, MUX	1
			Enable/Disable Hi-Idle - e)High Idle enable	
160	0783153		Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	1
			Color, Headlight Bez - Chrome Bezel	
161	0648425		Light, Directional, Win 600 Cmb, Cab Crn, Imp/Vel/AXT/Qtm/DCF	1
			Color, Lens, LED's - m)match LED's	
162	0620054		Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	1
163	0648074		Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts	1
164	0627282		Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	1
165	0564683		Lights, Tail, Win M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir Arw For Hsg	1
			Color, Lens - Colored	
166	0561471		Lights, Backup, Win M6BUW, LED, For Tail Lt Housing	1
167	0664481		Bracket, License Plate & Light, P25 LED	1
168	0556842		Bezels, Win, (2) M6 Chrome Pierce, For mtg (4) Win M6 lights	1
169	0589905		Alarm, Back-up Warning, PRECO 1040	1
170	0769420		Lights, Perimeter Cab, Amdor AY-LB-12HW020 LED 4Dr	1
171	0769572		Lights, Perimeter Pump House, Amdor AY-LB-12HW020 LED 2lts	1
172	0770056		Lights, Perimeter Body, Amdor AY-LB-12HW020 LED 2lts, Rear Step	1
			Control, Perimeter Lts - Parking Brake Applied	
173	0556360		Lights, Step, P25 LED 4lts, Pump Pnl Sw	1
174	0620745		Light, HiViz FT-B-46-*, 46", 1st	2
			Location, Lights - One on each side of upper body rear most location	
			Qty, - 02	
			Control, Scene Lts - Cab Sw Panel DS and Cab Sw Panel PS	
			Color, Lt Housing HiViz - White	
			Scene Light Optics - Flood/Spot	
175	0620741		Light, HiViz FT-B-46-*, 46", 2nd	2
			Location, Lights - One on each side of crew cab	
			Qty, - 02	
			Control, Scene Lts - Cab Sw Panel DS and Cab Sw Panel PS	
			EXCLUDED: [Color, Lt Housing]. - White	
			Color, Lt Housing HiViz - White	
			Scene Light Optics - Flood/Spot	
176	0768882		Light, Roof Mt, HiViz LED, FT-B-54-2PKIT-*, Dual Lts, Cnt Feature	1
			Location, driver's/passenger's/center - 1DS & 1PS	
			Control, Scene Lts - Cab Sw Panel DS and Cab Sw Panel PS	
			Color, Lt Housing HiViz - Black	
177	0689891		Lights, Deck, Win (2) PFBP12C LED Rear Flood Lights	1
			Switch, Scene Lt Cntrl - h)switch at rear	
178	0645676		Lights, Not Required, Hose Bed, Deck Lights At Rear	1
179	0768541		Light, Hose Bed, Amdor AY-LB-12HW040, 40" LED	2
			Location - each side of hose bed near top	
			Qty, - 02	
			Control, Hose Bed Lts - Cup Switch At Rear	
180	0645681		Lights, Not Required, Rear Work, Deck Lights At Rear	1
181	0645683		Lights, Rear Scene, Win, M9LZC LED	2
			Qty, - 02	

Line	Option	Type	Option Description	Qty
181			Control, Rear Scene Lts - Cab Switch Panel DS and Body Switch, DS Rear Bulkhead	
			Location, Scene Lights - DS Rear Body Bulkhead, High, 1lt and PS Rear Body Bulkhead, High, 1lt	
182	0709438		Light, Walking Surf, FRP Flood, LED	1
183	0060016		Pumper, Long, Aluminum, 2nd Gen	1
184	0554271		Body Skirt Height, 20"	1
185	0013897		Tank, Water, 750 Gallon, Poly, Long, New York Style	1
186	0003405		Overflow, 4.00" Water Tank, Poly	1
187	0028107		Not Required, Foam Cell Modification	1
188	0633066		Sleeve, Through Tank	1
			Qty, Sleeve - 1	
			Water Tank Sleeve - Plumbing/Hydraulic Diameter - 3" Plumbing	
189	0553725		Restraint, Water Tank, Heavy Duty, Special Type Tank, 4x4, or Export	1
190	0003429		Not Required, Direct Tank Fill	1
191	0003424		Not Required, Dump Valve	1
192	0048710		Not Required, Jet Assist	1
193	0030007		Not Required, Dump Valve Chute	1
194	0514778		Not Required, Switch, Tank Dump Master	1
195	0618241		Hose Bed, Aluminum, Pumper, New York Style	1
			Material Trim/Scuffplate - b) S/S, Brushed	
196	0003481		Hose Bed Capacity, Special	1
			Capacity, Hosebed - 1000 ft of 5" rubber hose, 400 ft of 1.75 hose poly, and 600 ft 3" poly hose	
197	0003488		Divider, Hose Bed, Unpainted	3
			Qty, Hosebed Dividers - 3	
198	0589278		Hose Restraint, Hose Bed, Velcro Strap on Top, 2" Heavy Nylon Web at Rear	1
			Type of fastener - seat belt buckle	
			Nylon Web Color - Black	
			Type of fastener, Rear - seat belt buckle - bottom of hosebed	
199	0010133		Cross-Divider, Hose Bed	1
200	0013512		Running Boards, 12.75" Deep	1
201	0689621		Tailboard, 16" Deep	1
202	0690037		Wall, Rear, Smooth Aluminum/Body Material	1
			Material, Rear Wall Inboard Facing Surfaces - Aluminum Diamondplate	
203	0003531		Tow Bar, Under Tailboard	1
204	0590926		Hose Restraint, Running Board, Velcro Straps	1
			Location, Hose Tray, Running Board - Left Side	
			Qty, Tray, Hose - 1	
205	0003634		Tray, Hose, Running Board, Soft Suction Hose, 25' of 5.00"	1
			Location, Hose Tray, Running Board - b) LH Side	
			Qty, Tray, Hose - 1	
206	0003561		Construction, Compt, Alum, Pumper	1
207	0063662		LS 161" Rollup, Full Height Front & Rear, FDLER	1
208	0063669		RS 161" Rollup, Full Height Front & Rear, FDLER	1
209	0594005		Doors, Rollup, Amdor, Side Compartments	6
			Qty, Door Accessory - 06	
			Color, Roll-up Door - AMDOR Painted to Match Lower Body	
			Latch, Roll-up Door - Non-Locking Liftbar	
210	0013671		Compt, Rear, Rollup, 30.75" FF, 25.88" D	1
211	0594003		Door, Amdor, Rollup, Rear Compartment	1
			Color, Roll-up Door - AMDOR Painted to Match Lower Body	
			Latch, Roll-up Door - Non-Locking Liftbar	
212	0554995		No Body Modification Required	1
213	0625184		Guard, Drip Pan, S/S, Rollup Door, Pumper	7
			Qty, Door Accessory - 07	
			Location, Door Guard/Drip Pan - LS1, LS2, LS3, RS1, RS2, RS3 and B1	
214	0659353		Lights, Compt, Amdor AY-9220 LED, Dual Light Strip	7
			Qty, - 07	
215	0687146		Shelf Tracks, Painted	7
			Qty, Shelf Track - 07	
			Location, Shelf Track - LS1, LS2, LS3, RS1, RS2, RS3 and B1	

Line	Option	Type	Option Description	Qty
216	0600350		Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations	7
			Qty, Shelf - 07	
			Material Finish, Shelf - Painted - Spatter Gray	
			Location, Shelves/Trays, Predefined - .Location To Be Determined	
217	0647091		Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides	3
			Qty, - 03	
			Location, Tray Slide-Out, Floor Mounted - B1	
			Material Finish, Tray - Painted - Spatter Gray	
218	0540317		Toolboard, Swing-out, Alum, .188", Peg Board	1
			Qty - 1	
			Location, Pivot - Back	
			Mounting, Toolboard - Adjustable Frt-back	
			Hole Diameter, Pegboard/Toolboard - .281" diameter	
			Finish, Pegboard/Toolboard - Painted - Spatter Gray	
			Location, Toolboard - RS2	
219	0004005		Alum Treadplate on Compt Floor	3
			Location - to be determined	
			Qty, Comp. Accessory - 03	
220	0024016		Rub Rail, Aluminum Extruded, Side & Rear of Body	1
221	0784811		Fender Crowns, Rear, Stainless, w/Removable Liner	1
			Material Finish, Fender Liner - Painted	
222	0519849		Not Required, Hose, Hard Suction	1
223	0626229		Handrails, Side Pump Panels, Per Print	1
224	0004126		Handrails, Beavertail, Standard	1
225	0610196		Handrail, Rear, Above Hose Bed, New York Style/Low Hose Bed	1
			Handrail Finish - Black Rubber Covered	
			Reinforcement, Hose Bed Divider - Tied to Upper Handrail/Crossbar	
226	0004150		Handrail, Extra - 15-20" Long	4
			Qty, Handrails - 04	
			Location, Handrail Additional - to be determined	
227	0657651		Compt, Air Bottle, Double, Full Width Door, Fender Panel	3
			Qty, Air Bottle Comp - 3	
			Door Finish, Fender Compt - Polished	
			Location, Fender Compt - Double - LS Fwd, Double - LS Rear, Double - RS Fwd and Double - RS Rear	
			Latch, Air Bottle Compt - Southco C2 Chrome Raised	
			Insert, Air Bottle Compt - Rubber Matting and W-Shaped Insert	
228	0004225		Ladder, 24' Duo-Safety 900A 2-Section	1
229	0004230		Ladder, 14' Duo-Safety 775A Roof	1
230	0049958		Ladders Btwn Tank & S.Sht, RS, Ext'd Rr, Encl'd Complete, RPH	1
			Door, Material & Finish, Ladder Storage - smooth aluminum	
			Latch, Door Ladder Storage - D-Handle latch	
			Hinge Location - Right Side	
231	0014245		Ladder, 10' Duo-Safety Folding 585A, w/Mounting	1
			Location, Folding Ladder - Ladder Compartment	
232	0602877		Pike Pole, Pumper, Provided by Fire Department, NFPA 2016	1
			Pike Pole Make/Model - Duo-Safety 10' Pike Pole	
233	0602875		Pike Pole, 6', Pumper, Provided by Fire Department, NFPA 2016	1
			Pike Pole Make/Model - Duo-Safety 6' Pike Pole	
234	0004361		Tubes, Alum, Pike Pole Storage	2
			Qty, Pike Pole Tubes - 02	
			Location, Pike Pole Tube - Ladder Storage	
235	0024388		No Steps Required, Front Of Body	1
236	0004382		Steps, Folding, Rear of Body, Eberhard	1
237	0004390		Step, Folding - Extra, Body Only, Eberhard	4
			Qty, Folding Step - 04	
			Location, Additional Step - To be determined at drawing approval.	
238	0004425		Pump, Waterous, CSU, 1500 GPM, Single Stage	1
239	0004481		Seal, Grafoil, Waterous	1
240	0559769		Trans, Pump, Waterous C20 Series	1
241	0635600		Pumping Mode, Stationary Only	1
242	0605126		Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	1
243	0003148		Transmission Lock-up, EVS	1

Line	Option	Type	Option Description	Qty
244	0004547		Auxiliary Cooling System	1
245	0014486		Not Required, Transfer Valve, Stage Pump	1
246	0746501		Valve, Relief Intake, Elkhart	1
			Qty - 1	
			Pressure Setting - 125 psig	
			Intake Relief Valve Control - Behind Right Side Pump Panel	
247	0794959		Controller, Pressure, Pierce, Pump Boss, PBA300	1
248	0072153		Primer, Trident, Air Prime, Air Operated	1
249	0780364		Manuals, Pump, (2) Total, Electronic Copies	1
250	0602512		Plumbing, Stainless Steel and Hose, Single Stage Pump, Control Zone	1
251	0089437		Plumbing Without Foam System	1
252	0004645		Inlets, 6.00" - 1250 GPM or Larger Pump	1
253	0004646		Cap, Main Pump Inlet, Long Handle, NST, VLH	1
254	0014650		Pump Suction Tube(s), Short, All	1
255	0084610		Valves, Akron 8000 series- All	1
256	0004660		Inlet, Left Side, 2.50"	1
257	0029147		Not Required, Inlet, Right Side	1
258	0016158		Valve, Inlet(s) Recessed, Side Cntrl, "Control Zone"	1
			Qty, Inlets - 1	
259	0004700		Control, Inlet, at Valve	1
260	0092569		No Rear Inlet (Large Dia) Requested	1
261	0092696		Not Required, Cap, Rear Inlet	1
262	0064116		No Rear Inlet Actuation Required	1
263	0009648		No Rear Intake Relief Valve Required on Rear Inlet	1
264	0092568		No Rear Auxiliary Inlet Requested	1
265	0563738		Valve, .75" Bleeder, Aux. Side Inlet, Swing Handle	1
266	0029043		Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing	1
267	0004905		Outlet, Tank Fill, 1.50"	1
268	0004940		Outlet, Left Side, 2.50"	1
			Qty, Discharges - 01	
269	0092570		Not Required, Outlets, Left Side Additional	1
270	0004945		Outlet, Right Side, 2.50"	1
			Qty, Discharges - 01	
271	0092571		Not Required, Outlets, Right Side Additional	1
272	0005046		Outlet, 4" w/3.50" Waterous Valve, Right, Handwheel	1
273	0649939		Outlet, Front, 1.50" w/2" Plumbing	1
			Fitting, Outlet - 1.50" NST with 90 degree swivel	
			Drain, Front Outlet - Automatic	
			Location, Front, Single - top of right bumper	
274	0004995		Outlet, Rear, 2.50"	1
			Qty, Discharges - 01	
			Location, Outlet - b) left side	
275	0092574		Not Required, Outlet, Rear, Additional	1
276	0004990		Outlet, Front HB, 2.50" w/2.50" Plumbing	2
			Location - Front of Hose Bed	
			Qty, Discharges - 02	
277	0752097		Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	1
278	0563739		Valve, 0.75" Bleeder, Discharges, Swing Handle	1
279	0008475		Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" Male Special Thread,VLH	1
			Qty, Discharges - 01	
			Special Threads - Paducah	
280	0035094		Not Required, Elbow, Left Side Outlets, Additional	1
281	0008385		Elbow, Right Side Outlets, 45 Degree, 2.50" FNST x 2.50" Male Special Thread,VLH	1
			Qty, Discharges - 01	
			Special Threads - Paducah	
282	0089584		Not Required, Elbow, Right Side Outlets, Additional	1
283	0008800		Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.50", Male Special Threads, VLH	1
			Qty, Discharges - 01	
			Special Threads - Paducah	
284	0085695		Not Required, Elbow, Rear Outlets, Large, Additional	1

Line	Option	Type	Option Description	Qty
285	0005097		Elbow, Large Dia Outlet, 30 Deg, 4.00" FNST x 5.00" Storz	1
			Qty, - 01	
286	0062133		Control, Outlets, Manual, Pierce HW if applicable	1
287	0090927		Outlet, 3.00" Deluge w/TFT Extend-a-Gun XG18	1
288	0777050		Monitor, TFT Crossfire XFT-NJ, No Ground Base	1
			Monitor Finish - Painted by OEM	
289	0047322		Nozzle, TFT M-R, 1,250 GPM, with XF-SS5 and MST-4NJ, Shaper and Tips	1
290	0046857		Deluge Mount, For TFT Crossfire Monitor, TFT Manual Extend-A-Gun Only	1
291	0029167		Crosslays Sngl Sheet Unpainted, (2+) 1.50", Std. Cap	2
			Qty, Crosslays - 2	
292	0090442		Crosslays Sngl Sheet Unpainted, (1) 2.50" Std Cap	1
293	0591145		Hose Restraint, Crosslay/Deadlay, Top and Ends, Elastic Netting	2
			Qty, - 02	
294	0029260		Not Required, Speedlays	1
295	0750536		Hose Restr, Spdly, Not Required, No Spdly	1
296	0019853		Crosslays, 8.00" Lower Than Standard - Control Zone w/9.00" Raised PH	1
297	0044333		Not Required, Foam System	1
298	0012126		Not Required, CAF Compressor	1
299	0552517		Not Required, Refill, Foam Tank	1
300	0042573		Not Required, Foam System Demonstration	1
301	0045465		Not Required, Foam Tanks	1
302	0091110		Not Required, Foam Tank Drain	1
303	0091079		Not Required, Foam Tank #2	1
304	0091112		Not Required, Foam Tank #2 Drain	1
305	0007575		Pump House, Side Control, 48", Control Zone	1
306	0738072		Approval Dwg, Pump Panel(s), Not Required	1
307	0032479		Pump Panel Configuration, Control Zone	1
308	0629252		Material, Pump Panels, Side Control Black Vinyl	1
			Material Finish, Pump Panel, Side Control - Black Vinyl	
			Material, Pump Panel, Side Control - Aluminum	
309	0005578		Panel, Pump Access - Right Side Only	1
310	0037731		Pump House Structure, Raised, Included with Ladder Storage	1
311	0583824		Light, Pump Compt, Wln 3SC0CDCR LED White	1
			Qty, - 01	
312	0586382		Gauges, Engine, Included With Pressure Controller	1
313	0005601		Throttle, Engine, Incl'd w/Press Controller	1
314	0739224		Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	1
315	0549333		Indicators, Engine, Included with Pressure Controller	1
316	0745568		Indicator Light, Pump Panel, Ok To Pump, Green	1
317	0511078		Gauges, 4.00" Master, Class 1, 30"-0-600psi	1
318	0511100		Gauge, 2.00" Pressure, Class 1, 30"-0-400psi	1
319	0062586		Gauge, Water Level, Class 1, Pierce Std	1
320	0006774		Not Required, Foam Level Gauge	1
321	0679660		Light Shield, S/S, On Scene Night Axe, LED	1
322	0606697		Air Horns, (2) Grover, In Bumper	1
323	0606835		Location, Air Horns, Bumper, Each Side, Outside Frame, Outboard (Pos #1 & #7)	1
324	0016065		Control, Air Horn, Horn Ring, PS Chrome Push Button	1
325	0525667		Siren, Wln 295SLSA1, 100 or 200 Watt	1
326	0510206		Location, Elect Siren, Recessed Overhead In Console	1
			Location, Elec Siren - Overhead, DS Center Sw Pnl	
327	0076156		Control, Elec Siren, Head Only	1
328	0601306		Speaker, (1) Wln, SA315P, w/Pierce Polished Stainless Steel Grille, 100 watt	1
			Connection, Speaker - siren head	
329	0601565		Location, Speaker, Frt Bumper, Recessed, Center (Pos 4)	1
330	0016080		Siren, Federal Q2B	1
331	0006095		Siren, Mechanical, Mounted Above Deckplate	1
			Location, Siren, Mech - a) Left	
332	0036165		Control, Mech Siren, Horn Ring, PS Push Button On Engine Tunnel	1
333	0740391		Sw, Siren Brake, Momentary Chrome Push Button, RS	1
334	0607820		Lightbar, Wln, Freedom IV-V, 81", R_R_R__R____R__R_R_R	1
			Filter, Whl Freedom Ltbrs - No Filters	

Line	Option	Type	Option Description	Qty
335	0540460		Light, Front Zone, Wln M6*C LED, Clear Lens, 4lts Q Bezel	1
			Color, Lt DS Frnt Outside - DS Front Outside Red	
			Color, Lt PS Frnt Outside - PS Front Outside Red	
			Color, Lt DS Front Inside - r) DS Front Inside Red	
			Color, Lt PS Front Inside - r) PS Front Inside Red	
336	0653937		Flasher, Headlight Alternating	1
			Headlt flash deactivation - a)w/high beam	
337	0540692		Lights, Side Zone Lower, Wln M6*C LED, Clear Lens, 3pr, Ovr 25	1
			Location, Lights Front Side - b)each side bumper	
			Color, Lt Side Front - Red	
			Color, Lt Side Middle - Red	
			Color, Lt Side Rear - Red	
			Location, Lights Mid Side - Rearward of Crew Cab Doors	
			Location, Lights Rear Side - Between Tandem	
338	0564655		Lights, Rear Zone Lower, Wln M6*C LED, Clear Lens, For Tail Lt Housing	1
			Color, Lt DS Rear - r) DS Rear Lt Red	
			Color, Lt PS Rear - r) PS Rear Lt Red	
339	0088745		Light, Rear Zone Upper, Wln L31HRFN LED Beacon, Red LED	1
			Color, Dome, Rear Warning - j) both domes clear	
340	0006551		Not Required, Lights, Rear Upper Zone Blocking	1
341	0006615		Mtg, Rear Warn Lts, On Top of Compt	1
342	0791528		Light, Traffic Directing, Wln TAL65, 36.00" Long, TACTL5	1
			Activation, Traffic Dir L - Not Connected	
343	0551728		Location, Traf Dir Lt, Recessed with S/S Trim	1
344	0530282		Location, Traf Dir Lt Controller, Overhead Switch Panel DS Right End	1
345	0519934		Not Required, Brand, Hydraulic Tool System	1
346	0649753		Not Required, PTO Driven Hydraulic Tool System	1
347	0007150		Bag of Nuts and Bolts	1
			Qty, Bag Nuts and Bolts - 1	
348	0602516		NFPA Required Loose Equipment, Pumper, NFPA 2016, Provided by Fire Department	1
349	0602407		Soft Suction Hose, Provided by Fire Department, Pumper NFPA 2016 Classification	1
350	0027023		No Strainer Required	1
351	0602538		Extinguisher, Dry Chemical, Pumper NFPA 2016 Class, Provided by Fire Department	1
352	0602360		Extinguisher, 2.5 Gal. Pressurized Water, Pumper NFPA 2016,Provided by Fire Dept	1
353	0602679		Axe, Flathead, Pumper NFPA 2016 Classification, Provided by Fire Department	1
354	0602667		Axe, Pickhead, Pumper NFPA 2016 Classification, Provided by Fire Department	1
355	0559685		Paint, Two Tone, Cab, Custom Cab	1
			Paint Color, Predefined - #90 Red	
			Paint Color, Upper Area, Predefined - #10 White	
356	0646897		Paint Chassis Frame Assy, E-Coat, Standard	1
			Paint Color, Frame Assembly, Predefined - Standard Black	
357	0693797		No Paint Required, Aluminum Front Wheels	1
358	0693792		No Paint Required, Aluminum Rear Wheels	1
359	0733739		Paint, Axle Hubs	1
			Paint, Axle Hub - Lower Job Color	
360	0007230		Compartment, Painted, Spatter Gray	1
361	0544129		Reflective Band, 1"-6"-1"	1
			Color, Reflect Band - A - a) white	
			Color, Reflect Band - B - l) white	
			Color, Reflect Band - C - w) white	
362	0510041		Reflective across Cab Face, Imp/Vel	1
363	0536954		Stripe, Chevron, Rear, Diamond Grade, Pumper	1
			Color, Rear Chevron DG - fluorescent yellow green	
364	0665144		Stripe, Reflective, Chevron, Cab and Crew Cab Door Edge, Diamond Grade	1
			Color, Reflect Band - A - p) fluorescent yellow green diamond grade	
			Color, Reflect Chev - A - r) red diamond grade	
365	0009062		Ribbon, Broken Effect on Reflective Stripe, Pair	1
66	0017359		Stripe, Black Outline, Vinyl on Reflective Band	7
			Qty, - 07	
367	0583278		Stripe, Chevron, Diamond Grade, Rear Access Doors	1
			Color, Rear Chevron DG - fluorescent yellow green	

Line	Option	Type	Option Description	Qty
368	0022087		"Z" Ribbon, w/Shade in Reflective Stripe, Pair	7
			Qty, - 07	
369	0065687		Stripe, Reflective, Cab Doors Interior	1
			Color, Reflective - a) white	
370	0030076		Lettering Specifications, Vinyl/Painted	1
371	0027245		Lettering, Vinyl 4" w/outline & shade (1-20)	1
372	0685985		Lettering, Reflective, 12.00", Each	4
			Qty, Lettering - 04	
			Outline, Lettering - No Outline or Shade	
373	0685979		Lettering, Reflective, 16.00", Each	14
			Qty, Lettering - 14	
			Outline, Lettering - No Outline or Shade	
374	0686194		Lettering, Gold Leaf, 12.00", Each	14
			Qty, Lettering - 14	
			Outline, Lettering - Outline and Shade	
375	0067027		Lettering, Reflective, "Dial 911" Each	1
			Color, Lettering - a) white	
			Location, Lettering - To be determined	
			Qty, - 1	
			Size, -Dial 911- - 08	
376	0677306		Emblem, Maltese Cross, Printed Effect Gold Leaf, 15"-17", Each	3
			Qty, - 03	
			Location, Emblem - To be determined at drawing/graphic approval.	
377	0772003		Manual, Fire Apparatus Parts, USB Flash Drive, Custom	1
			Qty, - 01	
378	0772037		Manual, Chassis Service, USB Flash Drive, Custom	1
			Qty, - 01	
379	0773381		Manual, Chassis Operation, (1) USB Flash Drive, Custom	1
380	0030008		Warranty, Basic, 1 Year, Apparatus, WA0008	1
381	0611136		Warranty, Chassis, 3 Year, Velocity/Impel, WA0284	1
382	0696698		Warranty, Engine, Cummins, 5 Year, WA0181	1
383	0684952		Warranty, Steering Gear, TRW Ross TAS, 1 Year WA0202	1
384	0595767		Warranty, Frame, 50 Year, Velocity/Impel, Dash CF, WA0038	1
385	0733309		Warranty, Axle, 5 Year, Meritor, General Service, WA0384	1
386	0733308		Warranty, Single Axle, 5 Year, Meritor, General Service, WA0384	1
387	0652758		Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	1
388	0019914		Warranty, Structure, 10 Year, Custom Cab, WA0012	1
389	0595813		Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	1
390	0524627		Warranty, Electronics, 5 Year, MUX, WA0014	1
391	0695416		Warranty, Pierce Camera System, WA0188	1
392	0708760		Warranty, Not Applicable, LED Strip Lights	1
393	0046369		Warranty, 5-year EVS Transmission, Standard Custom, WA0187	1
394	0685945		Warranty, Transmission Cooler, WA0216	1
395	0688798		Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	1
396	0596025		Warranty, Structure, 10 Year, Body, WA0009	1
397	0693126		Warranty, AMDOR, Roll-up Door, 10 Year/5 Year Painted, WA0185	1
398	0734463		Warranty, Pump, Waterous, 7 Year Parts, WA0382	1
399	0648675		Warranty, 10 Year S/S Pumbing, WA0035	1
400	0641372		Warranty, Foam System, Not Available	1
401	0595820		Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	1
402	0595412		Warranty, Graphics Lamination, 1 Year, Apparatus, WA0168	1
403	0683627		Certification, Vehicle Stability, CD0156	1
404	0736241		Certification, Engine Installation, Imp/Vel, Cummins L9, 2021	1
405	0686786		Certification, Power Steering, CD0098	1
406	0667418		Certification, Cab Integrity, Impel FR, CD0009	1
407	0548950		Certification, Cab Door Durability, Velocity/Impel, CD0001	1
408	0548967		Certification, Windshield Wiper Durability, Impel/Velocity, CD0005	1
409	0667411		Certification, Electric Window Durability, Velocity/Impel FR, CD0004	1
410	0549273		Certification, Seat Belt Anchors and Mounting, Imp/Vel/Vel SLT, CD0018	1
411	0735950		Certification, Cab HVAC System Performance, Velocity/Impel FR, CD0166/CD0168	1
412	0545073		Amp Draw Report, NFPA Current Edition	1
413	0002758		Amp Draw, NFPA/ULC Radio Allowance	1

Line	Option	Type	Option Description	Qty
414	0799248		Appleton/Florida BTO	1
415	0000018		PUMPER, 2ND GEN	1
416	0000012		PIERCE CHASSIS	1
417	0004713		ENGINE, OTHER	1
418	0046395		EVS 3000 Series TRANSMISSION	1
419	0020011		WATEROUS PUMP	1
420	0020009		POLY TANK	1
421	0028047		NO FOAM SYSTEM	1
422	0020006		SIDE CONTROL	1
423	0020007		AKRON VALVES	1
424	0020015		ABS SYSTEM	1
425	0658751		PUMPER BASE	1

SECTION 3

Finley Fire Equipment is pleased to submit a proposal to Paducah Fire Department for a **Pierce® triple combination pumper** per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications.

PIERCE MANUFACTURING was founded in 1913. Since then we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land.

Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification.

In accordance with the current edition of NFPA 1901 standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment.

Images and illustrative material in this proposal are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment.

GENERAL DESIGN AND CONSTRUCTION

To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system.

QUALITY AND WORKMANSHIP

Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested and certified to meet the American welding Society

codes upon hire and every three (3) years thereafter. Pierce also employs and American Welding Society certified welding inspector in plant during working hours to monitor weld quality.

Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal.

In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to insure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce.

To demonstrate the quality of our products and services, a list of at least two (2) fire departments/municipalities that have purchased vehicles for a second time is provided.

DELIVERY

The apparatus will be delivered under its own power to insure proper break-in of all components while the apparatus is still under warranty. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered.

MANUAL AND SERVICE INFORMATION

At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

SAFETY VIDEO

At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance.

PERFORMANCE TESTS

A road test will be conducted with the apparatus fully loaded and a continuous run of no less than ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet NFPA 1901 acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by Finley Fire Equipment by operating a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within two hundred (200) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The

parts facility stocks in excess of $5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operators manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Personal and Advertising Injury$1,000,000

General Aggregate$2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit:$1,000,000

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate:$3,000,000

Each Occurrence:$3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

PRODUCT LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

UMBRELLA/EXCESS LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Each Occurrence:$25,000,000

Aggregate:$25,000,000

The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.

SINGLE SOURCE MANUFACTURER

Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.

Your apparatus will be manufactured in Appleton, Wisconsin.

NFPA 2016 STANDARDS

This unit will comply with the NFPA standards effective January 1, 2016, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions.

Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.

All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.

A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating.

The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company will designate, in writing, who is qualified to witness and certify test results.

NFPA COMPLIANCY

Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA".

VEHICLE INSPECTION PROGRAM CERTIFICATION

To assure the vehicle is built to current NFPA standards, the apparatus, in its entirety, will be third-party, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition of NFPA 1901. The certification will include: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus.

A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.

PUMP TEST

Underwriters Laboratory (UL) will test, approved, and certify the pump. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the pump manufacturer's record of pump construction details will be forwarded to the Fire Department.

GENERATOR TEST

If the unit has a generator, Underwriters Laboratory (UL) will test, approved, and certify the generator. The test results will be provided to the Fire Department at the time of delivery.

BREATHING AIR TEST

If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and have the sample certified that the air quality meets the requirements of NFPA 1989, *Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection.*

INSPECTION TRIP(S)

The bidder will provide three (3) factory inspection trip(s) for TBD customer representative(s). The inspection trip(s) will be scheduled at times mutually agreed upon between the manufacturer's representative and the customer. All costs such as travel, lodging and meals will be the responsibility of the bidder.

BID BOND

A bid bond as security for the bid in the form of a 10% bid bond will be provided with the proposal. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language which assures that the bidder/principal will give a bond or bonds, as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a

vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.

PERFORMANCE BOND

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.

APPROVAL DRAWING

A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.

A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.

ELECTRICAL WIRING DIAGRAMS

Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.

IMPEL CHASSIS

The Pierce Impel® is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required. The chassis will be the manufacturer's first line tilt cab.

WHEELBASE

The wheelbase of the vehicle will be 197.00.

GVW RATING

The gross vehicle weight rating will be 48,500.

FRAME

The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will have a 13.38" tall web over the front and mid sections of the chassis, with a continuous smooth taper to 10.75" over the rear axle. Each rail will have a section modulus of 25.992 cubic inches and a resisting bending moment (rbm) of 3,119,040 in-lb over the critical regions of the frame assembly, with a section modulus of 18.96 cubic inches with an rbm of 2,275,200 in-lb over the rear axle. The frame rails will be constructed of 120,000 psi yield strength heat-treated 0.38" thick steel with 3.50" wide flanges.

FRONT AXLE
The front axle will be a reverse "I" beam type with inclined king pins. It will be a Meritor™ axle, Model MFS-20, with a rated capacity of 21,500 lb.

The turning angle will be 45 degrees.

A viewing window will be provided on each side of the axle for checking the oil level.

FRONT SUSPENSION
The front springs will be a Standens, three (3)-leaf, taper leaf design, 54.00" long x 4.00" wide, with a ground rating of 21,500 lb.

The two (2) top leaves will wrap the forward spring hanger pin. The top leaf will also wrap the rear spring hanger pin. Both the front and rear eyes will be Berlin style wraps that will place the eyes in the horizontal plane within the main leaf. This will reduce bending stress from acceleration and braking.

A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.

SHOCK ABSORBERS
To provide a smoother ride, the front axle will be furnished with Monroe® Gas-Magnum® 65 heavy-duty telescoping shock absorbers.

FRONT OIL SEALS
Oil seals with viewing window will be provided on the front axle.

FRONT TIRES
Front tires will be Goodyear® 425/65R22.50 radials, 20 ply G296 MSA tread, rated for 22,800 lb maximum axle load and 68 mph maximum speed.

The tires will be mounted on Alcoa 22.50" x 12.25" polished aluminum disc type wheels with a ten (10)stud, 11.25" bolt circle.

REAR AXLE
The rear axle will be a Meritor™, Model RS-26-185, with a capacity of 27,000 lb.

TOP SPEED OF VEHICLE
A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph.

REAR SUSPENSION
The rear suspension will be Standens, semi-elliptical, 3.00" wide x 53.00" long, 12-leaf pack with a ground rating of 27,000 lb. The spring hangers will be castings.

The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger. To reduce bending stress due to acceleration and braking, the front eye will be a berlin eye that will place the front spring pin in the horizontal plane within the main leaf.

A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.

REAR OIL SEALS
Oil seals will be provided on the rear axle(s).

REAR TIRES
Rear tires will be four (4) Goodyear® 12R22.50 radials, 16 ply all season G622 RSD tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.

The tires will be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud 11.25" bolt circle.

TIRE BALANCE
All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.

TIRE PRESSURE MANAGEMENT
There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of six (6) tires.

The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi.

Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.

FRONT HUB COVERS
Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.

REAR HUB COVERS
A pair of stainless steel high hat hub covers will be provided on rear axle hubs.

CHROME LUG NUT COVERS
Chrome lug nut covers will be supplied on front and rear wheels.

MUD FLAPS
Mud flaps with a Pierce logo will be installed behind the front and rear wheels.

WHEEL CHOCKS
There will be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks, with easy-grip handle provided.

Wheel Chock Brackets
There will be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets will be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets will be mounted below the left side rear compartment.

ANTI-LOCK BRAKE SYSTEM

The vehicle will be equipped with a Meritor WABCO 4S4M, anti-lock braking system. The ABS will provide a 4-channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.

BRAKES

The service brake system will be full air type by Meritor™.

Front brakes will be Model EX225 Disc Plus, disc type with automatic pad wear adjustment and 17.00" ventilated rotors for improved stopping distance.

The rear brakes will be Meritor™ 16.50" x 7.00" cam operated with automatic slack adjusters. Dust shields will be provided.

BRAKE SYSTEM AIR COMPRESSOR

The air compressor will be a Cummins/WABCO with 18.7 cubic feet per minute output.

BRAKE SYSTEM

The brake system will include:

- Bendix® dual brake treadle valve
- Heated automatic moisture ejector on air dryer
- Total air system capacity of 4,362 cubic inches
- Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi
- Spring set parking brake system
- Parking brake operated by a push-pull style control valve
- A parking "brake on" indicator light on instrument panel
- Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi
- A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa)
- 1/4 turn drain valve on each air tank

The air tank will be primed and painted to meet a minimum 750 hour salt spray test.

To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.

BRAKE SYSTEM AIR DRYER

The air dryer will be WABCO System Saver 1200 with spin-on coalescing filter cartridge and 100 watt heater.

BRAKE LINES

Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.

AIR INLET

One (1) air inlet with 3D series male coupling will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will be located forward in the driver side lower step well of cab. A check valve will be provided to prevent reverse flow of air. The inlet will discharge into the "wet" tank of the brake system. A mating female fitting will also be provided with the loose equipment.

ADDITIONAL AIR TANK FOR AIR HORN

An additional air tank with 1,454 cubic inch displacement will be provided to increase the capacity of the air system. This tank will be dedicated for air horn use.

The air tank will be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.

The output flow of the engine air compressor varies with engine rpm. Full compressor output is only achieved at governed engine speed. Engine speed may be limited by generators, pumps and other PTO driven options.

ENGINE

The chassis will be powered by an electronically controlled engine as described below:

Make:	Cummins
Model:	L9
Power:	450 hp at 2100 rpm
Torque:	1250 lb-ft at 1400 rpm
Governed Speed:	2200 rpm
Emissions Level:	EPA 2021
Fuel:	Diesel
Cylinders:	Six (6)
Displacement:	543 cubic inches (8.9L)
Starter:	Delco 39MT™
Fuel Filters:	Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter.

The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected.

HIGH IDLE

A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm. A switch will be installed, at the cab instrument panel, for activation/deactivation.

The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided, adjacent to the switch. The light will illuminate when the above conditions are met. The light will be labeled "OK to Engage High Idle."

ENGINE BRAKE

A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.

The driver will be able to turn the engine brake system on/off and have a high, medium and low setting.

The engine brake will activate when the system is on and the throttle is released.

The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine.

The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.

The ABS system will automatically disengage the auxiliary braking device, when required.

CLUTCH FAN

A Horton® fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and fully engaged in "Pump" position.

ENGINE AIR INTAKE

An air intake with an ember separator (to prevent road dirt, burning embers, and recirculating hot air from entering the engine) will be mounted at the front of the apparatus, on the passenger side of the engine. The ember separator will be mounted in the air intake with flame retardant, roto-molded polyethylene housing. It will be easily accessible by the hinged access panel at the front of the vehicle.

EXHAUST SYSTEM

The exhaust system will be stainless steel from the turbo to the engine's aftertreatment device, and will be 4.00" in diameter. The exhaust system will include a single module aftertreatment device to meet current EPA standards. An insulation wrap will be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device . The exhaust will terminate horizontally ahead of the right side rear wheels. A tailpipe diffuser will be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.

RADIATOR

The radiator and the complete cooling system will meet or exceed NFPA and engine manufacturer cooling system standards.

For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The core will be made of aluminum fins, having a serpentine design, brazed to aluminum tubes. The tubes will be brazed to aluminum headers. The radiator core will have a minimum frontal area of 1434 square inches. Supply tank made of glass-reinforced nylon and a return tank of cast aluminum alloy will be crimped on to the core assembly using header tabs and a compression gasket to complete the radiator core assembly. The radiator will be compatible with commercial antifreeze solutions.

There will be a full steel frame around the entire radiator core assembly. The radiator core assembly will be isolated within the steel frame by rubber inserts to enhance cooling system durability and reliability. The radiator will be mounted in such a manner as to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven ground. The radiator assembly will be isolated from the chassis frame rails with rubber isolators.

The radiator assembly will include an integral deaeration tank permanently mounted to the top of the radiator framework, with a readily accessible remote-mounted overflow tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap.

A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.

A heavy-duty fan will draw in fresh, cool air through the radiator. Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.

COOLANT LINES

Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by the chassis manufacturer.

Hose clamps will be stainless steel "constant torque type" to prevent coolant leakage. They will react to temperature changes in the cooling system and expand or contract accordingly while maintaining a constant clamping pressure on the hose.

FUEL TANK

A 65 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps.

A 0.75" drain plug will be located in a low point of the tank for drainage.

A fill inlet will be located on the left hand side of the body and is covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only."

A 0.50" diameter vent will be installed from tank top to just below fuel fill inlet.

The fuel tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.

All fuel lines will be provided as recommended by the engine manufacturer.

DIESEL EXHAUST FLUID TANK

A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body forward of the rear axle.

A 0.50" drain plug will be provided in a low point of the tank for drainage.

A fill inlet will be located on the driver's side of the body and be covered with a hinged, spring loaded, polished stainless steel door that is marked "Diesel Exhaust Fluid Only".

The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing.

The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.

FUEL SHUTOFF
A fuel line shutoff valve will be installed on both the inlet and outlet of the primary fuel filter.

TRANSMISSION
An Allison 5th generation, Model EVS 3000P, electronic torque converting automatic transmission will be provided.

The transmission will be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display will indicate when service is due.

Two (2) PTO openings will be located on both sides of converter housing (positions 4 o'clock and 8 o'clock) as viewed from the rear.

A transmission temperature gauge with red light and audible alarm will be installed on the cab dash.

TRANSMISSION SHIFTER
A five (5)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation.

The transmission ratio will be:

1st	3.49 to 1.00
2nd	1.86 to 1.00
3rd	1.41 to 1.00
4th	1.00 to 1.00
5th	0.75 to 1.00
R	5.03 to 1.00

TRANSMISSION COOLER
A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.

DRIVELINE
Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1710 universal joints.

The shafts will be dynamically balanced before installation.

A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.

STEERING
A Ross, Model TAS-85, steering gear, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and an Eaton, Model VN20, hydraulic pump with integral pressure and flow control. All power steering lines will have wire braided lines with crimped fittings.

A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.

STEERING ASSIST CYLINDER ON FRONT AXLE
To aid in the steering of the apparatus, the front axle will be equipped with a Ross power assist cylinder.

STEERING WHEEL
The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.

LOGO AND CUSTOMER DESIGNATION ON DASH
The dash panel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row.

The first row of text will be: PADUCAH

The second row of text will be: FIRE

The third row of text will be: DEPARTMENT

BUMPER - PIAA RFL 07210 Fog Lamps will be provided.
A one (1) piece, ten (1) gauge, 304-2B type polished stainless steel bumper, a minimum of 10.00" high, will be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength.

The bumper will be extended 19.00" from front face of cab.

Gravel Pan
A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face. The gravel pan will be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.

CENTER HOSE TRAY
A hose tray, constructed of aluminum, will be placed in the center of the bumper extension.

The tray will have a capacity of 150' of 1.75" double jacket cotton-polyester hose.

Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.

Center Hose Tray Cover
A bright aluminum treadplate cover will be provided over the center hose tray.

The cover will be attached with a stainless steel hinge.

One (1) D-ring latch will secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position.

LIFT AND TOW MOUNTS

Mounted to the frame extension will be lift and tow mounts. The lift and tow mounts will be designed and positioned to adapt to certain tow truck lift systems.

The lift and tow mounts with eyes will be painted the same color as the frame.

TOW HOOKS

No tow hooks are to be provided. This truck will be equipped with a lift and tow package with integral tow eyes.

FOG LIGHTS

There will be two (2) PIAA, Model 07210, 6.00" long white LED fog lamps provided, one (1) on each side under the front bumper.

The fog lamp switch will be properly identified and installed on the switch panel with in reach of the driver. The switch will be powered with the low beam headlamps on and will be deactivated when the high beam headlights are activated. An indicator in the switch will indicate when the fog lights are on.

CAB

The Impel™ cab will be designed specifically for the fire service and will be manufactured by Pierce Manufacturing.

To provide quality at the source and single source customer support, the cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises.

For reasons of structural integrity and enhanced occupant protection, the cab will be of heavy duty design, constructed to the following minimal standards.

The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts) and rear wall areas. The A-pillar will be constructed of 0.25" heavy wall extrusions joined by a solid A356-T6 aluminum joint casting. The B-pillar and C-pillar will also be constructed from 0.25" heavy wall extrusions. The rear wall will be constructed of two (2) 4.00" x 2.00" outer aluminum extrusions and two (2) 3.00" x 2.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 7.50" x 3.50" x 0.125" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.75" thick corner casting at each of the front corners of the roof assembly.

The front of the cab will be constructed of a 0.25" thick firewall, covered with a 0.125" front skin (for a total thickness of 0.38"), and reinforced with 24.50" wide x 10.00" deep x 0.50" thick supports on each side of the engine tunnel. The cross-cab support will be welded to the A-pillar, 0.25" firewall, and engine tunnel, on the left and right sides.

The cab floors will be constructed of 0.1875" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.44" of structural material at the front floor area. The front floor area will also be supported with three (3) 0.50" plates bolted together that also provides

the mounting point for the cab lift. This tubing will run from the front of the cab to the 0.1875" thick engine tunnel, creating the structure to support the forces created when lifting the cab.

The cab will be a full-tilt style. A three (3)-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.

The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.

The overall height (from the cab roof to the ground) will be approximately 102.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 112.00". The raised portion will start at the most forward point of the B-pillar and continue rearward to the back of the cab. The overall height listed will be calculated based on a truck configuration with the lowest suspension weight ratings, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed.

The cab will have an interior width of not less than 93.50". The driver and passenger seating positions will have a minimum 24.00" clear width at knee level.

To reduce injuries to occupants in the seated positions, proper head clearance will be provided. The floor-to-ceiling height inside the forward cab will be no less than 60.25". The floor-to-ceiling height inside the crew cab will be no less than 62.95" in the center position and 68.75" in the outboard positions.

The crew cab will measure a minimum of 57.50" from the rear wall to the backside of the engine tunnel (knee level) for optimal occupant legroom.

INTERIOR CAB INSULATION

The cab walls, ceiling and engine tunnel will be insulated in all strategic locations to maximize acoustic absorption and thermal insulation. The cab will be insulated with 2.00" insulation in the rear wall, 3.00" insulation in the side walls, and 1.50" insulation in the ceiling.

FENDER LINERS

Full-circular, aluminum inner fender liners in the wheel wells will be provided.

PANORAMIC WINDSHIELD

A one (1)-piece, safety glass windshield with more than 2,802 square inches of clear viewing area will be provided. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers; the outer light, the middle safety laminate, and the inner light. The 0.114" thick outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.

WINDSHIELD WIPERS

Three (3) electric windshield wipers with a washer, in conformance with FMVSS and SAE requirements, will be provided. The wiper blades will be 21.65" long and together will clear a minimum of 1,783 square inches of the windshield for maximum visibility in inclement weather.

The windshield washer fluid reservoir will be located at the front of the vehicle and be accessible through the access hood for simple maintenance.

FAST SERVICE ACCESS FRONT TILT HOOD

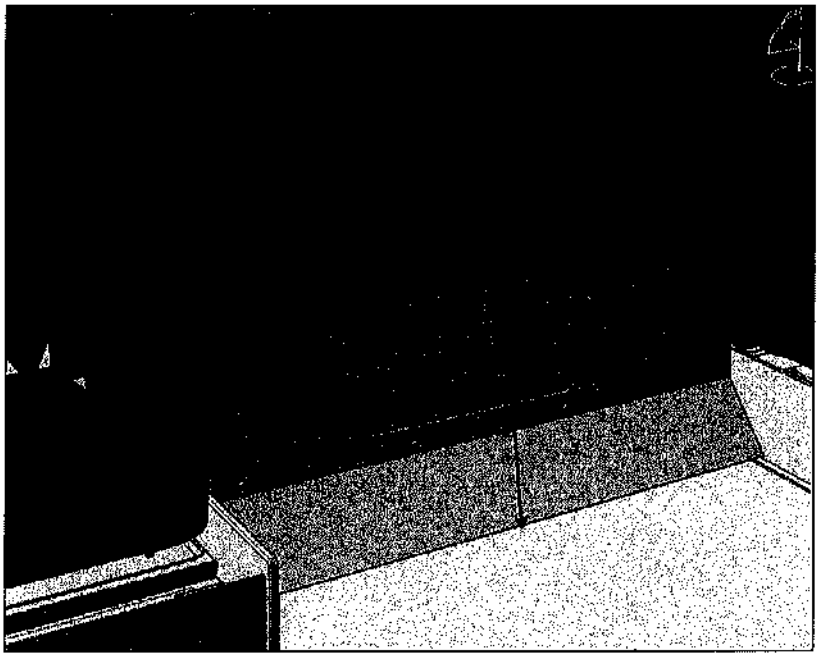
A full-width access hood will be provided for convenient access to engine coolant, steering fluid, wiper fluid, cab lift controls, headlight power modules, and ember separator. The hood will also provide complete access to the windshield wiper motor and components. The hood will be contoured to provide a sleek, automotive appearance. The hood will be constructed of two (2) fiberglass panels bonded together and will include reinforcing ribs for structural integrity. The hood will include air cylinders to hold the hood in open and closed positions, and a heavy duty latch system that will meet FMVSS 113 (Hood Latch System). The spring-loaded hood latch will be located at the center of the hood with a double-action release lever located behind the Pierce logo. The two (2)-step release requires the lever first be pulled to the driver side until the hood releases from the first latch (primary latch) then to the passenger side to fully release the hood (secondary latch).

ENGINE TUNNEL

To provide structural strength, the engine tunnel sidewalls will be constructed of 0.50" aluminum plate that is welded to both the 0.25" firewall and 0.38" heavy wall extrusion under the crew cab floor. To maximize occupant space, the top edges will be tapered.

The back of the engine tunnel will be no higher than 16.25" off the crew cab floor.

The engine tunnel will be insulated on both sides for thermal and acoustic absorption. The underside of the tunnel will be covered with 1.00" thick polyether foam that is reinforced with an aluminized face. Thermal rating for this insulation will be -40 degrees Fahrenheit to 300 degrees Fahrenheit. The insulation will keep noise (dBA) levels at or lower than the specifications in the current edition of the NFPA 1901 standards.



CAB REAR WALL EXTERIOR COVERING

The exterior surface of the rear wall of the cab will be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.

CAB LIFT

A hydraulic cab lift system will be provided, consisting of an electric-powered hydraulic pump, fluid reservoir, dual lift cylinders, remote cab lift controls and all necessary hoses and valves. The hydraulic pump will have a backup manual override, for use in the event of an electrical failure.

The cab lift controls will be located at the driver side front of the cab, easily accessible under the full width front access hood. The controls will include a permanently mounted raise/lower switch. For enhanced visibility during cab tilt operations, a remote control tether with on/off switch will be supplied on a coiled cord that will extend from 2.00' (coiled) to 6.00' (extended).

The cab will be capable of tilting 42 degrees and 80 degrees with crane assist to accommodate engine maintenance and removal. The cab pivots will be located 46.00" apart to provide stability while tilting the cab.

The rear of the cab will be locked down by a two (2)-point, automatic, hydraulic, double hook mechanism that fully engages after the cab has been lowered (self-locking). The dual 2.25" diameter hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the cab is in the tilt position.

For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the driver side between the chassis and cab frame when cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered.

Cab Lift Interlock
The cab lift safety system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.

GRILLE
A bright finished aluminum mesh grille screen, inserted behind a formed bright finished grille surround, will be provided on the front center of the cab, and will serve as an air intake to the radiator.

DOOR JAMB SCUFFPLATES
All cab door jambs will be furnished with a polished stainless steel scuffplate, mounted on the striker side of the jamb.

FRONT CAB TRIM
A band of 22 gauge polished stainless steel trim will be installed across the front of the cab, from door hinge to door hinge. The trim band will be centered on the head lights and applied with two (2)-sided tape. A 0.625" self adhesive trim strip will be applied around the perimeter of the trim band.

There will be polished stainless steel corner covers provided over the painted cab corner where the cab turn signals are located.

SIDE OF CAB MOLDING
Chrome molding will be provided on both sides of cab.

MIRRORS
One (1) Ramco, Model 6000-PCHR, polished aluminum mirror will be mounted on each of the cab doors. The mirrors will be 9.25" wide x 13.50" high with a convex section. The mirror head will have a highly polished aluminum finish.

The flat glass in each mirror will be heated and adjustable, with remote controls that are convenient to the driver.

The convex section in each mirror will be heated and adjustable, with remote controls that are convenient to the driver.

CAB DOORS (4) Crew cab windows will be provided
The forward cab and crew cab doors will be the half-height style door. To enhance entry and egress to the cab, the forward cab doors will be a minimum of 43.59" wide x 64.71" high. The crew cab doors will measure a minimum of 37.87" wide x 73.75" high.

The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.125". The exterior door skins will be constructed from 0.090" aluminum.

The forward cab door windows will include a 7.50" high x 10.00" wide drop area at the front to enhance visibility.

A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands. Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be

designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.

The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed.

A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.

A chrome grab handle will be provided on the inside of each cab and crew cab door.

A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted.

The cab steps at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.

Door Panels

The inner cab door panels will be constructed out of brushed stainless steel. The cab door panels will be removable.

RECESSED POCKET WITH ELASTIC COVER

To provide organized storage (clutter control) in the cab for miscellaneous equipment, the cab interior will be provided with recessed storage pockets. The pockets will be 5.63" wide x 2.00" high x 4.00" deep. The pockets will be provided with a perforated elastic material cover to secure the equipment in the pocket. The pockets will be installed in all available mounting locations of the overhead console.

ELECTRIC WINDOW CONTROLS

Each cab entry door will be equipped with an electrically operated tempered glass window. A window control panel will be located on the door panel within easy reach of the respective occupant. Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second. The driver control panel will contain a control switch for each cab door's window. All other door control panels will contain a single switch to operate the window within that door.

The window switches will be connected directly to the battery power. This allows the windows to be raised and lowered when the battery switch is in the off position.

DUAL STEPS

A dual step will be provided below each cab and crew cab door. The steps will be designed with a grip pattern punched into bright aluminum treadplate material providing support, slip resistance, and drainage. The steps will be a bolt-on design and provide a 24.00" wide x 7.00" deep stepping surface. The step design raises the middle step higher and closer to the cab floor, resulting in a 12.00" distance from the step to cab floor in the cab and a 13.50" distance from the step to cab floor in the crew cab. Stepping distances from the ground to first step will be 16.50" and from first step to middle step will be 12.00".

The first step will be lit by a white 12 volt DC LED light provided on the step.

CAB EXTERIOR HANDRAILS

A Hansen knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress. Each handrail will be provided with red LED lights. The lights will be activated when the headlight switch is activated and the parking brake is applied. The LED lights may be load managed.

STEP LIGHTS

For reduced overall maintenance costs compared to incandescent lighting, there will be four (4) white LED step lights provided. The lights will be installed at each cab and crew cab door, one (1) per step. The lights will be located in the driver side front doorstep, driver side crew cab doorstep, passenger side front doorstep and passenger side crew cab doorstep.

In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light.

The lights will be activated when the adjacent door is opened.

FENDER CROWNS

Stainless steel fender crowns will be installed at the cab wheel openings. The fender crowns will have a radius outside corner that will allow the fender crown to extend out further than the standard width crown, thus extending beyond the sidewall of the front tires and allow the crew cab doors to open fully.

WINDOWS, REAR

The rear wall of the crew cab will have two (2) windows, each being 11.25" wide x 18.00" high.

STORAGE COMPARTMENTS

Provided on each side of the cab, to the rear of the crew cab access doors, will be a storage compartment. The compartments will be approximately 10.71" wide x 30.00" high x 14.00" deep with a clear door opening of 9.50" wide x 28.00" high.

The doors will be a painted single pan construction with one (1) D-ring latch. The door stop will be chain for each exterior door.

The compartment interior will be painted spatter gray.

Compartment Light

There will be two (2) red Amdor, LED strip lights provided, one (1) each hinged side of compartment door openings.

MOUNTING PLATE ON ENGINE TUNNEL

Equipment installation provisions will be installed on the engine tunnel.

A .188" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will be located to the left of the officer and on the rear of the tunnel. It will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel 1.00" to allow for wire routing below the plate.

The mounting surface will be painted to match the cab interior.

CAB INTERIOR

With safety as the primary objective, the wrap-around style cab instrument panel will be designed with unobstructed visibility to instrumentation. The dash layout will provide the driver with a quick reference to gauges that allows more time to focus on the road.

The center console will be a high impact ABS polymer and will be easily removable for access to the defroster. The center console will include louvers strategically located for optimal air flow and defrost capability to the windshield.

The passenger side dashboard will be constructed of painted aluminum for durability and low maintenance. For enhanced versatility, the passenger side dash will include a flat working surface.

To provide optional (service friendly) control panels, switches and storage modules, a painted aluminum overhead console will also be provided.

To complete the cab front interior design, painted aluminum modesty panels will be provided under the dash on both sides of the cab. The driver side modesty panel will provide mounting for the battery switch and diagnostic connectors, while the passenger side modesty panel provides a glove box, and ground access to the main electrical distribution panel via quick quarter turn fasteners.

To provide a deluxe automotive interior, the engine tunnel will be covered by leather grain vinyl that is resistant to oil, grease, and mildew. For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum.

The headliner will be installed in both forward and rear cab sections. The headliner panel will be a composition of an aluminum panel covered with a sound barrier and upholstery.

The cab structure will include designated raceways for electrical harness routing from the front of the cab to the rear upper portion of the cab. Raceways will be extruded in the forward door frame, floor, walls and overhead in the area where the walls meet the ceiling. The raceways located in the floor will be covered by aluminum extrusion, while the vertical and overhead raceways will be covered by painted aluminum covers. The raceways will improve harness integrity by providing a continuous harness path that eliminates wire chafing and abrasion associated with exposed wiring or routing through drilled metal holes. Harnesses will be laid in place.

CAB INTERIOR UPHOLSTERY

The cab interior upholstery will be 36 oz black vinyl. All cab interior materials will meet FMVSS 302 (flammability of interior materials).

CAB INTERIOR PAINT

The following metal surfaces will be painted black, vinyl textured paint:

- Modesty panel in front of driver
- Vertical surface of dash in front of the officer (not applicable for recessed dash)
- Glove box in front of the officer (if applicable)
- Power distribution in front of the officer
- Rear heater vent panels

The remaining cab interior metal surfaces will be painted fire smoke gray, vinyl texture paint.

CAB FLOOR

The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.

The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.

DEFROST/AIR CONDITIONING SYSTEM

A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.

Cab Defroster

A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defrost will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following:

- One (1) adjustable will be directed towards the left side cab window
- One (1) adjustable will be directed towards the right side cab window
- Six (6) fixed outlets will be directed at the windshield

The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.

Cab/Crew Auxiliary Heater

There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat risers with a dual scroll blower. An aluminum plenum incorporated into the cab structure used to transfer heat to the forward positions.

Air Conditioning

A 19.10 cubic inch compressor will be installed on the engine.

A roof-mounted condenser with a 78,000 BTU output at 2,400 SCFM that meets and exceeds the performance specification will be installed on the cab roof. The condenser cover and mounting legs to be painted white as provided by the A/C manufacturer.

The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.

The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab.

The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications.

Adjustable air outlets will be strategically located on the forward plenum cover per the following:

- Four (4) will be directed towards the seating position on the left side of the cab
- Four (4) will be directed towards the seating position on the right side of the cab

Adjustable air outlets will be strategically located on the evaporator cover per the following:

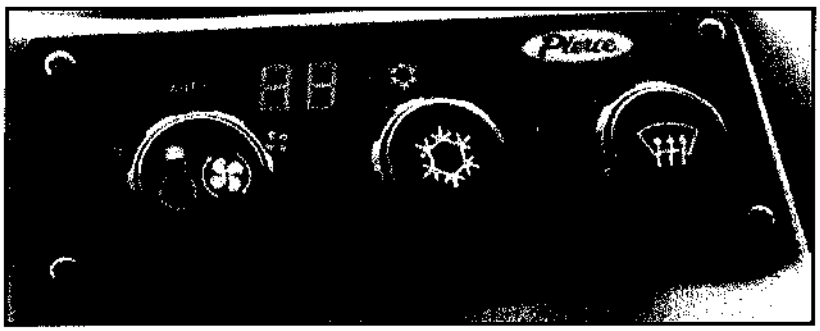
- Five (5) will be directed towards crew cab area

A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be secured with four (4) screws.

The air conditioner refrigerant will be R-134A and will be installed by a certified technician.

Climate Control

An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control.



The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature.

The AC system will be manually activated by pushing the center of the temperature control knob.
Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position.

Gravity Drain Tubes

Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.

SUN VISORS

Two (2) smoked Lexan™ sun visors provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab.

There will be no retention bracket provided to help secure each sun visor in the stowed position.

GRAB HANDLE

A black rubber covered grab handle will be mounted on the door post of the driver side cab door to assist in entering the cab. The grab handle will be securely mounted to the post area between the door and windshield.

A long rubber grab handle will be mounted on the dash board in front of the officer.

ENGINE COMPARTMENT LIGHTS

There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination.

These light(s) will be activated automatically when the cab is raised.

ACCESS TO ENGINE DIPSTICKS

For access to the engine oil and transmission fluid dipsticks, there will be a door on the engine tunnel, inside the crew cab. The door will be on the rear wall of the engine tunnel, on the vertical surface. The door will be 20.00" wide x 8.25" high and be flush with the wall of the engine tunnel.

The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling. An additional port will be provided for filling the engine oil.

The door will have a rubber seal for thermal and acoustic insulation. One (1) flush latch will be provided on the access door.

CAB SAFETY SYSTEM

The cab will be provided with a safety system designed to protect occupants in the event of a side roll or frontal impact, and will include the following:

- A supplemental restraint system (SRS) sensor will be installed on a structural cab member behind the instrument panel. The SRS sensor will perform real time diagnostics of all critical subsystems and will record sensory inputs immediately before and during a side roll or frontal impact event.
- A slave SRS sensor will be installed in the cab to provide capacity for eight (8) crew cab seating positions.
- A fault-indicating light will be provided on the vehicle's instrument panel allowing the driver to monitor the operational status of the SRS system.
- A driver side front air bag will be mounted in the steering wheel and will be designed to protect the head and upper torso of the occupant, when used in combination with the 3-point seat belt.
- A passenger side knee bolster air bag will be mounted in the modesty panel below the dash panel and will be designed to protect the legs of the occupant, when used in combination with the 3-point seat belt.
- Air curtains will be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall.
- Suspension seats will be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event.
- Seat belts will be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event.

FRONTAL IMPACT PROTECTION

The SRS system will provide protection during a frontal or oblique impact event. The system will activate when the vehicle decelerates at a predetermined G force known to cause injury to the occupants. The cab and chassis will have been subjected, via third party test facility, to a crash impact during frontal and oblique impact testing. Testing included all major chassis and cab components such as mounting straps for fuel and air tanks, suspension mounts, front suspension components, rear suspensions components, frame rail cross members, engine and transmission and their mounts, pump house and mounts, frame extensions and body mounts. The testing provided configuration specific information used to optimize the timing for firing the safety restraint system. The sensor will activate the pyrotechnic devices when the correct crash algorithm, wave form, is detected.

The SRS system will deploy the following components in the event of a frontal or oblique impact event:

- Driver side front air bag
- Passenger side knee bolster air bag
- Air curtains mounted in the outboard bolster of outboard seat backs
- Suspension seats will be retracted to the lowest travel position
- Seat belts will be pre-tensioned to firmly hold the occupant in place

SIDE ROLL PROTECTION

The SRS system will provide protection during a fast or slow 90 degree roll to the side, in which the vehicle comes to rest on its side. The system will analyze the vehicle's angle and rate of roll to determine the optimal activation of the advanced occupant restraints.

The SRS system will deploy the following components in the event of a side roll:

- Air curtains mounted in the outboard bolster of outboard seat backs
- Suspension seats will be retracted to the lowest travel position
- Seat belts will be pre-tensioned to firmly hold the occupant in place

SEATING CAPACITY

The seating capacity in the cab will be four (4).

DRIVER SEAT

A Pierce PS6® seat will be provided in the cab for the driver. The seat design will be a cam action type with air suspension. For increased convenience, the seat will include electric controls to adjust the rake (15 degrees), height (1.75" travel) and horizontal (7.00" travel) position. Electric controls will be located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have a reclining back, adjustable from 20 degrees back to 45 degrees forward. Providing for maximum comfort, the seat back will be a high back style with manual lumbar adjustment lever, for lower back support, and will include minimum 7.50" deep side bolster pads for maximum support. The lumbar adjustment lever will be easily located at the lower outboard position of the seat cushion. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control).

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.

- A suspension seat safety system will be included. When activated in the event of a side roll, this system will pretension the seat belt and retract the seat to its lowest travel position.

The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

OFFICER SEAT

A Pierce PS6® seat will be provided in the cab for the passenger. The seat will be a cam action type with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control). To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not belted.

The seat back will be an SCBA back style with 7.5 degree fixed recline angle, and will include minimum 4.50" wide x 7.50" deep side bolster pads for maximum support. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A suspension seat safety system will be included. When activated, this system will pretension the seat belt and then retract the seat to its lowest travel position.

The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

REAR FACING LEFT SIDE CABINET

A rear facing cabinet will be provided in the crew cab at the left side outboard position.

The cabinet will be 21.00" wide x 40.50" high x 30.50" deep with one (1) Amdor rollup door with anodized finish, non-locking. The frame to frame opening will be 18.50" wide x 35.25" high. The minimum clear door opening will be 15.75" wide x 29.37" high.

CLEAR DOOR OPENINGS (F-F = Frame to Frame)					
AMDOR		GORTITE		ROM	
HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
Subtract 2.00" from F-F	Subtract 5.88" from F-F	Subtract 2.75" from F-F	Subtract 4.75" from F-F	Subtract 2.56" from F-F	Subtract 4.50" from F-F

The cabinet will include two (2) infinitely adjustable shelves with a 0.75" up-turned lippainted to match the cab interior.

The cabinet will include no louvers and louvers provided on the back side of the cabinet for ventilation.

The cabinet will be constructed of smooth aluminum, and painted to match the cab interior.

Cabinet Light
There will be one (1) Amdor H2O LED strip light installed on the left side of the interior cabinet door opening. The lights will be controlled by an automatic door switch.

REAR FACING RIGHT SIDE CABINET
A rear facing cabinet will be provided in the crew cab at the right side outboard position.

The cabinet will be 19.00" wide x 40.50" high x 26.50" deep with one (1) Amdor rollup door with anodized finish, non-locking. The frame to frame opening will be 16.50" wide x 35.25" high. The minimum clear door opening will be 13.75" wide x 29.37" high.

CLEAR DOOR OPENINGS (F-F = Frame to Frame)					
AMDOR		GORTITE		ROM	
HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
Subtract 2.00" from F-F	Subtract 5.88" from F-F	Subtract 2.75" from F-F	Subtract 4.75" from F-F	Subtract 2.56" from F-F	Subtract 4.50" from F-F

The cabinet will include two (2) infinitely adjustable shelves with a 0.75" up-turned lippainted to match the cab interior.

The cabinet will include louvers provided on the back side of the cabinet for ventilation.

The cabinet will be constructed of smooth aluminum and painted to match the cab interior.

Cabinet Light
There will be one (1) Amdor H2O LED strip light installed on the right side of the interior cabinet door opening. The lights will be controlled by an automatic door switch.

FORWARD FACING DRIVER SIDE OUTBOARD SEAT
There will be one (1) forward facing, Pierce PS6® seat provided at the driver side outboard position in the crew cab. To provide improved ride comfort, and maximize accessibility to the crew cab, the seat will be provided with 15.00" deep foam cushions, and the seat back will be provided with 0 degree fixed recline angle. To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle, that will activate an alarm indicating a seat is occupied but not buckled.

The seat back will be an SCBA back style. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt around the occupant to firmly hold them in place in the event of a side roll.

The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

FORWARD FACING CENTER CABINET

A forward facing cabinet will be provided in the crew cab at the center position.

The cabinet will be 42.00" wide x 58.00" high x 24.00" deep with one (1) Amdor rollup door with anodized finish, non-locking. The cabinet will be provided with a sweep out style false floor. This floor will not affect the clear door opening height.. The frame to frame opening of the cabinet will be 39.50" wide x 52.75" high. The minimum clear door opening will be 36.75" wide x 46.87" high.

CLEAR DOOR OPENINGS (F-F = Frame to Frame)					
AMDOR		GORTITE		ROM	
HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
Subtract 2.00" from F-F	Subtract 5.88" from F-F	Subtract 2.75" from F-F	Subtract 4.75" from F-F	Subtract 2.56" from F-F	Subtract 4.50" from F-F

The cabinet will include two (2) infinitely adjustable shelves with a 1.25" up-turned lippainted to match the cab interior.

The cabinet will include no louvers and louvers provided on the left side of the cabinet for ventilation.

The cabinet will be constructed of smooth aluminum and painted to match the cab interior.

Cabinet Light

There will be one (1) Amdor H2O LED strip light installed on the left side of the interior cabinet door opening and one (1) Amdor H2O LED strip light installed on the right side of the interior cabinet door opening. The lighting will be controlled by an automatic door switch.

FORWARD FACING PASSENGER SIDE OUTBOARD SEAT

There will be one (1) forward facing, Pierce PS6® seat provided at the passenger side outboard position in the crew cab. To provide improved ride comfort, and maximize accessibility to the crew cab, the seat will be provided with 15.00" deep foam cushions, and the seat back will be provided with 0 degree fixed recline angle. To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle, that will activate an alarm indicating a seat is occupied but not buckled.

The seat back will be an SCBA back style. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt around the occupant to firmly hold them in place in the event of a side roll.

The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

REAR FACING OVERIIEAD STORAGE COMPARTMENT

There will be two (2) overhead rear facing storage compartments installed at the raised roof within the crew cab, on each side of the air conditioner. The compartments will be approximately 22.00" wide x 10.00" high x 34.00" deep at the bottom.

Each compartment will include one (1) lift up compartment door. Non-locking latch, paddle handle, and gas operated stay arms will be provided.

The compartment will be constructed of smooth aluminum and painted to match the cab interior.

COMPARTMENT LIGHT

The storage compartment lighting will consist of one (1) white Amdor LED strip light installed horizontally above each compartment door opening.

SEAT UPHOLSTERY

All seat upholstery will be leather grain 36 oz black vinyl resistant to oil, grease and mildew. The cab will have four (4) seating positions.

AIR BOTTLE HOLDERS

All SCBA type seats in the cab will have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket will include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp will constrain the SCBA bottle in the seat and will exceed the NFPA standard of 9G.

There will be a quantity of three (3) SCBA brackets.

SEAT BELTS

All seating positions in the cab, crew cab and tiller cab (if applicable) will have red seat belts.

To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards.

The 3-point shoulder type seat belts will also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location.

Any flip up seats will include a 3-point shoulder type belts only.

SHOULDER HARNESS HEIGHT ADJUSTMENT

All seating positions furnished with 3-point shoulder type seat belts will include a height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter.

A total of six (6) seating positions will have the adjustable shoulder harness.

HELMET STORAGE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided.

There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.

CAB DOME LIGHTS

There will be four (4) dual LED dome lights with black bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed and located, one (1) on each side of the crew cab.

The color of the LED's will be red and white.

The white LED's will be controlled by the door switches and the lens switch.

The color LED's will be controlled by the lens switch.

In order to ensure exceptional illumination, each white LED dome light will provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.

CAB SPOTLIGHT

There will be two (2) Golight® Stryker™, Model 30**4, white LED spotlights located on the cab roof, Each side of cab roof, final location at drawing approval. The spotlights will be mounted to the surface of the cab roof.

These lights may be load managed when the parking brake is applied.

SPOTLIGHT CONTROLLER

There will be one (1) wired dash mounted remote provided for each spotlight.

SPOTLIGHT CONTROLLER LOCATIONS

The remotes to control the spotlights will be located one (1) within reach of the driver and one (1) within reach of the officer.

PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 5.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus.

The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.

CAB INSTRUMENTATION

The cab instrument panel will consist of gauges, an LCD display, telltale indicator lights, alarms, control switches, and a diagnostic panel. The function of instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section directly forward of the driver. Gauge and switch panels will be designed to be removable for ease of service and low cost of ownership.

Gauges

The gauge panel will include the following ten (10) black gauges with black bezels to monitor vehicle performance:

- Voltmeter gauge (Volts)
  - Low volts (11.8 VDC)
    - Amber indicator on gauge assembly with alarm
  - High volts (15 VDC)
    - Amber indicator on gauge assembly with alarm
  - Very low volts (11.3 VDC)
    - Amber indicator on gauge assembly with alarm
  - Very high volts (16 VDC)
    - Amber indicator on gauge assembly with alarm
- Tachometer (RPM)
- Speedometer (Primary (outside) MPH, Secondary (inside) Km/H)
- Fuel level gauge (Empty - Full in fractions)
  - Low fuel (1/8 full)
    - Amber indicator on gauge assembly with alarm
  - Very low fuel (1/32) fuel
    - Amber indicator on gauge assembly with alarm
- Engine oil pressure gauge (PSI)
  - Low oil pressure to activate engine warning lights and alarms
    - Red indicator on gauge assembly with alarm
- Front air pressure gauge (PSI)
  - Low air pressure to activate warning lights and alarm
    - Red indicator on gauge assembly with alarm
- Rear air pressure gauge (PSI)
  - Low air pressure to activate warning lights and alarm
    - Red indicator on gauge assembly with alarm
- Transmission oil temperature gauge (Fahrenheit)
  - High transmission oil temperature activates warning lights and alarm
    - Amber indicator on gauge assembly with alarm
- Engine coolant temperature gauge (Fahrenheit)
  - High engine temperature activates an engine warning light and alarm
    - Red indicator on gauge assembly with alarm
- Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions)
  - Low fluid (1/8 full)
    - Amber indicator on gauge assembly with alarm

All gauges and gauge indicators will perform prove out at initial power-up to ensure proper performance.

Indicator Lamps

To promote safety, the following telltale indicator lamps will be integral to the gauge assembly and are located above and below the center gauges. The indicator lamps will be "dead-front" design that is only visible when active. The colored indicator lights will have descriptive text or symbols.

The following amber telltale lamps will be present:

- Low coolant
- Trac cntl (traction control) (where applicable)
- Check engine
- Check trans (check transmission)
- Aux brake overheat (Auxiliary brake overheat)
- Air rest (air restriction)
- Caution (triangle symbol)
- Water in fuel
- DPF (engine diesel particulate filter regeneration)
- Trailer ABS (where applicable)
- Wait to start (where applicable)
- HET (engine high exhaust temperature) (where applicable)
- ABS (antilock brake system)
- MIL (engine emissions system malfunction indicator lamp) (where applicable)
- SRS (supplemental restraint system) fault (where applicable)
- DEF (low diesel exhaust fluid level)

The following red telltale lamps will be present:

- Warning (stop sign symbol)
- Seat belt
- Parking brake
- Stop engine
- Rack down

The following green telltale lamps will be provided:

- Left turn
- Right turn
- Battery on

The following blue telltale lamp will be provided:

- High beam

Alarms

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.

Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.

Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms will intermittently chirp

every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.

Indicator Lamp and Alarm Prove-Out

Telltale indicators and alarms will perform prove-out at initial power-up to ensure proper performance.

Control Switches

For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver.

Emergency master switch: A molded plastic push button switch with integral indicator lamp will be provided. Pressing the switch will activate emergency response lights and siren control. A green lamp on the switch provides indication that the emergency master mode is active. Pressing the switch again disables the emergency master mode.

Headlight / Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking lights and the headlights. The second switch position will activate the parking lights. The third switch position will activate the headlights.

Panel backlighting intensity control switch: A three (3)-position momentary rocker switch will be provided. The first switch position decreases the panel backlighting intensity to a minimum level as the switch is held. The second switch position is the default position that does not affect the backlighting intensity. The third switch position increases the panel backlighting intensity to a maximum level as the switch is held.

The following standard controls will be integral to the gauge assembly and are located below the right hand gauges. All switches have backlit labels for low light applications.

High idle engagement switch: A two (2)-position momentary rocker switch with integral indicator lamp will be provided. The first switch position is the default switch position. The second switch position will activate and deactivate the high idle function when pressed and released. The "Ok To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.

"Ok To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

The following standard controls will be provided adjacent to the cab gauge assembly within easy reach of the driver. All switches will have backlit labels for low light applications.

Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will deactivate vehicle ignition. The second switch position will activate vehicle ignition. The third momentary position will disable the Command Zone audible alarm if held for three (3) to five (5) seconds. A green indicator lamp will be activated with vehicle ignition.

Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.

4-way hazard switch: A two (2)-position maintained rocker switch will be provided. The first switch position will deactivate the 4-way hazard switch function. The second switch position will activate the 4-way hazard function. The switch actuator will be red and includes the international 4-way hazard symbol.

Heater, defroster, and optional air conditioning control panel: A control panel with membrane switches will be provided to control heater/defroster temperature and heater, defroster, and air conditioning fan speeds. A green LED status bar will indicate the relative temperature and fan speed settings.

Turn signal arm: A self-canceling turn signal with high beam headlight and windshield wiper/washer controls will be provided. The windshield wiper control will have high, low, and intermittent modes.

Parking brake control: An air actuated push/pull park brake control valve will be provided.

Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.

Custom Switch Panels

The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the overhead console on the driver's side, up to four (4) switch panels in the engine tunnel console facing the driver, up to four (4) switch panels in the overhead console on the officer's side and up to two (2) switch panels in the engine tunnel console facing the officer. All switches will have backlit labels for low light applications.

Diagnostic Panel

A diagnostic panel will be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist. The diagnostic panel will include the following:

- Engine diagnostic port
- Transmission diagnostic port
- ABS diagnostic port
- SRS diagnostic port (where applicable)
- Command Zone USB diagnostic port
- ABS diagnostic switch (blink codes flashed on ABS telltale indicator)
- Diesel particulate filter regeneration switch (where applicable)
- Diesel particulate filter regeneration inhibit switch (where applicable)

Cab LCD Display

A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel. The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function. The upper left section will display the outside ambient temperature. The upper right section will display odometer, trip mileage, PTO hours, fuel consumption, engine hours, and other configuration specific information. The bottom section will display INFO, CAUTION, and WARNING messages. Text messages will automatically activate to describe the cause of an audible caution or warning

alarm. The LCD will be capable of displaying multiple text messages should more than one caution or warning condition exist.

AIR RESTRICTION INDICATOR

A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.

OFFICER SPEEDOMETER

A Class I digital display speedometer will be recessed into the instrument panel Determined at drawing approval.

"DO NOT MOVE APPARATUS" INDICATOR

A flashing red indicator light, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On."

The same circuit that activates the Do Not Move Apparatus indicator will activate a pulsing alarm when the parking brake is released.

DO NOT MOVE TRUCK MESSAGES

Messages will be displayed on the gauge panel LCD located forward of the steering wheel directly in front of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged).

The following messages will be displayed (where applicable):

- Do Not Move Truck
- DS Cab Door Open (Driver's Side Cab Door Open)
- PS Cab Door Open (Passenger's Side Cab Door Open)
- DS Crew Cab Door Open (Driver's Side Crew Cab Door Open)
- PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open)
- DS Body Door Open (Driver's Side Body Door Open)
- PS Body Door Open (Passenger's Side Body Door Open)
- Rear Body Door Open
- DS Ladder Rack Down (Driver's Side Ladder Rack Down)
- PS Ladder Rack Down (Passenger's Side Ladder Rack Down)
- Deck Gun Not Stowed
- Lt Tower Not Stowed (Light Tower Not Stowed)
- Hatch Door Open
- Fold Tank Not Stowed (Fold-A-Tank Not Stowed)
- Aerial Not Stowed (Aerial Device Not Stowed)
- Stabilizer Not Stowed
- Steps Not Stowed
- Handrail(s) Not Stowed

Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.

SWITCH PANELS

The emergency light switch panel will have a master switch for ease of use plus individual switches for selective control. Each switch panel will contain eight (8) membrane-type switches each rated for one million (1,000,000) cycles. Panels containing less than eight (8) switch assignments will include non-functioning black appliqués. Documentation will be provided by the manufacturer indicating the rated cycle life of the switches. The switch panel(s) will be located in the overhead position above the windshield on the driver side overhead to allow for easy access.

Additional switch panel(s) will be located in the overhead position(s) above the windshield or in designated locations on the lower instrument panel layout.

The switches will be membrane-type and also act as an integral indicator light. For quick, visual indication the entire surface of the switch will be illuminated white whenever back lighting is activated and illuminated green whenever the switch is active. An active illuminated switch will flash when interlock requirements are not met or device is actively being load managed. For ease of use, a two (2)-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed in the center of the switch. The label will allow light to pass through the letters for ease of use in low light conditions.

WIPER CONTROL

For simple operation and easy reach, the windshield wiper control will be an integral part of the directional light lever located on the steering column. The wiper control will include high and low wiper speed settings, a one (1)-speed intermittent wiper control and windshield washer switch. The control will have a "return to park" provision, which allows the wipers to return to the stored position when the wipers are not in use.

CUSTOMER SUPPLIED RADIO WIRING

There will be one (1) 12 volt combination wiring leads of which each will include one (1) battery switched, one (1) ignition and one (1) negative for use with radio equipment.

Each lead will be 18.00" long and be provided Officer Dash. The leads will be clearly marked in a coil and terminate with butt splices.

A breaker rated for 30 amps will be provided for circuit protection of the battery switched lead with a minimum of 10 gauge wire.

A breaker rated for 7.5 amps will be provided for circuit protection of the ignition lead.

The wires will be colored coded as follows:

- red for battery switched
- yellow for ignition
- black for ground

SPARE CIRCUIT

There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus.

The above wires will have the following features:

- The positive wire will be connected directly to the ignition switched power.

- The negative wire will be connected to ground.
- Wires will be protected to 15 amps at 12 volts DC.
- Power and ground will terminate Passenger forward area of engine tunnel.
- Termination will be with 15 amp, power point plug with rubber cover.
- Wires will be sized to 125 percent of the protection.

This circuit(s) may be load managed when the parking brake is set.

INFORMATION CENTER

A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area. The LCD display will be programmed to read US Customary.

COLLISION MITIGATION

There will be a HAAS Alert®, Model HA5 Responder-to-Vehicle (R2V) collision avoidance system provided on the apparatus. The HA5 cellular transponder module will be installed behind the cab windshield, as high and near to the center as practical, to allow clear visibility to the sky. The module dimensions are 5.40" long x 2.70" wide x 1.30" high, and operating temperature range is -40 degree C to 85 degree C.

The transponder will be connected to the vehicle's emergency master circuit and battery direct power and ground.

While responding with emergency lights on, the HA5 transponder sends alert messages via cellular network to motorists in the vicinity of the responding truck that are equipped with the WAZE app.

While on scene with emergency lights on, the HA5 transponder sends road hazard alerts to motorists in the vicinity of the truck that are equipped with the WAZE app.

The HA5 Responder-to-Vehicle (R2V) collision avoidance system will include the transponder and a 5 year cellular plan subscription.

Activation of the HAAS Alert system requires a representative of the customer to accept the End User License Agreement (EULA) via an on-line portal.

VEHICLE DATA RECORDER

There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.

The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.

The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs:

- Vehicle Speed - MPH
- Acceleration - MPH/sec
- Deceleration - MPH/sec
- Engine Speed - RPM
- Engine Throttle Position - % of Full Throttle
- ABS Event - On/Off

- Seat Occupied Status - Yes/No by Position
- Seat Belt Buckled Status - Yes/No by Position
- Master Optical Warning Device Switch - On/Off
- Time - 24 Hour Time
- Date - Year/Month/Day

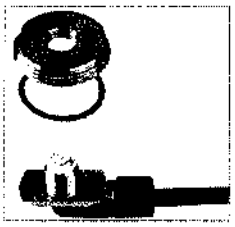
Seat Belt Monitoring System

A seat belt monitoring system (SBMS) will be provided. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:

- Seat Occupied & Buckled = Green LED indicator illuminated
- Seat Occupied & Unbuckled = Red LED indicator with audible alarm
- No Occupant & Buckled = Red LED indicator with audible alarm
- No Occupant & Unbuckled = No indicator and no alarm

The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.

RADIO ANTENNA MOUNT



There will be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed on the right side on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the instrument panel area. A weatherproof cap will be installed on the mount.

VEHICLE CAMERA SYSTEM

There will be a color vehicle camera system provided with the following:

- One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse.

The camera image will be displayed on a 7.00" LCD display located in view of the driver in the custom dash, per instrument panel layout. The display will include manual camera activation capability and audio from the active camera.

The following components will be included:

- One (1) MO700136DC, display
- One (1) SV-CW134639CAI, camera
- All necessary cables

ELECTRICAL POWER CONTROL SYSTEM

The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible.

Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership.

Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA.

SOLID-STATE CONTROL SYSTEM

A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic modules located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices.

The control system will operate as a master-slave system whereas the main control module instructs all other system components. The system will contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system will utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership.

For increased reliability and simplified use the control system modules will include the following attributes:

- Green LED indicator light for module power
- Red LED indicator light for network communication stability status
- Control system self test at activation and continually throughout vehicle operation
- No moving parts due to transistor logic
- Software logic control for NFPA mandated safety interlocks and indicators
- Integrated electrical system load management without additional components
- Integrated electrical load sequencing system without additional components
- Customized control software to the vehicle's configuration
- Factory and field re programmable to accommodate changes to the vehicle's operating parameters
- Complete operating and troubleshooting manuals
- USB connection to the main control module for advanced troubleshooting

To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules will meet the following specifications:

- Module circuit board will meet SAE J771 specifications
- Operating temperature from -40C to +70C
- Storage temperature from -40C to +70C
- Vibration to 50g

IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter)

Operating voltage from eight (8) volts to 16 volts DC

The main controller will activate status indicators and audible alarms designed to provide warning of problems before they become critical.

CIRCUIT PROTECTION AND CONTROL DIAGRAM

Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information.

ON-BOARD ELECTRICAL SYSTEM DIAGNOSTICS

Advanced on-board diagnostic messages will be provided to support rapid troubleshooting of the electrical power and control system. The diagnostic messages will be displayed on the information center located at the driver's position.

The on-board information center will include the following diagnostic information:

- Text description of active warning or caution alarms
- Simplified warning indicators
- Amber caution indication with intermittent alarm
- Red warning indication with steady tone alarm

TECH MODULE WITH WIFI

An in cab module will provide WiFi wireless interface and data logging capability. The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will provide an external antenna connection allowing a line of site communication range of up to 300 feet with a roof mounted antenna.

The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone™, control and information system.

The data logging capability will record faults from the engine, transmission, ABS and Command Zone, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data logger will provide up to 2 Gigabytes of data storage.

A USB connection will be provided on the Tech Module. It will provide a means to download data logger information and update software in the device.

PROGNOSTICS

A software based vehicle tool will be provided to predict remaining life of the vehicles critical fluid and events.

The system will send automatic indications to the Command Zone, color display and/or wireless enabled device to proactively alert of upcoming service intervals.

Prognostics will include:

- Engine oil and filter
- Transmission oil and filter
- Pump oil (if equipped)
- Foam oil (if equipped)
- Aerial oil and filter (if equipped)

ADVANCED DIAGNOSTICS

An advanced, Windows-based, diagnostic software program will be provided for this control system. The software will provide troubleshooting tools to service technicians equipped with a Windows-based computer or wireless enabled device.

The service and maintenance software will be easy to understand and use and have the ability to view system input/output (I/O) information.

INDICATOR LIGHT AND ALARM PROVE-OUT SYSTEM

A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.

VOLTAGE MONITOR SYSTEM

A voltage monitoring system will be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system will provide visual and audible warning when the system voltage is below or above optimum levels.

The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.

DEDICATED RADIO EQUIPMENT CONNECTION POINTS

There will be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment.

The studs will consist of the following:

- 12-volt 40-amp battery switched power
- 12-volt 60-amp ignition switched power
- 12-volt 60-amp direct battery power

There will also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.

ENHANCED SOFTWARE

The solid-state control system will include the following software enhancements:

All perimeter lights and scene lights (where applicable) will be deactivated when the parking brake is released.

Cab and crew cab dome lights will remain on for ten (10) seconds for improved visibility after the doors close. The dome lights will dim after ten (10) seconds or immediately if the vehicle is put into gear.

Cab and crew cab perimeter lights will remain on for ten (10) seconds for improved visibility after the doors close. The dome lights will dim after ten (10) seconds or immediately if the vehicle is put into gear.

EMI/RFI PROTECTION

To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.

The apparatus will have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system will meet, without exceptions, electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10Khz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10Khz-1GHz to 100 Volts/Meter requirements.

EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. The electrical system will be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI/RFI susceptibility.

ELECTRICAL

All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.

Electrical wiring and equipment will be installed utilizing the following guidelines:

1. All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.
2. Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body.
3. Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.
4. Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug).
5. All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.
6. All electrical terminals in exposed areas will have silicon (1890) applied completely over the metal portion of the terminal.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

The results of the tests will be recorded and provided to the purchaser at time of delivery.

BATTERY SYSTEM

There will be four (4) 12 volt Exide®, Model 31S950X3W, batteries that include the following features will be provided:

- 950 CCA, cold cranking amps
- 190 amp reserve capacity
- High cycle
- Group 31
- Rating of 3800 CCA at 0 degrees Fahrenheit
- 760 minutes of reserve capacity
- Threaded stainless steel studs

Each battery case will be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover will be manifold vented with a central venting location to allow a 45 degree tilt capacity.

The inside of each battery will consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.

BATTERY SYSTEM

There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.

MASTER BATTERY SWITCH

There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.

An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.

BATTERY COMPARTMENTS

The batteries will be stored in well-ventilated compartments that are located under the cab and bolted directly to the chassis frame. The battery compartments will be constructed of 3/16" steel plate and be designed to accommodate a maximum of three (3) group 31 batteries in each compartment. The compartments will include formed fit heavy-duty roto-molded polyethylene battery tray inserts with drains on each side of the frame rails. The batteries will be mounted inside of the roto-molded trays.

JUMPER STUDS

One (1) set of battery jumper studs with plastic color-coded covers will be installed on the battery box on the driver's side. This will allow enough room for easy jumper cable access.

BATTERY CHARGER

There will be an IOTA™, Model DSL 75, battery charger with IQ4, controller provided.

The battery charger will be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.

There will be a Kussmaul™, Model #091-94-12, remote indicator included.

The battery charger will be located in the left body compartment mounted on the left wall as high as possible.

The battery charger indicator will be located near the driver's seat riser with special bracketry.

AUTO EJECT FOR SHORELINE

There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus.

The shoreline inlet(s) will include red weatherproof flip up cover(s).

There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting.

The shoreline(s) will be connected to the battery charger.

There will be a mating connector body supplied with the loose equipment.

There will be a label installed near the inlet(s) that state the following:

- Line Voltage
- Current Ratting (amps)
- Phase
- Frequency

The shoreline receptacle will be located on the driver side of cab, above wheel.

ALTERNATOR

There will be a C.E Niehoff, Model C531 or C537 alternator provided. It will have a rated output current of 360 amps, as measured by SAE method J56. It will have a custom three (3)-set point voltage regulator, manufactured by C. E. Niehoff. The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

ELECTRONIC LOAD MANAGER

An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system.

For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed.

The system will include the following features:

- System voltage monitoring.
- A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off.
- Sixteen available electronic load shedding levels.
- Priority levels can be set for individual outputs.
- High Idle to activate before any electric loads are shed and deactivate with the service brake.
    - If enabled:
        - "Load Man Hi-Idle On" will display on the information center.
        - Hi-Idle will not activate until 30 seconds after engine start up.
- Individual switch "on" indicator to flash when the particular load has been shed.
- The information center indicates system voltage.

The information center, where applicable, includes a "Load Manager" screen indicating the following:

- Load managed items list, with priority levels and item condition.
- Individual load managed item condition:
    - ON = not shed
    - SHED = shed

SEQUENCER

A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator.

For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed.

Emergency light sequencing will operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation.

When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order.

Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals:

- Cab Heater and Air Conditioning
- Crew Cab Heater (if applicable)
- Crew Cab Air Conditioning (if applicable)
- Exhaust Fans (if applicable)
- Third Evaporator (if applicable)

HEADLIGHTS

There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights mounted in the front quad style, chrome housing on each side of the cab grille:

- the outside light on each side will contain a part number 055***1 low beam module
- the inside light on each side will contain a part number 055***1 high beam module
- the headlight to include chrome bezels

The low beam lights will be activated when the headlight switch is on.

The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.

DIRECTIONAL LIGHTS

There will be two (2) Whelen 600® series, LED combination directional/marker lights provided. The lights will be located on the outside cab corners, next to the headlights.

The color of the lenses will be the same color as the LED's.

INTERMEDIATE LIGHT

There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.

CAB CLEARANCE/MARKER/ID LIGHTS

There will be seven (7) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations:

- Three (3) amber LED identification lights will be installed in the center of the cab above the windshield.
- Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield.
- Two (2) amber LED marker lights will be installed, one (1) on each side above the cab doors.

REAR CLEARANCE/MARKER/ID LIGHTING

There will be a three (3) LED light bar used as identification lights located at the rear of the apparatus per the following:

- As close as practical to the vertical centerline
- Centers spaced not less than 6.00" or more than 12.00" apart
- Red in color
- All at the same height

There will be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:

- To indicate the overall width of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical

- Red in color
- To be visible from the rear
- All at the same height

There will be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following:

- To indicate the overall length of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the side
- All at the same height

There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

Per FMVSS 108 and CMVSS 108 requirements.

REAR FMVSS LIGHTING

The rear stop/tail and directional LED lighting will consist of the following:

- Two (2) Whelen®, Model M6BTT, red LED stop/tail lights
- Two (2) Whelen, Model M6T, amber LED arrow turn lights

The lights will be provided with color lenses.

The lights will be mounted in a polished combination housing.

There will be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing.

LICENSE PLATE BRACKET

There will be one (1) license plate bracket mounted on the rear of the body.

A white LED light will illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.

LIGHTING BEZEL

There will be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.

BACK-UP ALARM

A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.

CAB PERIMETER SCENE LIGHTS

There will be four (4) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" white LED strip lights provided, one (1) for each cab door.

These lights will be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.

PUMP HOUSE PERIMETER LIGHTS

There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, one (1) each side.

If the combination of options in the vehicle does not permit clearance for a 20.00" light, a 12.00" version of the Amdor light will be installed.

The lights will be controlled by the same means as the body perimeter lights.

BODY PERIMETER SCENE LIGHTS

There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens, 20.00" long, white LED's, 12 volt DC lights provided at the rear step area of the body, one (1) each side shining to the rear.

The perimeter scene lights will be activated when the parking brake is applied.

STEP LIGHTS

Four (4) white LED step lights will be provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard.

In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light.

These step lights will be actuated with the pump panel light switch.

All other steps on the apparatus will be illuminated per the current edition of NFPA 1901.

12 VOLT LIGHTING

There will be two (2) HiViz FIRETECH, Model FT-B-46-*, 46.00" 12 volt DC LED light(s) with a combination of flood and spot optics and adjustable mounting brackets mounted One on each side of crew cab.

The color of the light housing(s) and brackets will be painted parts of the light housing and brackets to be white.

The light(s) selected above will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.

These light(s) may be load managed when the parking brake is applied.

12 VOLT LIGHTING

There will be two (2) HiViz FIRETECH, Model FT-B-46-*, 46.00" 12 volt DC LED light(s) with a combination of flood and spot optics and adjustable mounting brackets mounted One on each side of upper body rear most location.

The color of the light housing(s) and brackets will be painted parts of the light housing and brackets to be white.

The light(s) selected above will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.

These light(s) may be load managed when the parking brake is applied.

12 VOLT LIGHTING – Providing a 54" Rigid as per page 92

There will be a ~~HiViz Model FT-B-54-2PKIT~~ *, 2.49" high x 54.60" long x 2.45" deep 12 volt DC dual light kit with 15,745 effective lumens and white LEDs provided, on the cab roof located, one (1) on the driver's side and one (1) on the passenger's side.

The painted parts of the light housing and brackets to be black.

The light will be activated by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.

The light may be load managed when the parking brake is applied.

DECK LIGHTS

There will be two (2) Whelen, Model PFBP12C, 12 volt DC LED floodlights with swivel mount provided at the rear of the hose bed, one (1) each side.

The lights will be activated by a control from a switch at the rear of the truck.

HOSE BED LIGHT

There will be two (2) Amdor Model AY-LB-12HW040, 700 lumens, 40.00" LED light located each side of hose bed near top.

The light(s) will be activated when the battery switch is on, and by a cup switch at the rear of the apparatus no more than 72.00" from the ground.

REAR SCENE LIGHT(S)

There will be two (2) Whelen®, Model M9LZC, LED scene light(s) with chrome trim bezel(s) installed at the rear of the apparatus, one (1) high on the driver's side rear body bulkhead and one (1) high on the passenger's side rear body bulkhead.

The light(s) will be controlled by a switch at the driver's side switch panel and by a cup switch at the driver's side rear bulkhead.

The light(s) may be load managed when the parking brake is applied.

WALKING SURFACE LIGHT

There will be Model FRP, 4" round black 12 volt DC LED floodlight(s) with bolt mount provided to illuminate the entire designated walking surface on top of the body.

The light(s) will be activated when the body step lights are on.

WATER TANK

Booster tank will have a capacity of 750 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated.

The tank will be designed to achieve a low hosebed. Tank design will be a stepped design with the forward section of the tank higher than the section of the tank that is below the hose bed.

Tank joints and seams will be nitrogen welded inside and out.

Tank will be baffled in accordance with NFPA Bulletin 1901 requirements.

Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments.

Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding.

Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover.

All partitions will interlock and will be welded to the tank bottom and sides.

Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions.

Tank top will be sufficiently supported to keep it rigid during fast filling conditions.

Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.

A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank.

Sump will include a drain plug and the tank outlet.

Tank will be installed in a fabricated cradle assembly constructed of structural steel.

Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing.

Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on.

Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle.

Mounting system will be approved by the tank manufacturer.

Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long.

Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover.

An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.

SLEEVE, PLUMBING, THROUGH TANK

One (1) sleeve will be provided in the water tank for a 3.00" pipe to the rear.

WATER TANK RESTRAINT

A heavy-duty water tank restraint will be provided.

HOSE BED

The hose bed will be fabricated of 0.125"-5052 aluminum with a nominal 38,000 psi tensile strength.

The hose bed will be as low as practical.

Upper and rear edges of side panels will have a double break for rigidity.

The upper inside area of the beavertails will be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.

Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.

A cross divider will be provided at the front of the hose bed before the tank transitions from the lower section to the upper section. The divider will run from the top of the side sheet down below the hose bed grating.

Hose bed will accommodate 1000 ft of 5" rubber hose, 400 ft of 1.75 hose poly, and 600 ft 3" poly hose.

HOSE BED DIVIDER

Three (3) adjustable hosebed dividers will be furnished for separating hose.

Each divider will be constructed of a .125" brushed aluminum sheet fitted and fastened into a slotted, 1.50" diameter radiused extrusion along the top, bottom, and rear edge.

Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed.

Divider will be held in place by tightening bolts, at each end.

Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.

HOSE BED HOSE RESTRAINT

The hose in the hose bed will be restrained by a black nylon Velcro® strap at the top of the hosebed. At the rear of the hose bed, 2.00" black nylon webbing with a 1.50" x 4.00" box pattern will attach at the top rear outside corners with seat belt buckle fasteners. The webbing will have straps connected with seat belt buckle fasteners located at the rear body sheet below the hose bed.

A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheet.

RUNNING BOARDS
Running boards will be fabricated of .125" bright aluminum treadplate.

Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure.

Running boards will be 12.75" deep and spaced .50" away from the pump panel.

A splash guard will be provided above the running board treadplate.

TAILBOARD
The tailboard will also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.

The tailboard area will be 16.00" deep.

The exterior side will be flanged down and in for increased rigidity of tailboard structure.

REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL
The rear facing surfaces of the center rear wall will be smooth aluminum.

The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body.

Any inboard facing surfaces below the height of the hosebed will be aluminum diamondplate.

TOW BAR
A tow bar will be installed under the tailboard at center of truck.

Tow bar will be fabricated of 1.00" CRS bar rolled into a 3.00" radius.

Tow bar assembly will be constructed of .38" structural angle. When force is applied to the bar, it will be transmitted to the frame rail.

Tow bar assembly will be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle.

Tow bar design will have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.

RUNNING BOARD HOSE RESTRAINT
A pair of 2.00" wide black nylon straps with Velcro fasteners will be provided for each hose tray to secure the hose during travel. There will be One (1) hose tray located in the left side running board.

HOSE TRAY
One (1) hose tray will be recessed in the left hand side running board.

Capacity of the tray will be 25.00' of 5.00" soft suction hose.

Rubber matting will be installed on the floor of the tray to provide proper ventilation.

COMPARTMENTATION

Body and compartments will be fabricated of .125", 5052-H32 aluminum.

Side compartments will be an integral assembly with the rear fenders.

Circular fender liners will be provided for prevention of rust pockets and ease of maintenance.

Side compartment flooring will be of the sweep out design with the floor higher than the compartment door lip.

The side compartment door opening will be framed by flanging the edges in 1.75" and bending out again .75" to form an angle.

Drip protection will be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate or polished stainless steel.

The top of the compartment will be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers will have the corners welded.

Side compartment covers will be separate from the compartment tops.

Front facing compartment walls will be covered with bright aluminum treadplate.

All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury.

UNDERBODY SUPPORT SYSTEM

Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load will be provided.

The backbone of the support system will be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads.

The support system will include .375" thick steel vertical angle supports bolted to the chassis frame rails with .625" diameter bolts.

Attached to the bottom of the steel vertical angles will be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.

A steel frame will be mounted on the top of these supports to create a floating substructure which will result in a 500 lb equipment support rating per lower compartment.

The floating substructure will be separated from the horizontal members with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body.

Isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.

The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.

AGGRESSIVE WALKING SURFACE

All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards.

LOUVERS

Louvers will be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they will be formed into the metal and not added to the compartment as a separate plate.

TESTING OF BODY DESIGN

Body structural analysis has been fully tested. Proven engineering and test techniques such as finite element analysis, stress coating and strain gauging have been performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure.

Body will be tested while loaded to its greatest in-service weight.

The criteria used during the testing procedure will include:

- Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb.
- Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions.
- Driving the vehicle at 35 mph on a washboard road.
- Driving the vehicle at 55 mph on a smooth road.
- Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement.

Evidence of actual testing techniques will be made available upon request.

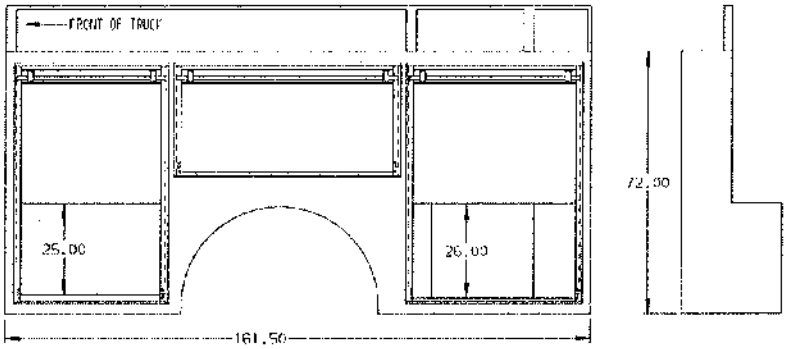
LEFT SIDE COMPARTMENTATION

The left side compartmentation will consist of three (3) rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 44.00" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 38.25" wide x 56.88" high.

A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high.

A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.



	CLEAR DOOR OPENINGS					
	AMDOR		GORTITE		ROM	
COMPARTMENT	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
Ahead of axle	39.00	56.88	38.25	58.00	38.44	58.25
Over axle	59.00	23.13	58.25	24.25	58.44	24.50
Behind axle	45.50	57.88	44.75	59.00	44.94	59.25

The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one (1) hand.

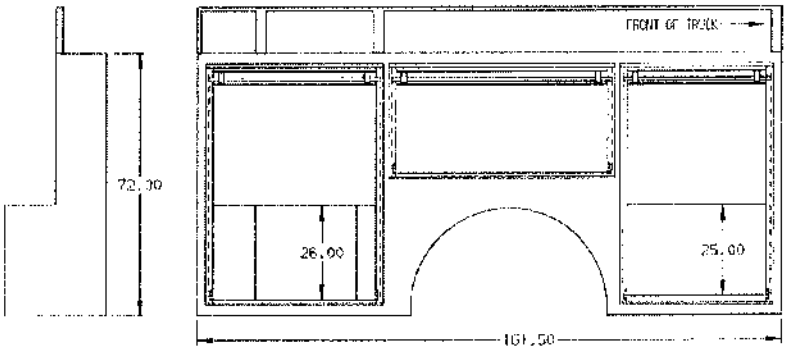
RIGHT SIDE COMPARTMENTATION

The right side compartmentation will consist of three (3) rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 44.00" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 38.25" wide x 56.88" high.

A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high.

A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.



	CLEAR DOOR OPENINGS					
	AMDOR		GORTITE		ROM	
COMPARTMENT	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
Ahead of axle	39.00	56.88	38.25	58.00	38.44	58.25
Over axle	59.00	23.13	58.25	24.25	58.44	24.50
Behind axle	45.50	57.88	44.75	59.00	44.94	59.25

The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one (1) hand.

SIDE COMPARTMENT ROLLUP DOOR(S)

There will be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors.

Door(s) will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement.

Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingression.

The doors will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.

Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.

A polished stainless steel lift bar to be provided for each roll-up door. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.

All injection molded rollup door wear components will be constructed of Type 6 nylon.

Each rollup door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.

The header for the rollup door assembly will not exceed 4.00".

A heavy-duty magnetic switch will be used for control of open compartment door warning lights.

REAR COMPARTMENTATION

A roll-up door compartment above the rear tailboard will be provided.

The interior dimensions of this compartment will be 40.00" wide x 33.63" high x 25.88" deep. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartment will be calculated with the compartment door closed.

A louvered, removable access panel will be furnished on the back wall of the compartment.

The rear compartment will be open into the rear side compartments.

The clear door opening of this compartment will be a minimum of 33.25" wide x 23.88" high.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

ROLLUP REAR COMPARTMENT DOOR

The rear compartment will have a rollup door.

The door will be double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors.

The door will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement.

Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingression.

The door will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.

Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.

A polished stainless steel lift bar to be provided for each roll-up door. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.

All injection molded rollup door wear components will be constructed of Type 6 Nylon.

The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.

The header for the rollup door assembly will not exceed 4.00".

A heavy-duty magnetic switch will be used for control of open compartment door warning lights.

DOOR GUARD

There will be seven (7) compartment doors that will include a guard/drip pan designed to protect the rollup door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed left side rearward compartment, left side over the wheel compartment, left side forward compartment, right side rearward compartment, right side over the wheel compartment, right side forward compartment and rear compartment.

COMPARTMENT LIGHTING

There will be seven (7) compartments with Amdor, Model AY-9220, white 12 volt DC LED compartment light strips. The lights will be mounted with mechanical fasteners.

There will be two (2) strip lights installed vertically in each compartment opening per the latest NFPA requirements.

The lights will be activated when the battery switch is on and the respective compartment door is opened.

MOUNTING TRACKS

There will be seven (7) sets of tracks for mounting shelf(s) in LS1, LS2, LS3, RS1, RS2, RS3 and B1. These tracks will be installed vertically to support the adjustable shelf(s), and will be full height of the compartment. The tracks will be painted to match the compartment interior.

ADJUSTABLE SHELVES

There will be seven (7) shelves with a capacity of 500 lb provided.

The shelf construction will consist of .188" aluminum painted spatter gray with 2.00" sides.

Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track.

The shelves will be held in place by .12" thick stamped plated brackets and bolts.

The location(s) will be determined at a later date.

SLIDE-OUT FLOOR MOUNTED TRAY

There will be three (3) floor mounted slide-out tray(s) provided.

Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position.

Each tray will be constructed of aluminum painted spatter gray

There will be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides will have a safety factor rating of 2.

To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.

To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request.

Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.

The location(s) will be B1.

SWING OUT TOOLBOARD

A swing out aluminum toolboard will be provided.

It will be a minimum of .188" thick with .281" diameter holes in a pegboard pattern with 1.00" centers between holes.

A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard.

The board will be mounted on a pivoting device at the back of the compartment on the top and bottom to allow easy movement in and out of the compartment. The maximum tool load will be 400 pounds.

The board will have positive lock in the stowed and extended position.

The board will be mounted on adjustable tracks from front to back within the compartment.

There will be One (1) toolboard(s) provided. The toolboard(s) will be spatter gray painted and installed RS2.

COMPARTMENT FLOOR SCUFFPLATE

Aluminum treadplate will be provided on the floor of three (3) compartments. The locations will be, to be determined.

The edges of the treadplate will be completely caulked before installation to prevent corrosion.

RUB RAIL
Bottom edge of the side and rear of the body compartments will be trimmed with a bright aluminum extruded rub rail.

Trim will be 2.12" high with 1.38" flanges turned outward for rigidity.

The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.

BODY FENDER CROWNS
Polished stainless steel fender crowns will be provided around the rear wheel openings with a dielectric barrier will be provided between the fender crown and the fender sheet metal to prevent corrosion.

The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting will be provided between the body and crown.

BODY FENDER LINER
A painted fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.

HARD SUCTION HOSE
Hard suction hose will not be required.

HANDRAILS
The handrails will be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface.

Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces.

Drain holes will be provided in the bottom of all vertically mounted handrails.

Handrails will be provided to meet NFPA 1901 section 15.8 requirements. The handrails will be installed as noted on the sales drawing.

HANDRAILS
One (1) vertical handrail will be located on each rear beavertail.

One (1) horizontal black rubber-covered handrail will be provided above the hose bed at the rear of the apparatus. The hose bed dividers shall be tied to the upper handrail or cross bar in order to provide sufficient reinforcement.

ADDITIONAL HANDRAIL
Four (4) handrails will be mounted to be determined.

AIR BOTTLE STORAGE (DOUBLE)
A quantity of three (3) air bottle compartments, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the left side forward of the rear wheels, on the left side rearward of the rear wheels, on the right side forward of the rear wheels and on the right side rearward of the rear wheels . A polished stainless steel door with a Southco

raised trigger C2 chrome lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

Inside the compartment, black rubber matting and "W" shaped insert formed of composite materials will be provided.

EXTENSION LADDER
There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.

ROOF LADDER
There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.

LADDER STORAGE
The ladders will be stored between the water tank and the right side compartments.

The ladders will extend into the pump compartment just to the rear of the water pump discharges.

The ladder storage area will be enclosed as practical by means of sheet metal to protect the ladders from road dirt. The ladders that extend into the pump house will also be enclosed. A black rubber boot will be provided to enclose the ladders in the gap between the pump house and the body.

Each ladder will be stored vertically in a separate stainless steel storage trough. Each stainless steel trough will be lined with Dura-Surf nylon slides.

An aluminum enclosure will be provided at the rear of the body to properly contain the ladders. This enclosure will extend to the rear of the side body compartments.

The enclosure will also include a vertically hinged smooth aluminum door with a D-handle latch to access the ladders. The door will be hinged on the right side.

FOLDING LADDER
One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed in a U-shaped trough inside the ladder storage compartment .

PIKE POLE PROVIDED BY FIRE DEPARTMENT
NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 8 ft or longer pike pole mounted in a bracket fastened to the apparatus.

The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike pole.

The pike pole(s) will be a Duo-Safety 10' pike pole.

6' PIKE POLE PROVIDED BY FIRE DEPARTMENT
NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 6' pike pole or plaster hook mounted in a bracket fastened to the apparatus.

The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike pole.

The pike pole(s) will be a Duo-Safety 6' pike pole.

PIKE POLE STORAGE

Aluminum tubing will be used for the storage of two (2) pike poles and will be located in ladder storage compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate will be provided.

REAR FOLDING STEPS

Chrome Eberhard folding steps will be provided at the rear. All steps will provide adequate surface for stepping.

Four (4) additional folding steps, Eberhard, will be located To be determined at drawing approval..

PUMP

Pump will be a Waterous CSU, 1500 gpm single (1) stage midship mounted centrifugal type.

Pump will be the class "A" type.

Pump will deliver the percentage of rated discharge at pressures indicated below:

- 100% of rated capacity at 150 psi net pump pressure.

-70% of rated capacity at 200 psi net pump pressure.

-50% of rated capacity at 250 psi net pump pressure.

Pump body will be close-grained gray iron, bronze fitted, and horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly (including wear rings).

Pump will be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping.

Pump case halves will be bolted together on a single horizontal face to minimize chance of leakage and facilitate ease of reassembly. No end flanges will be used.

Discharge manifold of the pump will be cast as an integral part of the pump body assembly and will provide a minimum of three (3) 3.50" openings for flexibility in providing various discharge outlets for maximum efficiency.

The three (3) 3.50" openings will be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold.

Impeller shaft will be stainless steel, accurately ground to size. It will be supported at each end by sealed, anti-friction ball bearings for rigid precise support. Impeller will have flame plated hubs assuring maximum pump life and efficiency despite any presence of abrasive matter in the water supply.

Bearings will be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings will be used.

PUMP PACKING

Stuffing boxes will be of the conventional two (2) piece, split-gland type, to permit adjustment or replacement of Grafoil packing without disturbing the pump. Water will be fed into stuffing box lantern rings for proper lubrication and cooling when the pump is operating.

Lantern rings will be located at the inner ends of the stuffing boxes, to avoid having to remove them when replacing pump packing.

Wear rings will be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.

PUMP TRANSMISSION

The pump transmission will be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump will be through a high strength Morse HY-VO silent drive chain. By the use of a chain rather than gears, 50% of the sprocket will be accepting or transmitting torque, compared to two (2) or three (3) teeth doing all the work.

Drive shafts will be 2.35" diameter hardened and ground alloy steel and supported by ball bearings. The case will be designed to eliminate the need for water cooling.

PUMPING MODE

An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.

AIR PUMP SHIFT

Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control will also be located on the left side pump panel.

Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump".

The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements.

The pump shift control in the cab will be illuminated to meet NFPA requirements.

TRANSMISSION LOCK-UP

The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.

AUXILIARY COOLING SYSTEM

A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be cylindrical type and will be a separate unit.

The heat exchanger will be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger will be plumbed to the master drain valve.

INTAKE RELIEF VALVE - PUMP

There will be One (1) Elkhart Style 40 relief valve(s) installed on the suction side of the pump preset at 125 psig.

The relief valve(s) will have a working range of 75 psi to 250 psi.

The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag.

The relief valve pressure control will be located behind behind the right side pump panel with a stainless steel access door .

PRESSURE CONTROLLER

A Pierce Pump Boss Model PBA300 pressure governor will be provided.

A pressure transducer will be installed in the water discharge manifold on the pump.

The display panel will be located at the pump operator's panel.

PRIMING PUMP

The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901.

All wetted metallic parts of the priming system are to be of brass and stainless steel construction.

One (1) priming control will open the priming valve and start the pump primer.

PUMP MANUALS

There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.

PLUMBING, STAINLESS STEEL AND HOSE

All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness.

Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings.

Plumbing manifold bodies will be ductile cast iron or stainless steel.

All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame.

All water carrying gauge lines will be of flexible polypropylene tubing.

All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.

MAIN PUMP INLETS

A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.

MAIN PUMP INLET CAP

The main pump inlets will have National Standard Threads with a long handle chrome cap.



The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.

SHORT SUCTION TUBE(S)

The suction tube(s) on the water pump will have short suction tube(s) installed to allow for installation of adapters, elbows or intake valves without excessive overhang.

VALVES

All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.

Valves will have a **ten (10) year** warranty.

LEFT SIDE INLET

There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.

The auxiliary inlet will be provided with a strainer, chrome swivel and plug.

The location of the valve for the one (1) inlet will be recessed behind the pump panel.

INLET CONTROL

The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.

INLET BLEEDER VALVE

A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.

TANK TO PUMP

The booster tank will be connected to the intake side of the pump with stainless steel piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing.

A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.

TANK REFILL
A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.

LEFT SIDE DISCHARGE OUTLETS
There will be One (1) discharge outlet with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

RIGHT SIDE DISCHARGE OUTLETS
There will be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

LARGE DIAMETER DISCHARGE OUTLET
There will be a 4.00" discharge outlet with a 3.50" Waterous valve installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet will be actuated with a handwheel control at the pump operator's control panel.

An indicator will be provided to show when the valve is in the closed position.

FRONT DISCHARGE OUTLET
There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located on the top of the right side of the front bumper.

Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel.

There will be automatic drains provided at all low points of the piping.

REAR DISCHARGE OUTLET – Two 2.50" outlets provided
There will be ~~One (1)~~ discharge outlet piped to the rear of the hose bed, left side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.

FRONT OF HOSE BED DISCHARGE OUTLET – Delete
There will be Two (2) discharge outlets discharge(s) piped to the front of the hose bed and located Front of Hose Bed . Plumbing will consist of 2.50" piping with a 2.50" full-flow ball valve controlled at the pump operator's panel. The discharge(s) will terminate with a 2.50" (M) National Standard hose thread adapter.

DISCHARGE CAPS/ INLET PLUGS
Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets.

Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size.

The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

OUTLET BLEEDER VALVE

A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application.

The valves will be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders will be routed below the chassis frame rails.

LEFT SIDE OUTLET ELBOWS

The One (1) discharge outlet, located on the left side pump panel, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) Paducah, chrome plated, 45 degree elbow.

The elbow will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

RIGHT SIDE OUTLET ELBOWS

The One (1) discharge outlet, located on the right side pump panel, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) Paducah, chrome plated, 45 degree elbow.

The elbow will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

REAR OUTLET ELBOWS

The 2.50" discharge outlets, located at the rear of the apparatus, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) Paducah, chrome plated, 45 degree elbow.

The elbow will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

Elbows will be provided for One (1) discharge outlet.

LARGE DIAMETER OUTLET ELBOWS

The 4.00" outlet(s) will be furnished with one (1) 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.

DISCHARGE OUTLET CONTROLS

The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve.

If a handwheel control valve is used, the control will be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.

Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.

DELUGE RISER

A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be rigidly braced and installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel.

Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.

TELESCOPIC PIPING

The deluge riser piping will include an 18.00" Task Force Model XG18 Extend-A-Gun extension.

This extension will be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation.

A position sensor will be provided on the telescopic piping that will activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.

MONITOR

A Task Force Tips Crossfire #XFT-NJ monitor will be properly installed on the deluge riser. This monitor will be painted as provided by monitor manufacturer .

NOZZLE

A Task Force Tips Master Stream Series M-R nozzle will be provided.

Included will be a Task Force Tips XF-SS5 stream straightener and MST-4NJ quad stacked tips.

Tip sizes will be 1.38", 1.50", 1.75" and 2.0".

The deluge riser Extend-a-Gun will have provisions for direct mounting a Task Force Tips CrossFire monitor.

CROSSLAY HOSE BEDS

Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed hose and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.

Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.

The crosslay controls will be at the pump operator's panel.

The center crosslay dividers will be fabricated of 0.25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish.

Vertical scuffplates constructed of stainless steel will be provided at the front and rear ends of the bed on each side of vehicle.

Crosslay bed flooring will consist of removable perforated brushed aluminum.

2.50" CROSSLAY HOSE BED

One (1) crosslay with 2.50" outlets will be provided. This bed to be capable of carrying 200' of 2.50" double jacketed hose and will be plumbed with 2.50" i.d. pipe and gated with a 2.50" quarter turn ball valve.

Outlet to be equipped with a 2.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.

The crosslay control will be at the pump operator's panel.

The center crosslay dividers will be fabricated of 0.25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. The remainder of the crosslay bed will be painted job color.

Stainless steel vertical scuffplates will be provided at hose bed ends (each side of vehicle). Bottom of hose bed ends (each side) will also be equipped with a stainless steel scuffplate.

Crosslay bed flooring will consist of removable perforated brushed aluminum.

CROSSLAY/DEADLAY HOSE RESTRAINT

Elastic netting will be provided across the top and ends of two (2) crosslay/deadlay opening(s) to secure the hose during travel. The netting will be permanently attached at the top center of the crosslay/deadlay bed and removable on each end.

CROSSLAY 8.00" LOWER THAN STANDARD

The crosslays will be lowered 8.00" from standard.

FOAM SYSTEM

A foam system will not be required on this apparatus.

PUMP COMPARTMENT

The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. The pump compartment will be constructed of the same material as the body compartmentation.

The pump compartment substructure will be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.

The pump compartment will be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist.

Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly.

PUMP MOUNTING

Pump will be mounted to a substructure which will be mounted to the chassis frame rail using rubber isolators. The mounting will allow chassis frame rails to flex independently without damage to the fire pump.

LEFT SIDE PUMP CONTROL PANEL

All pump controls and gauges will be located at the left (driver's) side of the apparatus and properly identified.

Layout of the pump control panel will be ergonomically efficient and systematically organized.

The pump operator's control panel will be removable in two (2) main sections for ease of maintenance:

The upper section will contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels will be removable from the face of the pump panel for ease of maintenance. Below the sub panels will be located all valve controls and line pressure gauges.

The lower section of the panel will contain all inlets, outlets, and drains.

All push/pull valve controls will have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods will be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls will be capable of locking in any position. The control rods will pull straight out of the panel and will be equipped with universal joints to eliminate binding.

IDENTIFICATION TAGS

The identification tag for each valve control will be recessed in the face of the tee handle.

All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge.

All line pressure gauges will be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting will be removable from the face of the pump panel for ease of maintenance. The casting will be color coded to correspond with the discharge identification tag.

All remaining identification tags will be mounted on the pump panel in chrome plated bezels.

The pump panel on the right (passenger's) side will be removable with lift and turn type fasteners.

Trim rings will be installed around all inlets and outlets.

PUMP PANEL CONFIGURATION

The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.

PUMP AND GAUGE PANEL

The pump and gauge panels will be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding will be provided around each panel.

The right side pump panel will be removable and fastened with swell type fasteners.

PUMP COMPARTMENT LIGHT

There will be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the pump compartment.

There will be a switch accessible through a door on the pump panel included with this installation.

Engine monitoring graduated LED indicators will be incorporated with the pressure controller.

Also provided at the pump panel will be the following:

- Master Pump Drain Control

THROTTLE READY GREEN INDICATOR LIGHT

There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.

OK TO PUMP INDICATOR LIGHT

There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.

VACUUM AND PRESSURE GAUGES

The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©.

The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel.

Test port connections will be provided at the pump operator's panel. One will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They will be marked with a label.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

PRESSURE GAUGES

The individual "line" pressure gauges for the discharges will be Class 1© interlube filled.

They will be a minimum of 2.00" in diameter and have white faces with black lettering.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

Gauges will have a pressure range of 30"-0-400#.

The individual pressure gauge will be installed as close to the outlet control as practical.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

WATER LEVEL GAUGE

There will be an electronic water level gauge provided on the operator's panel that registers water level by means of five (5) colored LED lights. The lights will be durable, ultra-bright five (5) LED design viewable through 180 degrees. The water level indicators will be as follows:

- 100 percent = Green
- 75 percent = Yellow
- 50 percent = Yellow
- 25 percent = Yellow

- Refill = Red

The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the water tank is empty.

The level measurement will be based on the sensing of head pressure of the fluid in the tank.

The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from water and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level.

LIGHT SHIELD

There will be a polished, 16 gauge stainless steel light shield will be installed over the pump operators panel.

- There will be three (3) On Scene Solutions Night Axe, Model 70005, 18.00" LED lights installed under the stainless steel light shield to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house.
- One (1) pump panel light will come on when the pump is in ok to pump mode.

There will be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel.

AIR HORN SYSTEM

There will be two (2) Grover air horns recessed in the front bumper. The horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed in-line to prevent loss of air in the air brake system.

Air Horn Location

The air horns will be located on each side of the bumper, towards the outside.

Air Horn Control

The air horns will be actuated by a chrome push button located on the officer's side of the engine tunnel and by the horn button in the steering wheel. The driver will have the option to control the air horns or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

ELECTRONIC SIREN

A Whelen®, Model 295SLSA1, electronic siren with noise canceling microphone will be provided.

This siren to be active when the battery switch is on and that emergency master switch is on.

Electronic siren head will be recessed in the driver side center switch panel.

The electronic siren will be controlled on the siren head only. No horn button or foot switches will be provided.

SPEAKER

There will be one (1) Whelen®, Model SA315P, black nylon composite, 100-watt, speaker with through bumper mounting brackets and polished stainless steel grille provided. The speaker will be connected to the siren amplifier.

The speaker(s) will be recessed in the center of the front bumper.

AUXILIARY MECHANICAL SIREN

A Federal Q2B® siren will be furnished.

The control solenoid will be powered up after the emergency master switch is activated.

The mechanical siren will be mounted on the bumper deck plate. It will be mounted on the left side. A reinforcement plate will be furnished to support the siren.

The mechanical siren will be actuated by a chrome push button located on the officer side of the engine tunnel and by the horn button in the steering wheel.

The driver will have the option to control the siren or the chassis horn from the horn button by means of a selector switch located on the instrument panel.

A momentary chrome push button switch will be included in the right side dash panel to activate the siren brake.

FRONT ZONE UPPER WARNING LIGHTS

There will be one (1) 81.00" Whelen Freedom IV LED lightbar mounted on the cab roof.

The lightbar will include the following:

- One (1) red flashing LED module in the driver's side rear corner position.
- Open in the driver's side end position.
- One (1) red flashing LED module in the driver's side front corner position.
- Open in the driver's side first front position.
- One (1) red flashing LED module in the driver's side second front position.
- Open in the driver's side third front position.
- Open in the driver's side fourth front position.
- One (1) red flashing LED module in the driver's side fifth front position.
- Open in the driver's side sixth front position.
- Open in the driver's side seventh position.
- Open in the passenger's side seventh position.
- Open in the passenger's side sixth front position.
- One (1) red flashing LED module in the passenger's side fifth front position.
- Open in the passenger's side fourth front position.
- Open in the passenger's side third front position.
- One (1) red flashing LED module in the passenger's side second front position.
- Open in the passenger's side first front position.
- One (1) red flashing LED module in the passenger's side front corner position.

- Open in the passenger's side end position.
- One (1) red flashing LED module in the passenger's side rear corner position.

There will be clear lenses included on the lightbar.

There will be a switch installed in the cab on the switch panel to control the lightbar.

The four (4) red flashing LED modules in the front positions may be load managed when the parking brake is applied.

CAB FACE WARNING LIGHTS

There will be four (4) Whelen®, Model M6*C, LED flashing warning lights installed on the cab face, above the headlights, mounted in a common bezel.

- The driver's side front outside warning light to be red
- The driver's side front inside warning light to be red
- The passenger's side front inside warning light to be red
- The passenger's side front outside warning light to be red

All four (4) lights will include a clear lens.

There will be a switch located in the cab, on the switch panel, to control the four (4) lights.

The inside lights may be load managed if colored or disabled if white, when the parking brake is set.

HEADLIGHT FLASHER

The high beam headlights will flash alternately between the left and right side.

There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on.

The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.

SIDE ZONE LOWER LIGHTING

There will be six (6) Whelen®, Model M6*C, flashing LED warning lights with chrome trim installed per the following:

- Two (2) lights, one (1) each side on the bumper extension. The side front lights to be red.
- Two (2) lights, one (1) each side of cab rearward of crew cab doors. The side middle lights to be red.
- Two (2) lights, one (1) each side located between the tandems. The side rear lights to be red.
- The lights will include clear lenses.

There will be a switch in the cab on the switch panel to control the lights.

REAR ZONE LOWER LIGHTING

There will be two (2) Whelen®, Model M6*C, LED flashing warning lights located at the rear of the apparatus.

- The driver's side rear light to be red

- The passenger's side rear light to be red

Both lights will include a lens that is clear.

There will be a switch located in the cab on the switch panel to control the lights.

REAR/SIDE ZONE UPPER WARNING LIGHTS

There will be two (2) Whelen®, Model L31H*FN, LED warning beacons provided at the rear of the truck, located one (1) each side. There will be a switch located in the cab on the switch panel to control the beacons.

The color of the lights will be red LEDs with both domes clear.

The rear warning lights will be mounted on top of the compartmentation with all wiring totally enclosed. The rear deck lights will be mounted on the beavertails as high as possible.

TRAFFIC DIRECTING LIGHT

There will be one (1) Whelen®, Model TAL65, 36.00" long x 2.87" high x 2.25" deep, amber LED traffic directing light installed at the rear of the apparatus.

The Whelen, Model TACTI.5, control head will be included with this installation.

The controller will be energized when the battery switch is on.

The auxiliary flash not activated.

This traffic directing light will be recessed with a stainless steel trim plate at the rear of the apparatus as high as practical.

The traffic directing light control head will be located in the driver side overhead switch panel in the right panel position.

LOOSE EQUIPMENT

The following equipment will be furnished with the completed unit:

- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.

NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT

The following loose equipment as outlined in NFPA 1901, 2016 edition, section 5.9.3 and 5.9.4 will be provided by the fire department.

- 800 ft (60 m) of 2.50" (65 mm) or larger fire hose.
- 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose.
- One (1) handline nozzle, 200 gpm (750 L/min) minimum.
- Two (2) handline nozzles, 95 gpm (360 L/min) minimum.
- One (1) smoothbore of combination nozzle with 2.50" shutoff that flows a minimum of 250 gpm.

- One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer.
- One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s).
- One (1) first aid kit.
- Four (4) combination spanner wrenches.
- Two (2) hydrant wrenches.
- One (1) double female 2.50" (65 mm) adapter with National Hose threads.
- One (1) double male 2.50" (65 mm) adapter with National Hose threads.
- One (1) rubber mallet, for use on suction hose connections.
- Two (2) salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m).
- One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, *Standard for High Visibility Public Safety Vests*, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front.
- Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band.
- Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities.
- One (1) automatic external defibrillator (AED).
- Four (4) ladder belts meeting the requirements of NFPA 1983, *Standard on Fire Service Life Safety Rope and System Components* (if equipped with an aerial device).
- If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, will be carried mounted in brackets fastened to the apparatus.
- If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side will be carried. Any intake connection larger than 3.00" (75 mm) will include a pressure relief device that meets the requirements of 16.6.6.
- If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake will be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake.
- If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters will be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.

SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 5.8.2.1 requires a minimum of 20' of suction hose or 15' of supply hose will be carried.

Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.

DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 5.9.4 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus.

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 5.9.4 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus.

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) flathead axe mounted in a bracket fastened to the apparatus.

The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus.

The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

PAINT - BODY PAINTED TO MATCH CAB

The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows:

1. Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.
2. Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse will be applied to all metal surfaces.
3. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.
4. Finish Sanding - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.

5. Sealer Primer - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated.
6. Basecoat Paint - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment.
7. Clear Coat - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacture.

Each batch of basecoat color is checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment is used to compare the color sample to the color standard entered into the computer. Color specifications are used to determine the color match. A Delta E reading is used to determine a good color match within each family color.

All removable items such as brackets, compartment doors, door hinges, and trim will be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly.

Pierce Manufacturing paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) meet or exceed the Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels meet or exceed the #6 A.C.T.standard in critical areas. These requirements are met in order for the exterior paint finish to be considered acceptable. The Pierce Manufacturing written paint standards will be available upon request.

The cab will be two-tone, with the upper section painted #10 white and lower section of the cab and body painted #90 red.

PAINT - ENVIRONMENTAL IMPACT

Contractor will meet or exceed all current State regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions:

- Topcoats and primers will be chrome and lead free.
- Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals.
- Particulate emission collection from sanding operations will have a 99.99% efficiency factor.
- Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98.00%. Water wash systems will be 99.97% efficient
- Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean.
- Paint wastes are disposed of in an environmentally safe manner.
- Empty metal paint containers will be to recover the metal.

- Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse.

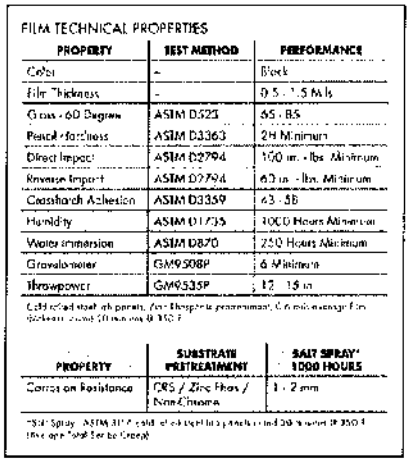
Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his State EPA rules and regulations.

PAINT CHASSIS FRAME ASSEMBLY

The chassis frame assembly will be finished with a single system black top coat before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.

Components treated with epoxy E-coat protection prior to paint:

- Two (2) C-channel frame rails



FILM TECHNICAL PROPERTIES

PROPERTY	TEST METHOD	PERFORMANCE
Color	-	Black
Film Thickness	-	0.5 - 1.5 Mils
Gloss - 60 Degree	ASTM D523	65 - 85
Pencil Hardness	ASTM D3363	2H Minimum
Direct Impact	ASTM D2794	160 in. - lbs. Minimum
Reverse Impact	ASTM D2794	60 in. - lbs. Minimum
Crosshatch Adhesion	ASTM D3359	4B - 5B
Humidity	ASTM D1735	1000 Hours Minimum
Water Immersion	ASTM D870	250 Hours Minimum
Gravelometer	GM9508P	6 Minimum
Throwpower	GM9535P	12 - 15 in

Cold rolled steel panels. Zinc Phosphate pretreatment. 0.6 mils average film thickness. Cured 30 minutes @ 350 F

PROPERTY	SUBSTRATE PRETREATMENT	SALT SPRAY* 1000 HOURS
Corrosion Resistance	CRS / Zinc Phos / Non-Chrome	1 - 2 mm

*ASTM Spray - ASTM B117 5% salt solution at 95 degrees F. Scribed per ASTM D1654 (five cycles of 168 hours each)

Components that are included with the chassis frame assembly that will be painted not e-coated are:

- Cross members
- Axles
- Suspensions
- Steering gear
- Battery boxes
- Bumper extension weldment
- Frame extensions
- Body mounting angles
- Rear Body support substructure (front and rear)
- Pump house substructure
- Air tanks
- Steel fuel tank
- Castings
- Individual piece parts used in chassis and body assembly

The E-coat process will meet the technical properties shown.

AXLE HUB PAINT

All axle hubs will be painted to match lower job color.

COMPARTMENT INTERIOR PAINT

The interior of all compartments will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.

REFLECTIVE STRIPES

Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" white stripe at the top with a 1.00" gap then a 6.00" white stripe with a 1.00" gap and a 1.00" white stripe on the bottom.

The reflective band provided on the cab face will be below the headlights on the fiberglass.

REAR CHEVRON STRIPING

There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered.

The colors will be red and fluorescent yellow green diamond grade.

Each stripe will be 6.00" in width.

This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.

CHEVRON STRIPING ON CAB AND CREW CAB DOOR EDGE

There will be alternating chevron striping located on the inside of each cab and crew cab door edge. The design will be either DOT pattern or standard chevron design. Width will be determined by available space. The striping will consist of the following colors:

The first color will Ibe red diamond grade

The second color will be fluorescent yellow green diamond grade

BROKEN RIBBON IN STRIPE

A pair of reflective stripe splits will be placed one (1) at each side of the vehicle. This will appear as a broken ribbon type split. Room will be left within the split for an emblem and/or lettering.

REFLECTIVE STRIPE OUTLINE

A black outline will be applied on the top and the bottom of the reflective band. There will be seven (7) set of outline stripes required.

STRIPE ON REAR ACCESS DOORS

There will be alternating striping located on the rear access doors.

The colors will be red and fluorescent yellow green diamond grade.

The stripes will be 6.00" in width and will match the chevron pattern on the rear body.

"Z" RIBBON IN REFLECTIVE STRIPE

"Z" type ribbon(s) will be added to the reflective stripe. Areas adjacent to the "Z" portion of the stripe will be shaded and highlighted with an air brush to give it a ribbon affect. There will be seven (7) pair on the vehicle.

CAB DOOR REFLECTIVE STRIPE

A 6.00" x 16.00" white reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel.

This stripe will meet the NFPA 1901 requirement.

LETTERING
One (1) to twenty (20) non-reflective vinyl lettering, 4.00" high, outlining and shading will be provided.

LETTERING
There will be reflective lettering, 12.00" high, with no outline or shade provided. There will be four (4) letters provided.

LETTERING
There will be reflective lettering, 16.00" high, with no outline or shade provided. There will be 14 letters provided.

LETTERING
There will be genuine gold leaf lettering, 12.00" high, with outline and shade provided. There will be 14 letters provided.

LETTERING, REFLECTIVE, "DIAL 911"
There will be one (1)8.00" high white reflective decal, "Dial 911", will be installed at To be determined.

MALTESE CROSS INSTALLATION
There will be three (3) maltese crosses, comprised of printed effect gold leaf material, provided and installed To be determined at drawing/graphic approval..

FIRE APPARATUS PARTS MANUAL
There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided.

The manual(s) will contain the following:

- Job number
- Part numbers with full descriptions
- Table of contents
- Parts section sorted in functional groups reflecting a major system, component, or assembly
- Parts section sorted in alphabetical order
- Instructions on how to locate parts

Each manual will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.

Service Parts Internet Site
The service parts information included in these manuals are also available on the Pierce website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.

CHASSIS SERVICE MANUALS
There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit.

The manual will contain the following sections:

- Job number
- Table of contents
- Troubleshooting
- Front Axle/Suspension
- Brakes
- Engine
- Tires
- Wheels
- Cab
- Electrical, DC
- Air Systems
- Plumbing
- Appendix

The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.

CHASSIS OPERATION MANUAL
The chassis operation manual will be provided on one (1) USB flash drive.

ONE (1) YEAR MATERIAL AND WORKMANSHIP
A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.

THREE (3) YEAR MATERIAL AND WORKMANSHIP
The Pierce custom chassis limited warranty certificate, WA0284, is included with this proposal.

ENGINE WARRANTY
A Cummins **five (5) year** limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.

STEERING GEAR WARRANTY
A TRW **one (1) year** limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.

FIFTY (50) YEAR STRUCTURAL INTEGRITY
The Pierce custom chassis frame and crossmembers limited warranty certificate, WA0038, is included with this proposal.

FRONT AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY
A Meritor™ Axle 5 year limited warranty will be provided.

SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY
A Meritor™ Axle 5 year limited warranty will be provided.

ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY
A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.

TEN (10) YEAR STRUCTURAL INTEGRITY
The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.

TEN (10) YEAR PRO-RATED PAINT AND CORROSION
A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.

FIVE (5) YEAR MATERIAL AND WORKMANSHIP
The Pierce Command Zone electronics limited warranty certificate, WA0014, is included with this proposal.

CAMERA SYSTEM WARRANTY
A Pierce fifty four (54) month warranty will be provided for the camera system.

COMPARTMENT LIGHT WARRANTY
The compartment lights will not offer an extended warranty.

TRANSMISSION WARRANTY
The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission.

Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.

TRANSMISSION COOLER WARRANTY
The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed $10,000 per occurrence. A copy of the warranty certificate will be submitted with the bid package.

WATER TANK WARRANTY
A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.

TEN (10) YEAR STRUCTURAL INTEGRITY
The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.

ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY
An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of **ten (10) years**. A **five (5) year** limited warranty will be provided on painted roll up doors.

The limited warranty certificate, WA0185, is included with this proposal.

PUMP WARRANTY
The Waterous pump will be provided with a Seven (7) year material and workmanship limited warranty.

A copy of the warranty certificate will be submitted with the bid package (no exception).

TEN (10) YEAR PUMP PLUMBING WARRANTY
The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.

TEN (10) YEAR PRO-RATED PAINT AND CORROSION
A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.

ONE (1) YEAR MATERIAL AND WORKMANSHIP
The Pierce graphics fading and deterioration limited warranty limited warranty certificate, WA0168, is included with this proposal.

VEHICLE STABILITY CERTIFICATION
The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification will be provided at the time of bid.

ENGINE INSTALLATION CERTIFICATION
The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of delivery.

POWER STEERING CERTIFICATION
The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification will be provided at the time of bid.

CAB INTEGRITY CERTIFICATION
The fire apparatus manufacturer will provide a cab integrity certification with this proposal. The certification will state that the cab has been tested and certified by an independent third-party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state-licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below:

- European Occupant Protection Standard ECE Regulation No.29.
- SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.
- SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.

Roof Crush
The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria and is equivalent to the front axle rating up to a maximum of 10 metric tons.

Additional Roof Crush
The same cab will be subjected to a roof crush force of 100,000 lbs. This value exceeds the ECE 29 criteria by nearly 4.5 times.

Side Impact
The same cab will be subjected to dynamic preload where a 13,275 lb moving barrier slams into the side of the cab at 5.5 mph at a force of 13,000 ft-lbs. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident.

Frontal Impact
The same cab will withstand a frontal impact of 32,600 ft-lbs of force using a moving barrier in accordance with SAE J2420.

Additional Frontal Impact
The same cab will withstand a frontal impact of 65,200 ft-lbs of force using a moving barrier, (twice the force required by SAE J2420).

The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.

CAB DOOR DURABILITY CERTIFICATION
Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.

WINDSHIELD WIPER DURABILITY CERTIFICATION
Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 *Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles.* The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.

ELECTRIC WINDOW DURABILITY CERTIFICATION
Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.

SEAT BELT ANCHOR STRENGTH
Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.

SEAT MOUNTING STRENGTH
Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.

PERFORMANCE CERTIFICATIONS

Cab Air Conditioning
Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from

a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria.

Cab Defroster

Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.

Cab Auxiliary Heater

Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.

AMP DRAW REPORT

The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

The manufacturer of the apparatus will provide the following:

- Documentation of the electrical system performance tests.
- A written load analysis, which will include the following:
  - The nameplate rating of the alternator.
  - The alternator rating under the conditions specified per:
    - Applicable NFPA 1901 or 1906 (Current Edition).
  - The minimum continuous load of each component that is specified per:
    - Applicable NFPA 1901 or 1906 (Current Edition).
  - Additional loads that, when added to the minimum continuous load, determine the total connected load.
  - Each individual intermittent load.

All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).

SECTION 4

EXCEPTIONS REMARKS AND CLARIFICATIONS

PADUCAH FIRE DEPARTMENT

PIERCE PROPOSAL ----- All items contained in this proposal are subject to a final engineering review after contract acceptance and any issues due to the configuration that may have any effect on the building of the apparatus per our proposal may have to be reviewed and possibly changed per an agreement between the customer and Pierce Manufacturing.

The apparatus proposed will be constructed per the Pierce proposal provided.

WARRANTY ----- Apparatus warranty and service is provided by our fleet of traveling mechanics repairing the apparatus at Fire Department Headquarters and by our regional service centers located in McConnelsville, Ohio, and Lexington, Kentucky.

DELIVERY - TRAINING - SERVICE ----- Delivery of the completed apparatus will be made to The Paducah Fire Department, Paducah, KY.

A full in-service and training program will be provided to the fire department upon delivery of the completed apparatus. Training will include chassis and cab orientation, body orientation, pump operations, manuals, and warranty.

Further Training will be provided per Bid Spec page 93 for Service Classes for 2 personnel.

FACTORY TRIPS ----- A total of three factory trips are provided in our proposal per the following:

1. Pre-Construction (drawing approval) for a four (3) people.
2. Mid-Point Construction for four (3) people.
3. Final Inspection (RFP) for four (4) people.

These trips include meals, lodging, and transportation.

PREPAY OPTIONS ----- If The Paducah Fire Department desires to make a pre-payment towards the total price of the apparatus; Pierce Manufacturing Inc. will discount the price of the apparatus a total of ($19,200.00).

FINAL PAYMENT ----- The Pierce proposal is contingent upon The Paducah Fire Department paying the balance due on the apparatus upon delivery of the completed apparatus. If the payments herein stated are not acceptable; the sum of --- $ 100.00 per day must be added to the total invoice. It is to be understood that payment under no circumstances will be later than 10 days from said invoice. It is to be understood that for any miscellaneous equipment shortage, payment may be withheld until said equipment is received by The Paducah Fire Department. If a Lease Purchase or deferred payment plan is being utilized, all documents must be complete and credit approval obtained 60 days prior to delivery.

TAXES
"Any taxes imposed by the City, Village, County, State or Federal governments are not the responsibility of Finley Fire Equipment Co. Inc. If there are any taxes or fees levied, they will be invoiced to the purchaser in their entirety".

FINANCING ----- Apparatus financing may be provided upon request; Pierce Financial Solutions and Republic First National are available.

EXCEPTIONS----

1) No storage cabinet will be provided behind the Cab. This is an option on Aerials.

CLARIFICATIONS

1)The Ridgid Lightbar requested will be provided, not the HiViz Bar
2) The correct Rear Outlets will be provided

(+) Mechanics Training is included in our proposal.

SECTION 5

Fire and Rescue Apparatus

Ten (10) Year Structural Integrity
Custom Cab
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**The Pierce Custom Cab shall be free from structural failures caused by defects in material and workmanship**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years - or - 100,000 Miles**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty applies only to the cab tubular support and mounting structures and other structural components of the cab of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus.** **This warranty does not apply to damage caused by corrosion.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

One (1) Year Material and Workmanship
Basic Apparatus
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Portions of the apparatus manufactured by Pierce shall be free from defects in material and workmanship**
Warranty Begins:	**The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.**
Warranty Period Ends After:	**Twelve (12) months.**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**No specific exclusions apply**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

Five (5) Year Material and Workmanship
Command Zone Electronics
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Command Zone control modules shall be free from failures caused by defects in material and workmanship**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Five (5) Years**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty applies to all of the control modules for the Command Zone system, including the full color graphic displays. Related wire harnesses, cables and connectors are not covered under this limited warranty and are instead covered under the Pierce One Year Basic Apparatus Limited Warranty.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

One (1) Year Material and Workmanship
Graphics Fading and Deterioration

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Each graphic lamination shall be free from defects in material, workmanship, fading, and deterioration.**
Warranty Begins:	**The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.**
Warranty Period Ends After:	**One (1) Year**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty does not cover damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

Lifetime Fifty (50) Year Structural Integrity
Chassis Frame & Crossmembers

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Custom chassis frame rail and cross members manufactured by Pierce shall be free from defects in material and workmanship**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Fifty (50) Years (Expected Life of Apparatus)**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty does not apply to damage caused by corrosion.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion Cab

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Exterior surfaces of the cab painted by Pierce shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years**
Conditions and Exclusions: See Also Paragraphs 2 thru 4	**This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:** **Topcoat Durability & Appearance: Gloss, Color Retention & Cracking** **0-72 months 100%** **73-96 months 50%** **97-120 months 25%** **Integrity of Coating System: Adhesion, Blistering/Bubbling** **0-36 months 100%** **37-84 months 50%** **85-120 months 25%** **Corrosion: Dissimilar Metal and Crevice** **0-36 months 100%** **37-48 months 50%** **49-72 months 25%** **73-120 months 10%** **Corrosion Perforation** **0-120 months 100%** **This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.** **Items not covered by this warranty include:** **(a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).** **(b) UV paint fade.** **(c) Any cab not manufactured by Pierce.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion Custom Body

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Exterior surfaces of the body shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:** **Topcoat Durability & Appearance: Gloss, Color Retention & Cracking** **0-72 months 100%** **73-96 months 50%** **97-120 months 25%** **Integrity of Coating System: Adhesion, Blistering/Bubbling** **0-36 months 100%** **37-84 months 50%** **85-120 months 25%** **Corrosion: Dissimilar Metal and Crevice** **0-36 months 100%** **37-48 months 50%** **49-72 months 25%** **73-120 months 10%** **Corrosion Perforation** **0-120 months 100%** **This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.** **Items not covered by this warranty include:** **(a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).** **(b) UV paint fade.** **(c) Any cab not manufactured by Pierce.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

Ten (10) Year Structural Integrity
Apparatus Body
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**The apparatus body shall be free from structural failures caused by defects in material and workmanship**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years** **- or -** **100,000 Miles**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This warranty applies only to the body tubular support and mounting structures and other structural components of the body of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus.** **This warranty does not apply to damage caused by corrosion.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

Three (3) Year Material and Workmanship
Velocity and Impel Custom Chassis

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Portions of the apparatus manufactured by Pierce shall be free from defects in material and workmanship**
Warranty Begins:	**The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.**
Warranty Period Ends After:	**Three (3) Years, or 30,000 Miles, or 5000 Engine Hours**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty applies, where applicable, to Goldstar lamination, defroster heater coil and motor blower assembly (excluding the FET PWM module), heater, air conditioning condenser coil and fan/motor assembly, air conditioning evaporator coil and motor blower assembly (excluding the drain pan pump and thermostat), under seat heaters coil and motor blower assembly (excluding the FET PWM module), HVAC electronic switches, HVAC hoses and hard lines, heater water valve, Pierce PS6 seat frames and hardware, Pierce One-Eleven mirrors, Pierce hands-free scba holder, cracking or color loss of roto-molded components, Meritor rear axle, Wabco ABS system, cab door handles, Standen spring suspension components, and the gauge instrument cluster.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal for the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

Ten (10) Year Material and Workmanship
Stainless Steel Piping
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**Stainless steel piping shall be free from structural failures caused by defects in material and workmanship, or perforation caused by corrosion.**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Ten (10) Years - or - 100,000 Miles**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**Pierce's obligation under this warranty is limited to repairing or replacing without charge, as Pierce may elect, the stainless steel piping or components which Pierce determines to have failed due to defective material and workmanship, or perforation caused by corrosion.** **This warranty does not cover the use of fluoroprotein (FP) type foam. The sodium chloride within FP foam can cause long-term damage to system components if not thoroughly flushed immediately after use.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

Three (3) Year Material and Workmanship
Meritor Wabco ABS Brake System
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The Meritor Wabco ABS brake system shall be covered by Meritor Wabco as indicated in the attached Meritor Wabco warranty coverage description
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Three (3) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	The exclusions listed in the attached Meritor Wabco warranty description shall apply.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators with respect to all such parts, components, attachments and accessories. Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

Five (5) Year Material and Workmanship - Transmission Oil Cooler
Three (3) Year Collateral Damage Coverage

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**The transmission cooler shall be free from component or structural failures caused by defects in material and/or workmanship. Collateral damage up to $10,000 per occurrence is available for the first three (3) years.**
Warranty Begins:	**The date of delivery to the first retail purchaser.**
Warranty Period Ends After:	**Five (5) Years on Oil Cooler and three (3) years on collateral damage coverage**
Conditions and Exclusions: **See Also Paragraphs** 2 thru 4	**This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.** **This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.** **Towing is covered to the nearest distributor or authorized dealer only when necessary to prevent further damage to your transmission.** **Labor costs for the removal and reinstallation of goods may be covered when necessary to make repairs. Please contact your OEM for authorization.** **Replacement of cooler during the warranty period is limited to 100% of reasonable labor costs up to a maximum of $700 to remove, replace, or repair the oil cooler.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Fire and Rescue Apparatus

54 Months Material and Workmanship
Camera System
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	**This limited warranty covers repairs to correct any defect related to materials or workmanship of the Sharpvision camera system installed on the apparatus occuring during the warranty period.**
Warranty Begins:	**The date of delivery.**
Warranty Period Ends After:	**Fifty - Four (54) months**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**This limited warranty does not apply to related wire harnesses, cables, and connectors, which are covered by the Pierce one (1) year basic apparatus limited warranty.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Warranty / Terms of Business - AMDOR

WARRANTY INFORMATION / TERMS OF BUSINESS

AMDOR® Roll-Up Doors

All AMDOR Inc. roll-up door products are warranted for a period of 36 months from the date of delivery (with the exception of wet paint adhesion - please see below). AMDOR Inc. liability covers the replacement or repair of any component that fails due to defects in material and / or workmanship during the coverage period. We accept no liability for claims made for damages to any part (or parts) of a vehicle and / or machine (of any type) or injury claims by a person or persons assumed or alleged to have been brought about by the use or misuse of any product supplied by AMDOR Inc. Warranty coverage does not extend to door attachments including (but not limited to) decals, emblems, stripes and adhesives.

In order to initiate the claims process please contact your authorized representative of AMDOR Inc.

Warranty claims must be accompanied by a written description providing full and reasonable details as to the nature of the defect. Upon receipt of your claim arrangements will be made to inspect the defective product (if necessary). Justified warranty claims will be repaired, exchanged, or credited to the customer's account at AMDOR Inc.'s discretion. All warranty claims must be approved in writing by the Customer Service Manager for AMDOR Inc. There are no exceptions to this clause.

Limited warranty coverage includes the labor associated with the disassembly and assembly of products deemed to be defective by AMDOR Inc. Labor allowances are based on a set time schedule as determined by AMDOR Inc. The maximum allowable hourly labor rate is $65. All warranty labor claims must be approved in writing by an authorized representative of AMDOR Inc. prior to commencement of work.

Allowances for removal and installation:
Curtain replacement: 3/4 hour
Balancer replacement: 1 hour
Door ajar switch 3/4 hour
Bottom Panel Assembly: 1/2 hour
Slat replacement: 3/4 hour
Door removal and replacement 1 1/2 hours

Items authorized for return must be accompanied by a Return Goods Authorization (RGA) number. We will accept collect shipments of items deemed to be defective provided that they are returned via the most economical carrier. Should items be returned by means other than the most economical carrier the difference will be charged back to the sender.

AMDOR Inc. reserves the right to reject any claim when a product has been opened, interfered with, or modified. Claims may also be rejected when damage to the product (or any sub-assembly) has been brought about by accident, misuse, abuse, vandalism, incorrect installation, temperature extremes, chemical exposure, or any factor other than regular operating conditions. Proper cleaning and maintenance are important to the operation of your roll-up door. Warranty will be deemed null and void in the event that proper cleaning and maintenance procedures are not adhered to as outlined in the document posted on the AMDOR web site titled Maintenance – AMDOR.

Pierce

Fire and Rescue Apparatus

[redacted]

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

Coverage:	The Meritor axle shall be covered by Meritor as indicated in the attached Meritor warranty coverage description
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Five (5) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	The exclusions listed in the attached Meritor warranty description shall apply.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators, with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

Pierce

Fire and Rescue Apparatus

[redacted]

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

Coverage:	**The Meritor axle shall be covered by Meritor as indicated in the attached Meritor warranty coverage description**
Warranty Begins:	**The date of the original purchase invoice (issued when the product ships from the factory).**
Warranty Period Ends After:	**Five (5) Years**
Conditions and Exclusions: **See Also Paragraphs 2 thru 4**	**The exclusions listed in the attached Meritor warranty description shall apply.**

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

NEW PRODUCT WARRANTY

Allison Transmission.

PARTICIPATING OEM SALES
DISTRIBUTOR SALES

LIMITED WARRANTY ON NEW ALLISON AUTOMATIC TRANSMISSIONS USED IN EMERGENCY VEHICLE APPLICATIONS

Allison Transmission will provide for repairs or replacement, at its option, during the warranty period of each new Allison transmission listed below that is installed in an Emergency Vehicle in accordance with the following terms, conditions, and limitations.

WHAT IS COVERED

- **WARRANTY APPLIES —** This warranty is for new Allison transmission models listed below installed in an Emergency Vehicle and is provided to the original and any subsequent owner(s) of the vehicle during the warranty period.
- **REPAIRS COVERED —** The warranty covers repairs or replacement, at Allison Transmission's option, to correct any transmission malfunction resulting from defects in material or workmanship occurring during the warranty period. Needed repairs or replacements will be performed using the method Allison Transmission determines most appropriate under the circumstances.
- **TOWING** — Towing is covered to the nearest Allison Transmission Distributor or authorized Dealer only when necessary to prevent further damage to your transmission.
- **PAYMENT TERMS** — Warranty repairs, including parts and labor, will be covered per the schedule shown in the chart contained in section "APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE."
- **OBTAINING REPAIRS** — To obtain warranty repairs, take the vehicle to any Allison Transmission Distributor or authorized Dealer within a reasonable amount of time and request the needed repairs. A reasonable amount of time must be allowed for the Distributor or Dealer to perform necessary repairs.
- **TRANSMISSION REMOVAL AND REINSTALLATION —** Labor costs for the removal and re-installation of the transmission, when necessary to make a warranty repair, are covered by this warranty.
- **WARRANTY PERIOD** — The warranty period for all coverages shall begin on the date the transmission is delivered to the first retail purchaser, with the following exception:

  Demonstration Service - A transmission in a new truck or bus may be demonstrated to a total of 5000 miles (8000 kilometers). If the vehicle is within this limit when sold to a retail purchaser, the warranty start date is the date of purchase. Normal warranty services are applicable to the demonstrating Dealer. Should the truck or bus be sold to a retail purchaser after these limits are reached, the warranty period will begin on the date the vehicle was first placed in demonstration service and the purchaser will be entitled to the remaining warranty.

APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE

APPLICABLE MODELS	WARRANTY LIMITATIONS (Whichever occurs first)		ADJUSTMENT CHARGE TO BE PAID BY THE CUSTOMER	
	Months	Transmission Miles Or Kilometers	Parts	Labor
MT, MD 3000, 3200, 3500, 3700	0–24	No Limit	No Charge	No Charge
HT with Hydraulic Controls	0–24	No Limit	No Charge	No Charge
AT, 1000 Series™, 2000 Series™, 2400 Series™	0–36	No Limit	No Charge	No Charge
HT with Electronic Controls	0–60	No Limit	No Charge	No Charge
HD 1000 EVS, 2100 EVS, 2200 EVS 2350 EVS, 2500 EVS, 2550 EVS, 3000 EVS, 3500 EVS, 4000, 4000 EVS, 4500, 4500 EVS, 4700, 4700 EVS, 4800, 4800 EVS	0–60	No Limit	No Charge	No Charge

WHAT IS NOT COVERED

- **DAMAGE DUE TO ACCIDENT, MISUSE, or ALTERATION** — Defects and damage caused as the result of any of the following are not covered:
  - — Flood, collision, fire, theft, freezing, vandalism, riot, explosion, or objects striking the vehicle;
  - — Misuse of the vehicle;
  - — Installation into unapproved applications and installations;
  - — Alterations or modification of the transmission or the vehicle, and
  - – Damage resulting from improper storage (refer to long-term storage procedure outlined in the applicable Allison Service Manual)
  - — Anything other than defects in Allison Transmission material or workmanship

  NOTE: This warranty is void on transmissions used in vehicles currently or previously titled as salvaged, scrapped, junked, or totaled.
- **CHASSIS, BODY, and COMPONENTS** — The chassis and body company (assemblers) and other component and equipment manufacturers are solely responsible for warranties on the chassis, body, component(s), and equipment they provide. Any transmission repair caused by an alteration(s) made to the Allison transmission or the vehicle which allows the transmission to be installed or operated outside of the limits defined in the appropriate Allison Installation Guideline is solely the responsibility of the entity making the alteration(s).
- **DAMAGE CAUSED by LACK of MAINTENANCE or by the USE of TRANSMISSION FLUIDS NOT RECOMMENDED in the OPERATOR'S MANUAL** — Defects and damage caused by any of the following are not covered:
  - — Failure to follow the recommendations of the maintenance schedule intervals applicable to the transmission;
  - — Failure to use transmission fluids or maintain transmission fluid levels recommended in the Operator's Manual.
- **MAINTENANCE** — Normal maintenance (such as replacement of filters, screens, and transmission fluid) is not covered and is the owner's responsibility.
- **REPAIRS by UNAUTHORIZED DEALERS** — Defects and damage caused by a service outlet that is not an authorized Allison Transmission Distributor or Dealer are not covered.
- **USE of OTHER THAN GENUINE ALLISON TRANSMISSION PARTS** — Defects and damage caused by the use of parts that are not genuine Allison Transmission parts are not covered.
- **EXTRA EXPENSES** — Economic loss and extra expenses are not covered. Examples include but are not limited to: loss of vehicle use; inconvenience; storage; payment for loss of time or pay; vehicle rental expense; lodging; meals; or other travel costs.
- **"DENIED PARTY" OWNERSHIP** — Warranty repair parts and labor costs are not reimbursed to any participating or non-participating OEMs, dealers or distributors who perform warranty work for, or on behalf of, end users identified by the United States as being a "denied party" or who are citizens of sanctioned or embargoed countries as defined by the U.S. Department of Treasury Office of Foreign Assets Control. Furthermore, warranty reimbursements are not guaranteed if the reimbursement would be contrary to any United States export control laws or regulations as defined by the U.S. Department of Commerce, the U.S. Department of State, or the U.S. Department of Treasury.

OTHER TERMS APPLICABLE TO CONSUMERS AS DEFINED by the MAGNUSON-MOSS WARRANTY ACT

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Allison Transmission does not authorize any person to create for it any other obligation or liability in connection with these transmissions. **ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THESE TRANSMISSIONS IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. PERFORMANCE OF REPAIRS AND NEEDED ADJUSTMENTS IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (SUCH AS, BUT NOT LIMITED TO, LOST WAGES OR VEHICLE RENTAL EXPENSES) RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.****

** Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

OTHER TERMS APPLICABLE TO OTHER END-USERS

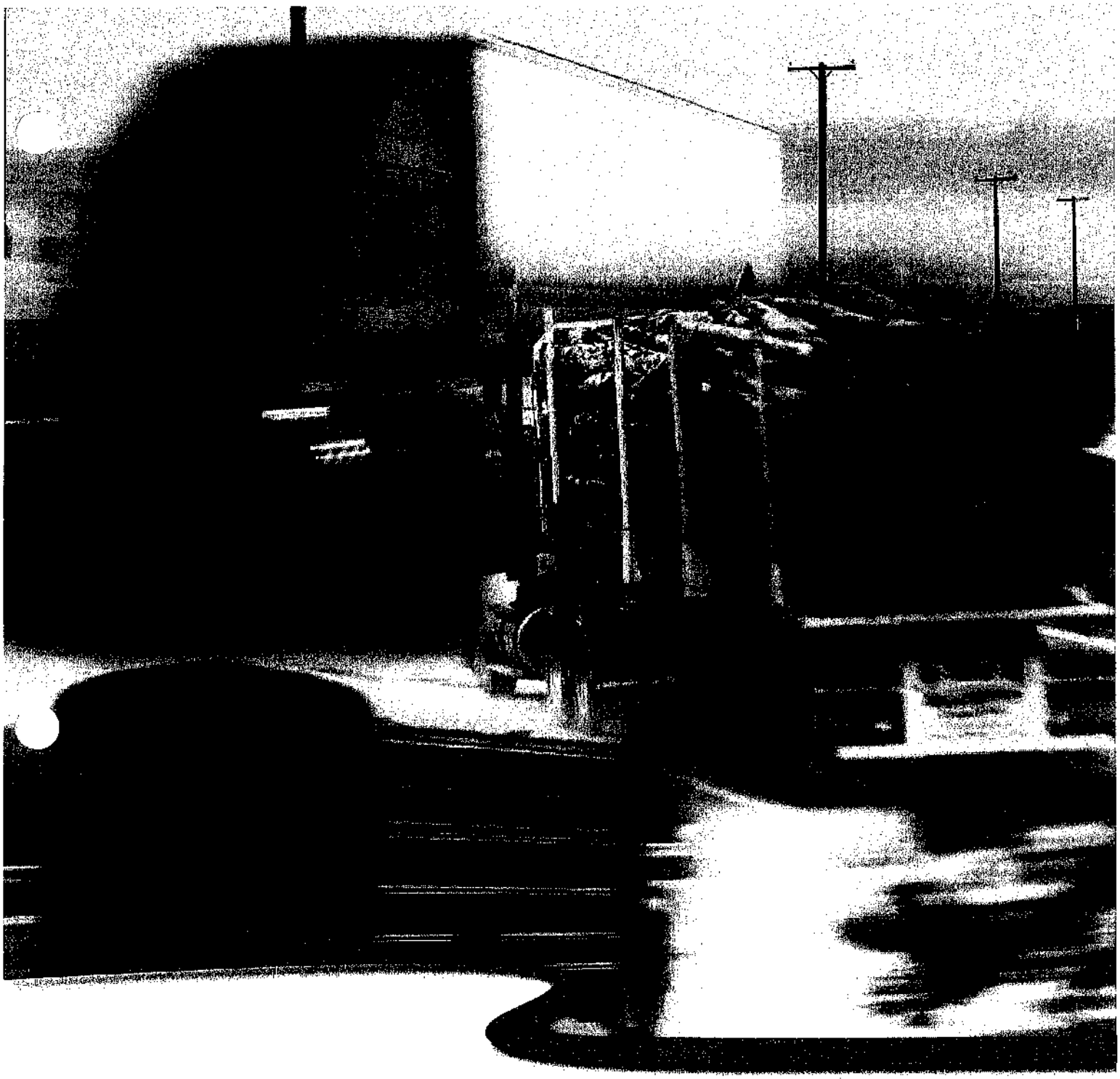
THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE ALLISON TRANSMISSION MODELS LISTED ABOVE AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLISON TRANSMISSION DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH TRANSMISSIONS. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WARRANTY OR ANY IMPLIED WARRANTY.

QUESTIONS

If you have any questions regarding this warranty or the performance of warranty obligations, you may contact any Allison Transmission Distributor or Dealer or write to:

Allison Transmission, Inc.
P.O. Box 894
Indianapolis, IN 46206-0894
Attention: Warranty Administration PF-9

Form SE0616EN (201009)



MERITOR WABCO

Safety Strong. Efficiency Smart.

Warranty
Model Year 2018 Vehicles

SIMPLER IS BETTER

Warranty coverage is essential to protecting your investment. But understanding the full details of your coverage can be challenging. This straightforward approach allows you, our valued customer, to better understand how your specific vehicle applications will be covered in your region. Our component warranty coverage is provided according to vocation/usage categories listed below.

- Linehaul covers high mileage operation (over 60,000 miles/year) on well maintained major highways of concrete or asphalt construction.
- General Service covers moderate mileage operations (less than 60,000 miles/year) on well maintained public roads (less than 10 percent off-road) typically with less than three (3) stops per mile.
- Heavy Service (Vocational) covers vehicles with more than 10 percent off-road OR moderate to frequent starts/stops typically with more than three (3) stops per mile.
- Off-Highway Service covers lower mileage operations. Vehicles are not typically licensed for highway use.

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How to Read Warranty Coverage (Example)

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor
3	300	P

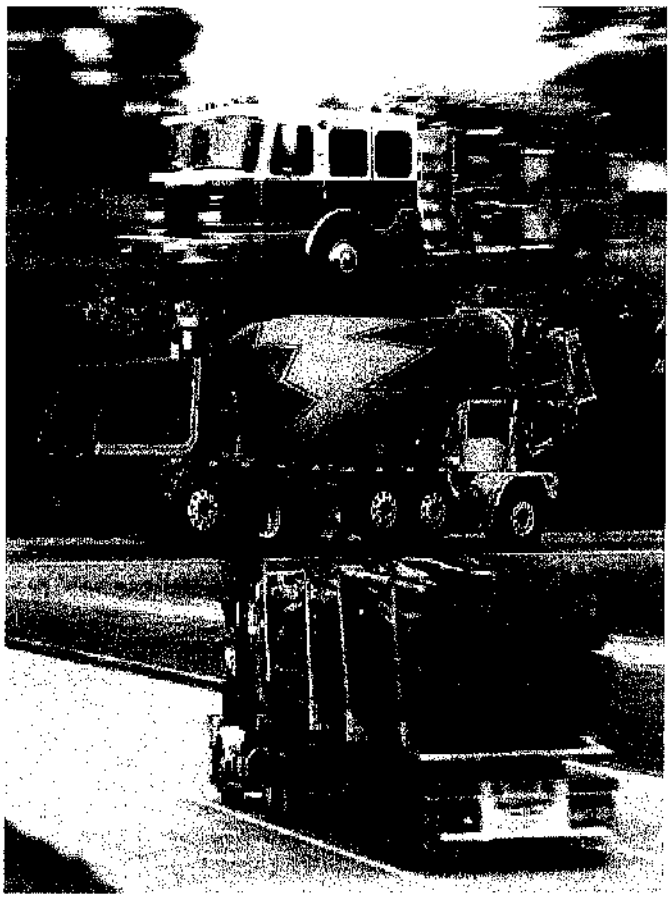
HEAVY SERVICE (VOCATIONAL) WARRANTY INFORMATION

Heavy Service Vehicles

- Airport Rescue Fire (ARF)
- Airport Shuttle
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- City Bus
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Crash Fire Rescue (CFR)
- Mixer
- Demolition
- Drill Rig
- Dump
- Emergency Service
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Newspaper Delivery
- Package Delivery
- Pick-up and Delivery
- Rapid Intervention Vehicle (RIV)
- Rear Loader
- Recycling Truck
- Residential Pick-Up/Waste
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Transit Bus
- Trolley
- Utility Truck
- Winch Truck

Heavy Service Typically Is

- On/Off road vocations (10% or more off-road) OR
- Moderate to frequent starts/stops typically more than three (3) stops per mile



Meritor WABCO Components[1]

ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	2/200/P&L
Electronic Braking System (EBS)	3/300/P&L
Electronic Stability Control (ESC)	3/300/P&L
Roll Stability Control (RSC)	3/300/P&L
Air Dryers (ALL)	1/100/P&L
Leveling Valves	1/100/P&L
Air Brake Valves	1/100/P&L
Emission Valves (SCR)	2/200/P&L
Clutch Controls	2/200/P&L
Air Compressors (ALL)[2]	1/100/P&L
OnGuard™	3/300/P&L
OnGuardACTIVE™	3/300/P&L
OnLane™ Lane Departure Warning	3/300/P&L
Blind Spot Detection	3/300/P&L
OptiRide™	2/200/P&L
Trailer Roll Stability Support (RSS)	3/300/P&L
Trailer Control Line Filter[3]	1/100/P&L
Trailer ABS Valve[3]	3/300/P&L

[1] WABCO and Meritor WABCO branded components.
[2] WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by Meritor WABCO. Please contact your respective dealer/distributor of those engines for warranty and servicing.
[3] An extended warranty of 4/400/P will be applied when a Meritor WABCO Trailer Control Line Filter is used in combination with a Meritor WABCO Trailer ABS valve.

TERMS AND CONDITIONS

Coverage Exclusions

Product Description

All

The cost of any repairs, replacements or adjustments to a covered product due to the following: (1) damage to the product or its component parts caused by incorrect use, installation, maintenance or repair, including without limitation (a) improper fit of mating components or brackets, (b) damaged threads, (c) cut, broken, chafed, pinched or otherwise damaged wiring (sensors, harnesses and connectors), (d) damaged sensors from removal when seized in block, or associated with sensor adjustments/ alignments, and (e) damage resulting from the use or installation of non-genuine Meritor WABCO components or materials; (2) damage to the product, its component parts, or diminished product or component part performance due to incorrect operation, deviation from approved conditions or misapplication; (3) any unauthorized disassembly of the product or its component parts including without limitation (a) obliterated, defaced or missing WABCO or Meritor WABCO name plate, serial numbers or label identifying the device as a Meritor WABCO product or WABCO component, (b) changes to sealed adjusting screws, and (c) opening or attempted repair of non-serviceable components; (4) malfunction of the component due to internal contamination out of the vehicle system including without limitation (a) water and other contamination damage that is due to the use of a non-genuine air dryer cartridge or (b) valve failures due to contamination in air system, (5) complaints associated with noise, (6) damage resulting from corrosion (including oxidation of electrical devices and connections).

Air Dryers

Mounting brackets (see vehicle OEM). Desiccant cartridge housing only.

Air System Components

Normal wear items; Gladhand seals, dash valve knobs, valve actuation handles, treadles, pedals.

ABS, Electronic Stability Control (ESC), Roll Stability Control (RSC), OptiRide™, OnGuard™ and OnLane™, collectively "Electronics"

Failure of electronic components due to overvoltage condition, improper grounding, electrostatic discharge (ESD), improper shielding, electromagnetic interference (EMI), or other wiring or installation issues.

Malfunctions and failure codes caused by other electronic subsystem failures (data bus, engine, transmission, dashboard, etc.)

Hydraulic Components

For certain components, brake fluid DOT3 or DOT4 is used as the operating medium. Use of any other fluid will void all warranties associated with that component. For hydraulic braking applications the brake fluid is considered a maintenance item. Maintenance intervals are listed in TB-1367.

Coverage Limitations

Product Description

All

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program.

Products purchased on an incomplete vehicle (glider) are limited to one year, 1/Unl/P.

For vehicles that operate full- or part-time outside of the United States and Canada, a 1-Year/Unlimited Miles parts only (1/Unl/P) will apply.

TOOLBOX™ Software

Proper diagnostics of Meritor WABCO Electronics may require the latest version of TOOLBOX™. Additional labor due to use of an outdated version of TOOLBOX™. TOOLBOX™ software, and/or the time to purchase or install latest version of TOOLBOX™ are not covered under product warranty.

TERMS AND CONDITIONS

(1) What Is Covered by this Commercial Warranty?
Meritor WABCO Vehicle Control Systems warrants to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment will be free from defects in material and workmanship. This warranty coverage begins from the original in-service date to the limits provided and runs concurrently with any warranties provided by OEMs and/or any service contracts that cover the components listed in this publication, if any. If the components listed in this publication are covered by an OEM warranty and/or service contract, then the OEM's warranty and/or service contract shall supersede Meritor WABCO's warranty and Owner shall comply with all OEM's warranty and/or service contract requirements for claims under such OEM's warranty and/or service contract until those agreements expire. Once those agreements expire and provided the Meritor WABCO warranty has not expired under the terms stated above, the Meritor WABCO warranty would be in effect until its expiration date.

Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed previously in this publication. Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Additional diagnostic time due to use of an outdated version of TOOLBOX™, time to purchase or install latest version of TOOLBOX™ are the responsibility of the authorized Meritor WABCO service location and are not covered under product warranty. Components installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

(2) Designation of Vocational Use Required.
To obtain warranty coverage, each Owner must notify Meritor WABCO through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Meritor WABCO components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Meritor WABCO directly. Failure to notify Meritor WABCO of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Meritor WABCO as to the intended vocational use of the vehicle. This notification can be sent directly to Meritor WABCO or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Meritor WABCO's warranty requires that the application of products be properly approved pursuant to OEM and Meritor WABCO, approvals.

(3) What is the Cost of this Warranty?
There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty?
In addition to the items listed on page 7, this warranty does not cover normal wear and tear, or service items; nor does it cover a component that fails, malfunctions or is damaged as a result of (a) improper handling, storage, installation, adjustment, repair or modification including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by Meritor WABCO, (b) accident, fire or other casualty, natural disaster, road debris, negligence, misuse, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the brake system capacity), or (c) improper or insufficient maintenance (including deviation from maintenance intervals, approved lubricants, or lube levels). This warranty does not cover any component or part that is not sold by Meritor WABCO.

(5) Remedy.
The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Meritor WABCO's option. Meritor WABCO reserves the right to require that all applicable covered components are available and/or returned to Meritor WABCO for review and evaluation.

(6) DISCLAIMER OF WARRANTY.
THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. SOME STATES LIMIT OR DO NOT ALLOW THE DISCLAIMER OF IMPLIED OR OTHER WARRANTIES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO THE EXTENT SUCH STATE'S LAW IS APPLICABLE TO THESE TERMS.

(7) LIMITATION OF REMEDIES.
IN NO EVENT SHALL MERITOR WABCO BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES OF ANY KIND OR UNDER ANY LEGAL THEORY, INCLUDING, BUT NOT LIMITED TO, TOWING, DOWNTIME, LOST PRODUCTIVITY, CARGO DAMAGE, TAXES, LOST PROFITS, COSTS OF PROCUREMENT OF A SUBSTITUTE COMPONENT OR ANY OTHER LOSSES OR COSTS RESULTING FROM A COVERED COMPONENT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO THE EXTENT SUCH STATE'S LAW IS APPLICABLE TO THESE TERMS.

(8) TIME LIMIT ON COMMENCING LEGAL ACTION.
ANY LEGAL ACTION OR CLAIM ARISING FROM OR RELATED TO THIS WARRANTY, IN CONTRACT OR OTHERWISE, MUST BE COMMENCED WITHIN ONE YEAR FROM THE ACCRUAL OF THAT CAUSE OF ACTION, OR BE BARRED FOREVER.

(9) To Obtain Service.
If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Meritor WABCO or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Meritor WABCO service location. The dealer will inspect the vehicle and contact Meritor WABCO for an evaluation of the claim. When authorized by Meritor WABCO, the dealer will repair or replace during the term of this warranty any defective Meritor WABCO component covered by this warranty.

(10) Entire Agreement.
This is the entire agreement between Meritor WABCO and the Owner about warranty and no Meritor, Meritor WABCO employee, or dealer is authorized to make any additional warranty on behalf of Meritor WABCO unless in writing and signed by an authorized representative of Meritor WABCO.



For more information on
Meritor WABCO Warranty, call
our OnTrac Customer Service team
at 866-OnTrac1 (866-668-7221)
or visit meritorwabco.com.

Litho in USA. Revised 06/17.
SP-1375 (4/865/11900)
Meritor WABCO Vehicle Control Systems
2135 West Maple Road, Troy, Michigan 48084, USA
Phone: 866-ONTRAC1 (866-668-7221) Fax: 248-435-8002

meritorwabco.com

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Meritor WABCO Vehicle Control Systems is a
joint venture of Meritor™ and WABCO

TRW COMMERCIAL STEERING SYSTEMS
800 HEATH STREET
LAFAYETTE, INDIANA 47904

PRODUCT WARRANTY

I. **WARRANTY**: The Commercial Steering Systems group of TRW, Inc., hereinafter referred to as "CSS", warrants that each new product supplied by CSS to its customer, when properly installed, used and maintained, shall be free from defect in material and workmanship for the period specified below:

(A) CSS Product installed in **New On-highway Motor Vehicle**:

Within twelve (12) months after date of delivery of such vehicle to the original retail purchaser, or before such vehicle has been driven one hundred thousand (100,000) miles, whichever event shall first occur.

(B) CSS Product installed in **New Agricultural, Turf, Industrial, or Construction Vehicles and Related Equipment**:

Within twelve (12) months after date of delivery of such vehicle/equipment to the original retail purchaser or before such vehicle/equipment has been operated for two thousand (2000) hours or fifty thousand (50,000) miles, whichever occurs first.

(C) CSS Product installed in **New End Product, Not Specifically Mentioned in Classifications (A) or (B) Above and All Other Off-Highway/Severe Applications**:
Within six (6) months after date of delivery of the original equipment manufacturer's end product to the original retail purchaser.

II. **REMEDY**: Customer's sole remedy under the foregoing warranty is limited to correction by means of repair, replacement or issuance of credit, at the option of CSS, of any product which is:

(A) Returned to CSS within the specified warranty time period, with prior notice to, and the written consent of, CSS, with transportation and handling charges prepaid, together with a statement describing the alleged defect, the part number, model number and application, and mileage or hours of use of such product; and

(B) Upon examination, determined by CSS not to conform to the warranty.

III. Any product which is repaired or replaced under this warranty will be returned to customer prepaid. Disposition of any product determined not to be covered by this warranty will be at the customer's expense.

IV. CSS will not be liable for any repairs, replacements, or adjustments to any product or any cost of labor performed by or at the request of customer without the express prior written consent of CSS.

V. **EXCEPTIONS**: The provision of this warranty shall not apply to any CSS product which is used for a purpose for which it is not designed, or which shall have been repaired or altered in any way, or which has been subject to misuse, negligence or accident, neglect of normal maintenance services, so as, in the judgement of CSS to adversely affect its performance and reliability. In no case will the CSS warranty exceed the standard published warranty of its customer in terms of time and/or distance. In all events, the CSS warranty will expire thirty (30) months after the date of manufacture as stamped on the Product. In the case of hydraulic equipment, operation with unapproved fluid or temperatures voids this warranty.

VI. **EXCLUSION OF ALL OTHER REMEDIES AND LIMITATION OF LIABILITY**: Customer's sole and exclusive remedy under the foregoing warranty shall be for the repair, replacement or issuance of credit with respect to a defective product, as set forth and described above. Other provisions hereof notwithstanding, CSS shall not be liable to Customer, or any successor in interest, beneficiary or assignee of Customer, based upon any claim against CSS, whether in contract, warranty, negligence, strict liability, indemnity or otherwise, for any special, consequential, incidental or other damages relating in any way to the design, manufacture, sale, installation or other use of any product purchased from CSS.

VII. **EXCLUSION OF ALL OTHER WARRANTIES: THE FOREGOING WARRANTY IS THE EXCLUSIVE WARRANTY BY CSS AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES AND REPRESENTATIONS, WHETHER ORAL, WRITTEN, EXPRESSED, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTIBILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

Effective 1 August, 2009

UNITED PLASTIC FABRICATING, INC.

WARRANTY

FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™

LIFETIME SERVICE WARRANTY

United Plastic Fabricating, Inc. (hereinafter called "UPF") warrants each POLY-TANK®, Booster/Foam Tank POLYSIDE® Wetside Tank, Integrator Tank/Body, ELLIPSE™ Elliptical Tank, Ellip-T-Tank Tank and DEFENDER™ Skid Tank to be free from defects in material and workmanship for the service life of the original vehicle (vehicle must be actively used in an emergency response for fire suppression). All UPF Tanks must be installed and operated in accordance with the UPF Installation and Operating Guidelines. Failure to do so can void the warranty.

Every UPF Tank is inspected and tested before leaving our facility. Should your UPF Tank require service, please notify UPF via email, fax, in writing or by calling UPF at 1-978-975-4520. Please provide the serial number, a description of the service request, the location along with the phone number and name of the contact person. Our goal is to have scheduled work completed within a reasonable time period.

Under a valid warranty claim, UPF will cover the cost to repair the UPF Tank including the customary and reasonable costs to make the tank accessible such as the removal and reinstallation of the tank if authorized in advance (pre-approved) by UPF. The warranty will not cover tanks that have been improperly installed, operated, misused, abused, or modified from its intended or designed use. Serial number must not have been altered, defaced or removed. Tanks that are not stored or installed properly which results in the tank suffering UV damage will not be covered by this agreement.

Should UPF determine that the service claim is valid under this warranty for a tank located outside of the United States and Canada, UPF will assume the costs for labor and material for the warranty repair as described above plus all travel costs to the U.S. port of embarkation. Costs for airline travel outside of the U.S. and Canada will not be the responsibility of UPF.

In the event the tank shall become stationed in an area of the world that is considered to be a war zone or where unsafe conditions exist for the safe passage of United States Nationals, as reported by the United States Department of State, (http://www.state.gov), and a request to perform service or warranty repairs, UPF reserves the right to refuse to honor such requests. It is the purchaser's responsibility to relocate the tank to an area where such repairs can be performed without undue risk to UPF employees or their designee. UPF will make every reasonable effort to support our products though alternative means.

For Ellipse™ elliptical tanks, a separate five year warranty provided by the subcontractor is applied to the sub-frames, chute linings (rubber isolation strips) and metal components. The stainless steel wrap provided by UPF shall be warranted by the subcontractor performing the wrap installation in accordance with their warranty in place at the time of the installation. UPF will not be liable for any warranty costs associated with the wrap, sub-frames, chute linings (rubber isolation strips) and metal components but will assist with all claims on behalf of its customer.

For PolySide® wetsided tanks and Integrator™ Tank/Body units, all polypropylene components related to the tank shall carry the standard UPF lifetime

Continued on back

UNITED PLASTIC FABRICATING, INC.

WARRANTY

FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™

service warranty. Other polypropylene components, including but not limited to compartments, wheel wells, fenders and other body related components shall be warranted by UPF for a period of ten years. The warranty for the PolySide® and Integrator™ units excludes paint or hardware, which shall be covered by the manufacturer of the paint/hardware.

All UPF tanks 50 gallons or less utilized for non-fire applications and installed on specialty vehicles such as ATVs, trailers, boats, etc. are covered under a separate warranty policy available from UPF. Further, UPF Protector™ foam and water trailers are warranted under a separate warranty policy available from UPF.

This UPF warranty is transferable within the United States only with prior written approval by UPF (except an original apparatus manufacturer may assign this warranty to the first titled owner/lessee of the apparatus).

UPF will NOT reimburse any unnecessary work and/or work that has not been pre-approved. Any and all third party charges must be pre-authorized and approved in writing by UPF prior to commencing the work. Any unauthorized third party repairs, alterations, actions or modifications will not be covered and can void the warranty. UPF will be the sole determining authority as to whether a service claim will be valid and covered under this warranty.

In no event will UPF be liable for an amount in excess of the purchase price of the booster/foam tank at the time of manufacture or for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of failure of its product. Loss of contents (water, foam, etc.) shall not be the responsibility of UPF. Further, UPF is not responsible for costs associated with service repairs to chassis, sub-frames, bodies, valves, dumps, hoses, pressure vacuum vents, and other components (i.e. liquid level transducers, etc.). Further, UPF will not cover the cost for travel of the vehicle to and from a repair facility.

This warranty contains the entire warranty. It is the sole warranty and price agreements or representation, whether oral or written, are either merged herein or expressly cancelled. UPF neither assumes, nor authorizes any person supposing to act on its behalf to change, nor assume for it, any warranty or liability concerning its product.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow exclusion or limitation or incidental or consequential damage, so the above limitation or exclusion may not apply to you. Since some states do not allow limitations on the length of an implied warranty, the above limitation may not apply to you.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATION OR LIABILITIES ON THE PART OF UPF.

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Effective March 15, 2010

SPECIALTY ROLL-UP DOORS

AMDOR Inc. TERMS OF BUSINESS AND GENERAL INFORMATION

Warranty:

All AMDOR Inc. roll-up door products are warranted for a period of 10 years from the date of delivery (with the exception of wet paint adhesion - please see below). AMDOR Inc. liability covers the replacement or repair of any component that fails due to defects in material and / or workmanship during the coverage period. We accept no liability for claims made for damages to any part (or parts) of a vehicle and / or machine (of any type) or injury claims by a person or persons assumed or alleged to have been brought about by the use or misuse of any product supplied by AMDOR Inc. Warranty coverage does not extend to door attachments including (but not limited to) decals, emblems, stripes and adhesives.

In order to initiate the claims process please contact your authorized representative of AMDOR Inc. Warranty claims must be accompanied by a written description providing full and reasonable details as to the nature of the defect. Upon receipt of your claim arrangements will be made to inspect the defective product (if necessary). Justified warranty claims will be repaired, exchanged, or credited to the customer's account at AMDOR Inc.'s discretion. All warranty claims must be approved in writing by the Customer Service Manager for AMDOR Inc. There are no exceptions to this clause.

Limited warranty coverage includes the labor associated with the disassembly and assembly of products deemed to be defective by AMDOR Inc. Labor allowances are based on a set time schedule as determined by AMDOR Inc. The maximum allowable hourly labor rate is $ 50. All warranty labor claims must be approved in writing by an authorized representative of AMDOR Inc. prior to commencement of work. Allowances for removal and installation:

Curtain replacement:	3/4 hour
Balancer replacement:	1 hour
Door ajar switch	3/4 hour
Bottom Panel Assembly:	1/2 hour
Slat replacement:	3/4 hour
Door removal and replacement	1 1/2 hours

Items authorized for return must be accompanied by a Return Goods Authorization (RGA) number. We will accept collect shipments of items deemed to be defective provided that they are returned via the most economical carrier. Should items be

returned by means other than the most economical carrier the difference will be charged back to the sender.

AMDOR Inc. reserves the right to reject any claim when a product has been opened, interfered with or modified. Claims may also be rejected when damage to the product (or any sub-assembly) has been brought about by accident, misuse, abuse, vandalism, incorrect installation, temperature extremes, chemical exposure or any factor other than regular operating conditions.

Limited Wet Paint Match Adhesion Warranty

AMDOR Inc. warrants wet paint finishes applied by AMDOR utilizing our approved factory paint specification. All wet paint match colors must be approved in writing by an authorized OEM representative. AMDOR Inc. will provide a color spray out for this purpose. The time required for shipping and consideration of initial color spray outs will be considered over and above stated lead times. Warranty coverage will extend for a period of not less than 5 years from the date of delivery as determined by AMDOR Inc.'s Packing Slip. AMDOR reserves the right to determine whether individual units will be replaced and / or repaired by an AMDOR approved vendor. An allowance will be made for labor associated with the disassembly and assembly of individual units at the prescribed hourly rate of $ 50 per hour. Compensation for labor will not exceed the maximum time allowance permitted for door removal and replacement. Written approval including specified allowance for time must be obtained from AMDOR prior to initiating work. Warranty coverage will extend to the following visible paint system defects:

1./ Loss of mechanical adhesion as evidenced by peeling, cracking or blistering which exposes the substrate material.

2./ Corrosion of the substrate due to paint system failure.

3./ Fading which results in a substantial departure from the primary AMDOR approved body color.

Wet paint adhesion limited warranty coverage will be excluded when damages to the system are determined by AMDOR Inc. to be a result of the following:

1./ Damage caused through the use of attachments including (but not limited to) decals, labels, adhesives, non factory approved coatings.

2./ Loss of gloss, discoloration or damage due to improper maintenance (including but not limited to) mechanical wash systems, pressure washers, steam cleaners, non approved wash or polishing agents.

3./ Abuse, acts of nature, excessive heat / cold, chemical exposure, vandalism and / or accidents.

4./ Scratches, chips, abrasions, or dents from any source.

This document supercedes all previous written and / or verbal warranties provided by AMDOR Inc. and / or it's affiliates.

Cummins Warranty

Worldwide
Fire Apparatus/Crash Trucks



Coverage

Products Warranted

This Warranty applies to new diesel Engines sold by Cummins and delivered to the first user on or after April 1, 2007, that are used in fire apparatus truck and crash truck* applications Worldwide.

Base Engine Warranty

The Base Engine Warranty covers any failures of the Engine which result, under normal use and service, from a defect in material or factory workmanship (Warrantable Failure). This Coverage begins with the sale of the Engine by Cummins and ends five years or 100,000 miles (160,935 kilometers), whichever occurs first, after the date of delivery of the Engine to the first user.

Engine aftertreatment components included in the Cummins Critical Parts List (CPL) and marked with a Cummins part number are covered under Base Engine Warranty.

Additional Coverage is outlined in the Emission Warranty section.

These Warranties are made to all Owners in the chain of distribution and Coverage continues to all subsequent Owners until the end of the periods of Coverage.

Cummins Responsibilities

Cummins will pay for all parts and labor needed to repair the damage to the Engine resulting from a Warrantable Failure.

Cummins will pay for the lubricating oil, antifreeze, filter elements, belts, hoses and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay for reasonable labor costs for Engine removal and reinstallation when necessary to repair a Warrantable Failure.

Cummins will pay reasonable costs for towing a vehicle disabled by a Warrantable Failure to the nearest authorized repair location. In lieu of the towing expense, Cummins will pay reasonable costs for mechanics to travel to and from the location of the vehicle, including meals, mileage and lodging when the repair is performed at the site of the failure.

Owner Responsibilities

Owner is responsible for the operation and maintenance of the Engine as specified in Cummins Operation and Maintenance Manuals. Owner is also responsible for providing proof that all recommended maintenance has been performed.

Before the expiration of the applicable Warranty, Owner must notify a Cummins distributor, authorized dealer or other repair location approved by Cummins of any Warrantable Failure and make the Engine available for repair by such facility. Except for Engines disabled by a Warrantable Failure, Owner must also deliver the Engine to the repair facility.

Service locations are listed on the Cummins Worldwide Service Locator at cummins.com.

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items provided during Warranty repairs unless such items are not reusable due to the Warrantable Failure.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred as a result of a Warrantable Failure.

Owner is responsible for non-Engine repairs and for "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs and other losses resulting from a Warrantable Failure.

Owner is responsible for a $100 (U.S. Dollars) deductible per each service visit under this plan in the 3rd, 4th and 5th years of Base Engine Warranty. The deductible will not be charged during the first 2 years of the Base Engine Warranty.

Limitations

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel

exhaust fluid.

This Warranty does not apply to accessories supplied by Cummins which bear the name of another company. Such non-warranted accessories include, but are not limited to: alternators, starters, fans, air conditioning compressors, clutches, filters, transmissions, torque converters, vacuum pumps, power steering pumps, fan drives and air compressors. Cummins branded alternators and starters are covered for the first two years from the date of delivery of the Engine to the first user, or the expiration of the Base Engine Warranty, whichever occurs first.

Failures resulting in excessive oil consumption are not covered beyond the duration of the Coverage or 100,000 miles (160,935 kilometers) or 7,000 hours from the date of delivery of the Engine to the first user, whichever of the three occurs first. Before a claim for excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

Failures of belts and hoses supplied by Cummins are not covered beyond the first year from the date of delivery of the Engine to the first user or the duration of the Warranty, whichever occurs first.

Parts used to repair a Warrantable Failure may be new Cummins parts, Cummins approved rebuilt parts or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

A new Cummins or Cummins approved rebuilt part used to repair a Warrantable Failure assumes the identity of the part it replaced and is entitled to the remaining Coverage hereunder.

Cummins Inc. reserves the right to interrogate Electronic Control Module (ECM) data for purposes of failure analysis.

CUMMINS DOES NOT COVER WEAR OR WEAROUT OF COVERED PARTS.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THIS WARRANTY AND THE EMISSION WARRANTY SET FORTH HEREINAFTER ARE THE SOLE WARRANTIES MADE BY CUMMINS IN REGARD TO THESE ENGINES. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Emission Warranty

Products Warranted

This Emission Warranty applies to new Engines marketed by Cummins that are used in the United States** in vehicles designed for transporting persons or property on a street or highway. This Warranty applies to Engines delivered to the first user on or after September 1, 1992.

Coverage

Cummins warrants to the first user and each subsequent purchaser that the Engine is designed, built and equipped so as to conform at the time of sale by Cummins with all U.S. federal emission regulations applicable at the time of manufacture and that it is free from defects in material or factory workmanship which would cause it not to meet these regulations within the longer of the following periods: (A) Five years or 100,000 miles (160,935 kilometers) of operation, whichever occurs first, as measured from the date of delivery of the Engine to the first user or (B) The Base Engine Warranty.

If the vehicle in which the Engine is installed is registered in the state of California, a separate California Emission Warranty also applies.

Limitations

Failures, other than those resulting from defects in material or factory workmanship, are not covered by this Warranty.

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel exhaust fluid.

Cummins is not responsible for non-Engine repairs, "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs or other losses resulting from a Warrantable Failure.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

* Airport operated crash trucks and fire department operated trucks employed to respond to fires, hazardous material releases, rescue and other emergency-type situations.

** United States includes American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico and the U.S. Virgin Islands.

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MERITOR® COMMERCIAL VEHICLE SYSTEMS

WARRANTY/MODEL YEAR 2020 VEHICLES

MERITOR



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How to Read Warranty Coverage

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor

Notice:

Models or components that are approved for use by Meritor's vocational guidelines contained in Meritor Publication TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, which are not specifically listed, are warranted for one year, unlimited miles, parts only (1/Unl/P).

Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Advantage Program

Purchasing additional coverage on select components will continue to safeguard your investment against major repair costs after the initial base coverage expires. You can find out more about the Advantage Program by visiting www.meritor.com or by contacting Meritor at 866-OnTrac1 (866-668-7221).

LINEHAUL WARRANTY INFORMATION

Linehaul Vehicles

- Bulk Hauler
- Chip Hauler (Truck)*
- Doubles
- Flatbed
- General Freight
- Grain Hauler
- Livestock Hauler
- Moving Van
- Pipe Hauler
- Refrigerated Freight
- Tanker
- Triples

* Chip Hauler vehicles require specific axle models listed below and Linehaul condition to be eligible for Linehaul warranty consideration.

Linehaul Typically Is

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction
- Greater than 30 miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/750/P&L

FD-965	FF-967	MFS-12-122B-N	MFS-12-132C-N	MFS-13-122B-N	MFS-13B-122C-N
FF-941	FG-941	MFS-12-122C-N	MFS-12E-132B-N	MFS-13-122C-N	MFS-13B-132B-N
FF-942	FG-943	MFS-12E-122A-N	MFS-12E-132C-N	MFS-13-132B-N	MFS-13B-132C-N
FF-943	MFS-10-122A	MFS-12E-122B-N	MFS-12-143A-N	MFS-13-132C-N	MFS-14-122A-N
FF-944	MFS-10-143A-N	MFS-12E-122C-N	MFS-12E-143A-N	MFS-13-143A-N	MFS-14-124A-N
FF-961	MFS-10-144A-N	MFS-12-124A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-14-143A-N
FF-966	MFS-12-122A-N	MFS-12-132B-N	MFS-13-122A-N	MFS-13B-122B-N	MFS-14-144A-N

Rear Drive Single Axles – 5/750/P&L

RS-19-144/145/A	RS-21-145	RS-23-160
MS-19-14X	RS-21-160	RS-23-161
MS-21-144	MS-23-17X	RS-23-186

Drivelines

RPL	5/500/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
155N	1/Unl/P
92N	1/Unl/P

Rear Drive Tandem/Tridem Axles – 5/750/P&L

RT-34-144/P/A	MA-40-165	MT-40-14XHE
RT-40-145/A	MA-40-175	MT-40-144/P
RT-40-160/P[1,2]	MT-34-14X/P	MT-40-943
RT-46-160/P[1,2]	MT-40-14T/P	MT-40-943-SP
RT-46-164EH/P[1,2]	MT-40-14X/P	RZ-166[2]
RT-50-160/P[1,2]	MT-40-14X/P	RZ-188

[1] These models required for Chip Hauler and Linehaul warranty consideration.
[2] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

LINEHAUL WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	5/500/P, 1/100/L
Q+ Drum Brake™	5/500/P, 1/Unl/P&L
ASA	5/500/P, 1/Unl/P&L
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™[2]	12-Years or Wearable Life/P
EX+ Air Disc Brake™	5/500/P, 1/Unl/L
EX+ Air Disc Brake Extended Standard Warranty[3]	5/500/P&L

[1] Includes: bushing, seal, cam, ASA lubrication and wear coverage of 3/500/P&L.
[2] Based on stamped wear diameter max.
[3] Applies only to MA761 friction material code CD brake assembly i.e. EX225LXXXCDXXX

Trailer Axles

Beam and Brackets	5/500/P, 1/100/L
Wheel End Systems[1]	
Standard System[2]	1/100/P&L
PreSet by Meritor[3]	5/500/P&L
AxlePak5[4]	5P/L
AxlePak7[5]	7P/L

[1] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.
[2] When installed by Meritor.
[3] Requires approved hubcap stating PreSet by Meritor on hubcap face.
[4] When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.
[5] When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

TAG/Pusher Axles[1]

TQ, TQD, TR, TRD Beam and Brackets	5/750/P&L

[1] For brake components and ABS Coverage, refer to appropriate product warranties.

Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L

Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram)[1]	
Major Structural Components	5/500/P, 1/100/L
Curbing Damage Warranty[2]	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/100/P&L
PinLoc Actuator	3/300/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs & Rebound Straps	2/200/P, 1/100/L
Bushings	5/500/P, 3/300/L

[1] Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor
(For axle and ABS coverage, refer to appropriate product warranties.)

[2] "Curbing damage" is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.

GENERAL SERVICE WARRANTY INFORMATION

General Service Vehicles

- Auto Hauler
- Beverage Truck
- Chip Hauler
- Cross Country Coach
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Newspaper Delivery
- Pick-Up and Delivery
- Pipe Hauler
- Platform Auto Hauler
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Trailer
- Tour Bus
- Wrecker

General Service Typically Is

- Lower mileage operations (less than 60,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 2/Unl/P&L

FD-965	FL-943	MFS-8-163B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-16-143A-N
FF-941	MFS-6-151A-N	MFS-10-122A	MFS-12-132C-N	MFS-13B-132B-N	MFS-18-133A-N
FF-942	MFS-6-153B-N	MFS-10-143A-N	MFS-12E-132C-N	MFS-13B-132C-N	MFS-18-135A-N
FF-943	MFS-6-162B-N	MFS-10-144A-N	MFS-12-143A-N	MFS-13-143A-N	MFS-18-193A-N
FF-944	MFS-6-153C-N	MFS-12-122A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-20-133A-N
FF-946	MFS-6-162C-N	MFS-12E-122A-N	MFS-12E-143A-N	MFS-14-122A-N	MFS-20-135A-N
FF-961	MFS-7-113C-N	MFS-12-122B-N	MFS-13-122A-N	MFS-14-124A-N	MFS-20-192A-N
FF-966	MFS-7-153C-N	MFS-12E-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N
FF-967	MFS-7-163C-N	MFS-12-122C-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N
FG-941	MFS-8-113B-N	MFS-12E-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N
FH-941	MFS-8-143A-N	MFS-12-124A-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N
FH-946[1]	MFS-8-153B-N	MFS-12-132B-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N
FL-941					

[1] Can also be used with reduced steer angles in tag position in Coach Applications.

Front Drive/Non-Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

Rear Drive Single Axles – 2/Unl/P&L

MS-17-13X	MS-21-14X	RC-23-160	RS-24-160	MS-30-616-SP
MS-17-14X	MS-21-144	RC-23-161	RC-25-160	RS-35-380
MS-19-13X	MS-23-17X	RC-23-162[1]	RS-26-185	71162
MS-19-14X	RS-21-145/A	RC-23-165[1]	MS-26-616	71163
RS-17-144/145/A	RS-21-160	RS-23-160	MS-26-616-SP	79163
RS-19-144/145/A	RC-22-145	RS-23-161	RS-30-185	
MS-21-13X	RC-22-145/A	RS-23-186	MS-30-616	

[1] 3/Unl/P&L if PreSet by Meritor.

Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P	MT-40-14XHE	RT-44-145/P	MT-58-616
RT-34-144/P/A	MT-40-144/P	RT-46-169	RT-58-185[1]
MT-40-14T/P	RT-40-145/A	MT-52-616	MT-70-380
MT-40-14X/P	MT-44-14X/P	RT-52-185[1]	RZ-188

[1] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Rear Drive Tandem/Tridem - 3/Unl/P&L

RT-40-160/P	RT-50-160/P
RT-46-160/P	RZ-166
RT-46-164EH/P	

Rear Drive Axles – 1/Unl/P&L

11170	RND-14H
523	RND-16A

Drivelines

RPL	4/400/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
155N	1/Unl/P
92N	1/Unl/P

Transmission – 1/Unl/P&L

516 FAT 30

PTO – 1/Unl/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190

GENERAL SERVICE WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	3/Unl/P, 1/Unl/L
Cam P[3]	2/200/P
Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake ™[3]	2/200/P&L
ASA	3/Unl/P
ASA[3]	2/200/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™[2]	12-Years or Wearable Life/P
EX+ Air Disc Brake™	2/Unl/P&L

[1] Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.
[2] Based on stamped wear diameter max.
[3] Applies to Tour Bus and Cross Country Coach only.

Trailer Axles

Beam and Brackets[1]	5/Unl/P, 1/Unl/L
Wheel End Systems[2]	
Standard System[3]	1/Unl/P&L
AxlePak5[4]	5/P&L
AxlePak7[5]	7/P&L

[1] 9000 Series is 3/Unl/P, 1/Unl/L
[2] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.
[3] When installed by Meritor.
[4] When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.
[5] When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

Chassis Axles (2000 Series/ChassiPak)

Beam & Brackets	6/Unl/P, 1/Unl/L
Wheel End Systems[1]	
Standard System	1/Unl/P&L
AxlePak7	7/P&L
Beam and Brackets	7/P, 1/L

[1] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram)[1]	
Major Structural Components	5/Unl/P, 1/Unl/L
Curbing Damage Warranty[2]	5/500/P, 1/100/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/Unl/P&L
PinLoc Air Actuator	3/Unl/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs and Rebound Straps	2/Unl/P, 1/Unl/L
Bushings[3]	5/Unl/P, 3/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)
[1] Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor
[2] "Curbing damage" is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.
[3] Raw wood applications 3/Unl/P, 1/Unl/L

TAG/Pusher Axles

TQ, TQD, TR, TRD Beam and Brackets[1]	3/Unl/P, 1/Unl/L
MC14002, MC16003, FH946	2/Unl/P&L

(For brake components and ABS coverage, refer to appropriate product warranties.)
[1] 3/Unl/P&L if sold with PreSet by Meritor.

Meritor® Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Heavy Service/Specialty Vehicle

- Airport Rescue Fire Fighting (ARFF)
- Airport Shuttle*
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Mixer
- Demolition
- Drill Rig
- Dump
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Rear Loader (Refuse)
- Recycling Truck
- Residential Pick-Up (Refuse)
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus*
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Utility Truck
- Winch Truck

*Commercial chassis only

Heavy Service/Specialty Vehicle Typically Is

- Moderate mileage operation (less than 60,000 miles per year)
- On/Off road vocations (10% or more off-road)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Drive/Non-Drive Steer Axles – 2/Unl/P&L

FD-965	FL-941	MFS-10-143A-N	MFS-12-143A-N	MFS-13-144A-N	MFS-18-193A-N	MX-12-120
FF-941	FL-943	MFS-10-144A-N	MFS-12-144A-N	MFS-13-155	MFS-20-133A-N	MX-12-120 EVO
FF-942	MFS-6-151A-N	MFS-12-122	MFS-12-155	MFS-14-122	MFS-20-135A-N	MX-14-120
FF-943	MFS-6-153B	MFS-12E-122	MFS-13-122	MFS-14-124A-N	MFS-20-192A-N	MX-16-120
FF-944	MFS-6-162B	MFS-12-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N	MX-18-120
FF-946	MFS-6-162C	MFS-12E-122B-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N	MX-17-140
FF-961	MFS-7-113C-N	MFS-12-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N	MX-19-140
FF-966	MFS-7-153C-N	MFS-12E-122C-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N	MX-21-140
FF-967	MFS-7-163C-N	MFS-12-124A-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N	MX-21-160
FG-941	MFS-8-113B-N	MFS-12-132B-N	MFS-13B-132B-N	MFS-16-143A-N	RF-16-145	MX-23-160
FG-943	MFS-8-153B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-18-133A-N	RF-21-160	MX-810
FH-941	MFS-8-163B-N	MFS-12-132C-N	MFS-13B-132C-N	MFS-18-135A-N	MX-10-120	
FH-946	MFS-10-122A	MFS-12E-132C-N	MFS-13-143A-N	MFS-18-192A-N	MX-10-120 EVO	

Front Drive/Non-Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

Rear Drive Single Axles – 2/Unl/P&L

MS-17-14X	RS-21-160	RS-24-160	MS-35-380
RS-17-144/145/A	RC-22-145	RS-25-160	RS-38-380
MS-19-14X	RC-23-160	MS-26-616	RC-25-160
RS-19-144	RH-23-160	MS-26-616-SP	RC-26-633
MS-21-114	RS-23-160	RS-26-185/380	MT-58-616
MS-21-14X	RC-23-161	MS-30-616	MT-58-616-SP
RS-21-145	RS-23-161	MS-30-616-SP	
RS-21-145/A	RS-23-186/380	RS-30-185/380	

Rear Drive Axles – 1/Unl/P&L

11170	RND-14H
523	RND-16A

Drivelines

RPL	3/Unl/P, 1/Unl/P&L
92N	1/Unl/P&L
MXL	1/Unl/P&L

Transmission – 1/Unl/P&L

516
FAT 30

PTO – 1/Unl/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P
RT-34-144/P/A
MT-40-14X/P
RT-40-145/A
MT-44-14X/P
RT-44-145/P
RT-46-169
RT-58-160
MT-52-615
MT-52-616-SP
RT-52-185/380[1,2]
MT-58-616
MT-58-616-SP
RT-58-185/380[1,2]
RT-70-380
MT-70-380
RZ-188

[1] Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.
[2] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Brake Components

Cam P	3/Unl/P
Cam P[1]	2/100/P
Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™[2]	2/100/P&L
ASA	3/Unl/P
ASA[2]	2/100/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake	2/100/P&L

[1] Based on stamped wear diameter max.
[2] Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.
[3] Warranty for all non-Meritor ASAs supplied by Meritor for all Heavy Service vocations is 1/100/P.

Rear Drive Tandem/Tridem - 3/Unl/P&L

RT-40-160/P/A[3]
RT-46-160/P/A[1,3]
RT-46-164EH/P/A[2,3]
RT-50-160/P/A[3]
RZ-166

[1] U.S. only. Canadian warranty = 1/Unl/P for combination vehicles only.
[2] Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.
[3] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L

Trailer Air Suspension Systems

MTA (Trailing Arm)

Major Structural Components[1]	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings[1]	5/Unl/P, 3/Unl/L

[1] Raw wood applications 3/Unl/P, 1/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)

Trailer Axles

Beam and Brackets[1]	5/Unl/P, 1/Unl/L
Wheel End Systems[2]	
Standard System[3]	1/Unl/P&L

[1] 9000 Series is 3/Unl/P, 1/Unl/L.
[2] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.
[3] When installed by Meritor.

(For brake components and ABS coverage, refer to appropriate product warranties.)

Gearboxes – 1/Unl/P&L

MGX-240
MGX-279
MGX-279D
MGX-280
MGX-285
MGX-292
MGX-314
MGX-376
MGX-377
MGX-378
MGX-380
MGX-384
MGX-402
MGX-413
MGX-448
MGX-456
MGX-478
MGX-480
MGX-487
MGX-488
MGX-505
MGX-506
MGX-514
MGX-519
MGX-520
MGX-522
MGX-524
MGX-527
MGX-528
MGX-533
MGX-534
MGX-536
MGX-537
MGX-541
MGX-545
MGX-546
MGX-550

Transfer Cases – 1/Unl/P

MTC-4213
MTC-4210
MTC-4208
MTC-4206-FV (TC-38)
MTC-3106-FV (TC-137)
MTC-3111 (T-2111)
MTC-3112-CV (529 & 548C)
MTC-3116 (T-2111)
MTC-3118-FV (TC-180 & TC-180-23)
MTC-3118-CV (358)
MTC-3120-FV (TC-143)
MTC-3124 (T-2119)
MTC-3205-GV (MTC-25/247)
MTC-3205-GV (MTC-25/350)
MTC-3205-GV (RTC-25/350)
MTC-3206-FV (TC-237)
MTC-3206-CS (544)
MTC-3208-GV (RTC-50)
MTC-3209-GV (RTC-60/420)
MTC-3209-GV (RTC-60/380)
MTC-3209-GV (MTC-60/420)
MTC-3209-GV (MTC-60/380)
MTC-3212-CV (315 & 548B)
MTC-3312-FV (TC-270)
MTC-3220-FC (TC-142)
MTC-2212-CV (306)

FIRE AND EMERGENCY WARRANTY INFORMATION

Fire and Emergency Vehicles

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Command Vehicle
- Crash Fire Rescue (CFR)
- Pumper
- Rapid Intervention Vehicle (RIV)
- Tanker

Fire and Emergency Typically Is

- Lower mileage operations (less than 20,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/Unl/P&L

FL-941	MFS-18-193A-N	MFS-22-135A-N
FL-943	MFS-20-133A-N	MFS-22H-135A-N
MFS-18-133A-N	MFS-20-135A-N	MFS-22-193A-N
MFS-18-135A-N	MFS-20-193A-N	MFS-22H-193A-N

Front Drive Steer Axles – 2/Unl/P&L

MX-19140	MX-21160	MX-23810
MX-21140	MX-23160	

Rear Drive Single Axles – 5/Unl/P&L

RC-23-160	RS-23-186	RS-26-185	RS-25-160
RS-23-160	RS-24-160	RS-30-185	
RS-23-161	RC-25-160	RS-35-380	

[1] 3/Unl/P&L if PreSet by Meritor.

Rear Drive Tandem/Tridem Axles – 5/Unl/P&L

MT-40-14X/P	RT-44-145/P	MT-52-616
MT-40-144/P	RT-46-160/P	RT-52-185[1]
RT-40-145/A	RT-46-164EH/P	MT-58-616
RT-40-160/P	RT-46-169	RT-58-185[1]
MT-44-14X/P	RT-50-160/P	MT-70-380

[1] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake™	2/Unl/P&L

[1] Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.

Drivelines

RPL	4/400/P, 1/Unl/L
MXL	3/350/P, 1/Unl/L
155N	1/Unl/P
92N	1/Unl/P

Transfer Cases – 1/Unl/P

MTC-4208	MTC-3111 (T-2111)
MTC-4210	MTC-3116 (T-2111)
MTC-4213	MTC-3124 (T-2119)

TRANSIT BUS WARRANTY INFORMATION

Transit Bus Vehicles

- Airport Shuttle
- City Bus
- Commuter Coach
- Shuttle Bus
- Transit Bus
- Trolley

Transit Bus Typically Is

- Moderate mileage operation (less than 50,000 miles per year)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Drive/Non-Drive Steer Axles – 5/300/P&L

FH-946	MFS-12-155
FH-941[1]	MFS-13-155

[1] Commuter coach only – 2/Unl/P&L

Rear Drive Single Axles – 5/300/P&L

RS-23-160	79163	RS-21-160
RC-23-161	RC-23-162[1]	
71163	RC-23-165[1]	

[1] Commuter coach only – 2/Unl/P&L

Brake Components

Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™[1]	2/100/P&L
ASA[1]	2/100/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake	2/100/P&L

[1] Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

Drivelines

RPL	3/Unl/P, 1/Unl/L
92N	1/Unl/P&L
MXL	1/Unl/P&L

Tag Axles – 2/Unl/P&L

MC-14002
MC-16003
FH-946

Center Non-drive Axles – 5/300/P&L

MC-26000
71063
79063

OFF-HIGHWAY SERVICE WARRANTY INFORMATION

Industrial And Off-Highway Service Vehicles

- Load-On/Load-Off
- Port Tractor
- Rail Yard Spotter
- Roll-On/Roll-Off
- Stevedoring Tractor
- Trailer Spotter
- Yard Jockey
- All-Terrain Crane
- Rough Terrain Crane
- Forestry
- Material Handling
- Specialized Heavy Haul
- Specialized Mining
- Excavator
- Compactor
- Fertilizer Spreader
- Snow Blower
- Mining
- Rail Car Mover
- Loader
- Tow Tractor
- Pushback Tractor

Industrial And Off-Highway Service Typically Is

- Low mileage operation
- Low speed vehicle speed restriction
- Vehicles are **not** typically licensed for highway use
- Six (6) starts/stops per mile (typical)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Contact Meritor regarding specific application approval questions on any product line.

Drivelines – 1/Unl/P

RPL	MXL

Front Non-Drive Steer Axles – 1/Unl/P

FF - 941	MFS-12-144A-N	MFS-18-193A-N
FF - 943	MFS-13-143A-N	MFS-20-133A-N
FF - 961	MFS-13-144A-N	MFS-20-135A-N
FF - 966	MFS-14-143A-N	MFS-20-192A-N
FG - 941	MFS-16-122A-N	MFS-20-193A-N
FG - 943	MFS-16-133A-N	MFS-22-135A-N
FL - 941	MFS-16-135A-N	MFS-22H-135A-N
FL - 943	MFS-16-143A-N	MFS-22-193A-N
FN - 951	MFS-18-133A-N	MFS-22H-193A-N
MFS-12-143A-N	MFS-18-135A-N	MON-Z0 FAMILY

Brake Components

Cam P	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P

Planetary Axles – 1/Unl/P

MOB	MOF	MOS	MOZ
MOC	MOG	MOT	
MOD	MOH	MOX	
MOE	MOR	MOY	

Gearboxes – 1/Unl/P&L

MGX-240	MGX-376	MGX-448	MGX-506	MGX-528	MGX-546
MGX-279	MGX-377	MGX-456	MGX-514	MGX-533	MGX-550
MGX-279D	MGX-378	MGX-478	MGX-519	MGX-534	
MGX-280	MGX-380	MGX-480	MGX-520	MGX-536	
MGX-285	MGX-384	MGX-487	MGX-522	MGX-537	
MGX-292	MGX-402	MGX-488	MGX-524	MGX-541	
MGX-314	MGX-413	MGX-505	MGX-527	MGX-545	

Transfer Cases – 1/Unl/P

MTC-4213	MTC-3116 (T-2111)	MTC-3205-GV (RTC-25/350)	MTC-3209-GV (MTC-60/380)
MTC-4210	MTC-3118-FV (TC-180 & TC-180-23)	MTC-3206-FV (TC-237)	MTC-3212-CV (315 & 548B)
MTC-4208	MTC-3118-CV (358)	MTC-3206-CS (544)	MTC-3312-FV (TC-270)
MTC-4206-FV (TC-38)	MTC-3120-FV (TC-143)	MTC-3208-GV (RTC-50)	MTC-3220-FC (TC-142)
MTC-3106-FV (TC-137)	MTC-3124 (T-2119)	MTC-3209-GV (RTC-60/420)	MTC-2212-CV (306)
MTC-3111 (T-2111)	MTC-3205-GV (MTC-25/247)	MTC-3209-GV (RTC-60/380)	
MTC-3112-CV (529 & 548C)	MTC-3205-GV (MTC-25/350)	MTC-3209-GV (MTC-60/420)	

TERMS AND CONDITIONS

Coverage Exclusions

Product Description

All
The cost of any repairs, replacements or adjustments to a covered component (1) associated with noise; (2) resulting from the use or installation of non-genuine Meritor components or materials; (3) due to vibration associated with improper operation or misapplication of drivetrain components; and (4) damage resulting from corrosion.

For axle assemblies supplied by Meritor with suspension and interface brackets designed and/or attached by non-Meritor parties, Meritor warranty coverage does not apply to the brackets, bracket attachment methods, and field issues caused by brackets or bracket attachments to any covered component unless specified in a separate OEM agreement.

Front Axles
King Pin Bushings.

Rear Axles
Self-contained traction equalizers and oil filters. The use of NoSPIN differentials will result in the exclusion of axle shafts from warranty considerations. NoSPIN is a product of Eaton.

ASA
Boot and bushing. Bent, broken, over-torqued, missing or otherwise damaged pawl assemblies.

Cam Brake
Brake lining wear and brake shoe "rust-jacking."

Disc Brake
Pad wear, rotor wear.

Coverage Limitations

Product Description

All
Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program. Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Front Axles
Tie rod and tie rod ends limited to 3-year/300,000-mile or published vocational coverage, whichever is less. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

Rear Axles
Pinion and through shaft seals limited to 3-year/300,000-mile or published vocational coverage, whichever is less, if yoke is installed by Meritor. If yoke is not installed by Meritor, then Meritor does not warrant pinion seals. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

Rear Axles
The Meritor® breather part number A-2297-C-8765 with A-3196-J-1336 hose must be used for eligibility of any potential warranty consideration relating to contamination and/or loss of lube in axles.

Cam Brake
Limited to bracket, brake spider and camshaft structural integrity.

STEELite X30
Wearable life is up to the discard diameter of the drum.

Disc Brake
Warranty coverage for boots, seals, bushings and pins is 2/200/P. Warranty coverage for pads is 1/100/P.

Warranty coverage on vehicles with 1,850 lb-ft engine torque and over may be reduced on individual drivetrain components. Contact your Meritor representative for specific details.

TERMS AND CONDITIONS

(1) What is Covered by this Commercial Warranty?
Meritor Heavy Vehicle Systems, LLC warrants to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment in vehicles licensed for on-highway use, will be free from defects in material and workmanship. This warranty coverage begins only after the expiration of the OEM's vehicle warranty for the applicable covered components. Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed elsewhere in this warranty statement.

Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Components (whether new, used or remanufactured) installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

For certain components, coverage requires the use of specific extended drain interval or synthetic lubricants. For further information about lubrication and maintenance, see Meritor publication Maintenance Manual Number I and the applicable Meritor maintenance manual for the product in question. Other conditions and limitations applicable to this warranty are detailed below.

(2) Designation of Vocational Use Required.
To obtain warranty coverage, each Owner must notify Meritor through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Meritor components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Meritor directly. Failure to notify Meritor of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Meritor as to the intended vocational use of the vehicle. This notification can be sent directly to Meritor or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Meritor's warranty requires that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

(3) What is the Cost of this Warranty?
There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty?
This warranty does not cover normal wear and tear; nor does it cover a component that fails, malfunctions or is damaged as a result of (I) improper installation, adjustment, repair or modification (including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by Meritor), (II) accident, natural disaster, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the axle and/or driveline capacity), or (III) improper or insufficient maintenance (including deviation from approved lubricants, change intervals, or lube levels). This warranty does not cover any component or part that is not branded by Meritor. For vehicles that operate full or part time outside of the United States and Canada, a one year, unlimited mileage, parts only warranty (1/Unl/P) will apply.

(5) Remedy.
The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Meritor's option. Meritor reserves the right to require that all applicable failed materials are available and/or returned to Meritor for review and evaluation.

(6) Disclaimer of Warranty.
THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESSED, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

(7) Limitation of Remedies.
In no event shall Meritor be liable for special, incidental, indirect, or consequential damages of any kind or under any legal theory, including, but not limited to, towing, downtime, lost productivity, cargo damage, taxes, or any other losses or costs resulting from a defective covered component.

(8) To Obtain Service.
If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Meritor or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Meritor service location. The dealer will inspect the vehicle and contact Meritor for an evaluation of the claim. When authorized by Meritor, the dealer will repair or replace during the term of this warranty any defective Meritor component covered by this warranty.

(9) Entire Agreement.
This is the entire agreement between Meritor and the Owner about warranty and no Meritor employee or dealer is authorized to make any additional warranty on behalf of Meritor. This agreement allocates the responsibilities for component failure between Meritor and the Owner.

Product models, brands, names and trademarks depicted here in are the property of their respective owners and, except where otherwise indicated, are not in any way associated with Meritor Heavy Vehicle Systems, LLC, or any parent or affiliate, thereof.

MERITOR

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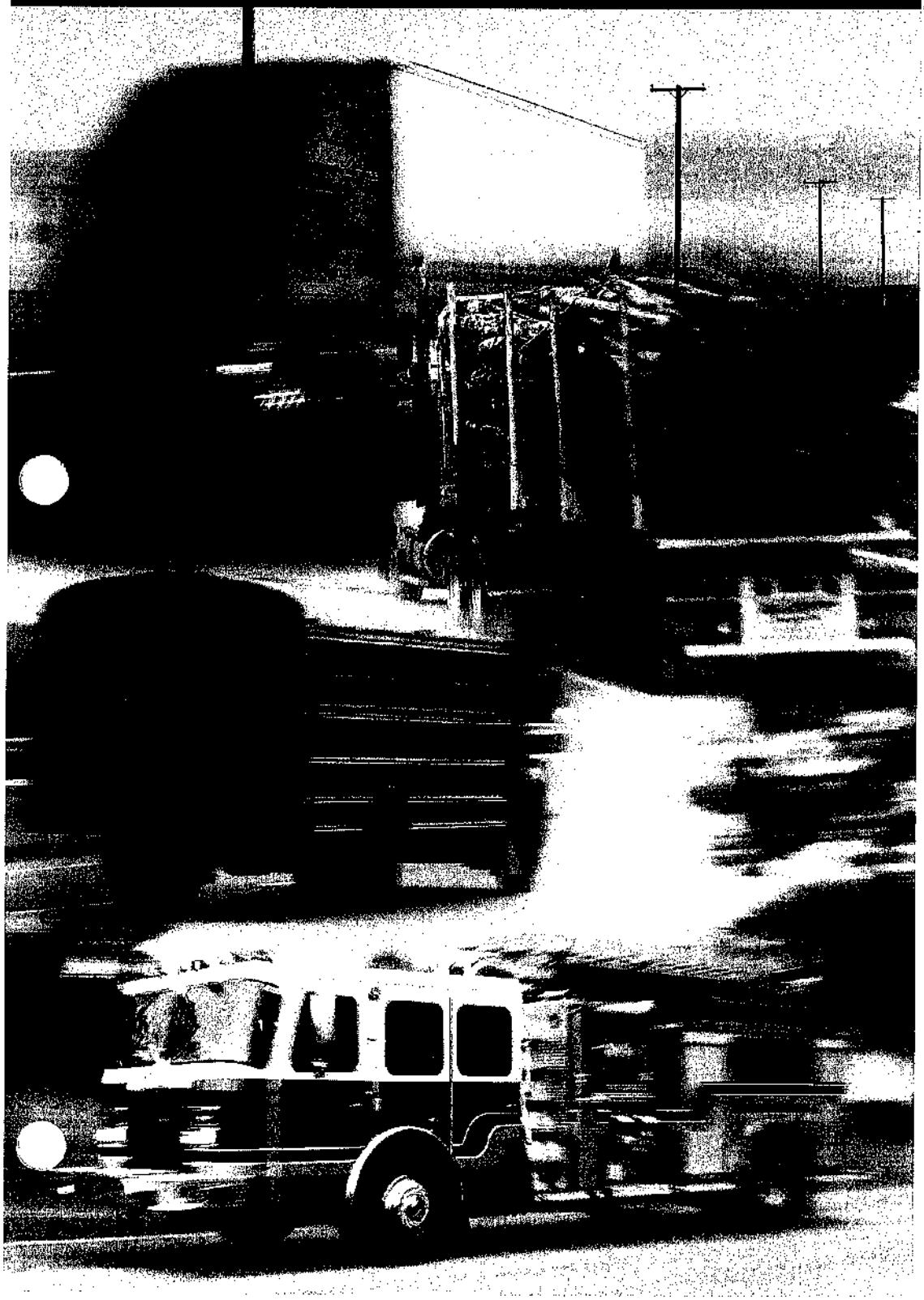
For more information:
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or visit meritor.com

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MERITOR® COMMERCIAL VEHICLE SYSTEMS

WARRANTY/MODEL YEAR 2020 VEHICLES

MERITOR



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How to Read Warranty Coverage

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor

Notice:

Models or components that are approved for use by Meritor's vocational guidelines contained in Meritor Publication TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, which are not specifically listed, are warranted for one year, unlimited miles, parts only (1/Unl/P).

Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Advantage Program

Purchasing additional coverage on select components will continue to safeguard your investment against major repair costs after the initial base coverage expires. You can find out more about the Advantage Program by visiting www.meritor.com or by contacting Meritor at 866-OnTrac1 (866-668-7221).

LINEHAUL WARRANTY INFORMATION

Linehaul Vehicles

- Bulk Hauler
- Chip Hauler (Truck)*
- Doubles
- Flatbed
- General Freight
- Grain Hauler
- Livestock Hauler
- Moving Van
- Pipe Hauler
- Refrigerated Freight
- Tanker
- Triples

* Chip Hauler vehicles require specific axle models listed below and Linehaul condition to be eligible for Linehaul warranty consideration.

Linehaul Typically Is

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction
- Greater than 30 miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/750/P&L

FD-965	FF-967	MFS-12-122B-N	MFS-12-132C-N	MFS-13-122B-N	MFS-13B-122C-N
FF-941	FG-941	MFS-12-122C-N	MFS-12E-132B-N	MFS-13-122C-N	MFS-13B-132B-N
FF-942	FG-943	MFS-12E-122A-N	MFS-12E-132C-N	MFS-13-132B-N	MFS-13B-132C-N
FF-943	MFS-10-122A	MFS-12E-122B-N	MFS-12-143A-N	MFS-13-132C-N	MFS-14-122A-N
FF-944	MFS-10-143A-N	MFS-12E-122C-N	MFS-12E-143A-N	MFS-13-143A-N	MFS-14-124A-N
FF-961	MFS-10-144A-N	MFS-12-124A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-14-143A-N
FF-966	MFS-12-122A-N	MFS-12-132B-N	MFS-13-122A-N	MFS-13B-122B-N	MFS-14-144A-N

Rear Drive Single Axles – 5/750/P&L

RS-19-144/145/A	RS-21-145	RS-23-160
MS-19-14X	RS-21-160	RS-23-161
MS-21-144	MS-23-17X	RS-23-186

Drivelines

RPL	5/500/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
155N	1/Unl/P
92N	1/Unl/P

Rear Drive Tandem/Tridem Axles – 5/750/P&L

RT-34-144/P/A	MA-40-165	MT-40-14XHE
RT-40-145/A	MA-40-175	MT-40-144/P
RT-40-160/P[1,2]	MT-34-14X/P	MT-40-943
RT-46-160/P[1,2]	MT-40-14T/P	MT-40-943-SP
RT-46-164EH/P[1,2]	MT-40-14X/P	RZ-166[2]
RT-50-160/P[1,2]	MT-40-14X/P	RZ-188

[1] These models required for Chip Hauler and Linehaul warranty consideration.
[2] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

LINEHAUL WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	5/500/P, 1/100/L
Q+ Drum Brake™	5/500/P, 1/Unl/P&L
ASA	5/500/P, 1/Unl/P&L
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™[2]	12-Years or Wearable Life/P
EX+ Air Disc Brake™	5/500/P, 1/Unl/L
EX+ Air Disc Brake Extended Standard Warranty[3]	5/500/P&L

[1] Includes: bushing, seal, cam, ASA lubrication and wear coverage of 3/500/P&L.

[2] Based on stamped wear diameter max.

[3] Applies only to MA761 friction material code CD brake assembly i.e. EX225LXXXCDXXX

Trailer Axles

Beam and Brackets	5/500/P, 1/100/L
Wheel End Systems[1]	
Standard System[2]	1/100/P&L
PreSet by Meritor[3]	5/500/P&L
AxlePak5[4]	5P/L
AxlePak7[5]	7P/L

[1] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

[2] When installed by Meritor.

[3] Requires approved hubcap stating "PreSet by Meritor on hubcap face.

[4] When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.

[5] When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

TAG/Pusher Axles[1]

TQ, TQD, TR, TRD Beam and Brackets	5/750/P&L

[1] For brake components and ABS Coverage, refer to appropriate product warranties.

Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L

Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram)[1]	
Major Structural Components	5/500/P, 1/100/L
Curbing Damage Warranty[2]	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/100/P&L
PinLoc Actuator	3/300/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs & Rebound Straps	2/200/P, 1/100/L
Bushings	5/500/P, 3/300/L

[1] Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor (For axle and ABS coverage, refer to appropriate product warranties.)

[2] "Curbing damage" is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.

GENERAL SERVICE WARRANTY INFORMATION

General Service Vehicles

- Auto Hauler
- Beverage Truck
- Chip Hauler
- Cross Country Coach
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Newspaper Delivery
- Pick-Up and Delivery
- Pipe Hauler
- Platform Auto Hauler
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Trailer
- Tour Bus
- Wrecker

General Service Typically Is

- Lower mileage operations (less than 60,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 2/Unl/P&L

FD-965	FL-913	MFS-8-163B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-16-143A-N
FF-941	MFS-6-151A-N	MFS-10-122A	MFS-12-132C-N	MFS-13B-132B-N	MFS-18-133A-N
FF-942	MFS-6-153B-N	MFS-10-143A-N	MFS-12E-132C-N	MFS-13B-132C-N	MFS-18-135A-N
FF-943	MFS-6-162B-N	MFS-10-144A-N	MFS-12-143A-N	MFS-13-143A-N	MFS-18-193A-N
FF-944	MFS-6-153C-N	MFS-12-122A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-20-133A-N
FF-946	MFS-6-162C-N	MFS-12E-122A-N	MFS-12E-143A-N	MFS-14-122A-N	MFS-20-135A-N
FF-961	MFS-7-113C-N	MFS-12-122B-N	MFS-13-122A-N	MFS-14-124A-N	MFS-20-192A-N
FF-966	MFS-7-153C-N	MFS-12E-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N
FF-967	MFS-7-163C-N	MFS-12-122C-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N
FG-941	MFS-8-113B-N	MFS-12E-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N
FH-941	MFS-8-143A-N	MFS-12-124A-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N
FH-946[1]	MFS-8-153B-N	MFS-12-132B-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N
FL-941					

[1] Can also be used with reduced steer angles in tag position in Coach Applications.

Front Drive/Non-Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

Rear Drive Single Axles – 2/Unl/P&L

MS-17-13X	MS-21-14X	RC-23-160	RS-24-160	MS-30-616-SP
MS-17-14X	MS-21-144	RC-23-161	RC-25-160	RS-35-380
MS-19-13X	MS-23-17X	RC-23-162[1]	RS-26-185	71162
MS-19-14X	RS-21-145/A	RC-23-165[1]	MS-26-616	71163
RS-17-144/145/A	RS-21-160	RS-23-160	MS-26-616-SP	79163
RS-19-144/145/A	RC-22-145	RS-23-161	RS-30-185	
MS-21-13X	RC-22-145/A	RS-23-186	MS-30-616	

[1] 3/Unl/P&L if PreSet by Meritor.

Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P	MT-40-14XHE	RT-44-145/P	MT-58-616
RT-34-144/P/A	MT-40-144/P	RT-46-169	RT-58-185[1]
MT-40-14T/P	RT-40-145/A	MT-52-616	MT-70-380
MT-40-14X/P	MT-44-14X/P	RT-52-185[1]	RZ-188

[1] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Rear Drive Tandem/Tridem - 3/Unl/P&L

RT-40-160/P	RT-50-160/P
RT-46-160/P	RZ-166
RT-46-164EH/P	

Rear Drive Axles – 1/Unl/P&L

11170	RND-14H
523	RND-16A

Drivelines

RPL	4/400/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
155N	1/Unl/P
92N	1/Unl/P

Transmission – 1/Unl/P&L

516 FAT 30

PTO – 1/Unl/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190

GENERAL SERVICE WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	3/Unl/P, 1/Unl/L
Cam P[3]	2/200/P
Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake ™[3]	2/200/P&L
ASA	3/Unl/P
ASA[3]	2/200/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™[2]	12-Years or Wearable Life/P
EX+ Air Disc Brake™	2/Unl/P&L

[1] Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.
[2] Based on stamped wear diameter max.
[3] Applies to Tour Bus and Cross Country Coach only.

Trailer Axles

Beam and Brackets[1]	5/Unl/P, 1/Unl/L
Wheel End Systems[2]	
Standard System[3]	1/Unl/P&L
AxlePak5[4]	5/P&L
AxlePak7[5]	7/P&L

[1] 9000 Series is 3/Unl/P, 1/Unl/L
[2] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.
[3] When installed by Meritor.
[4] When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.
[5] When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

Chassis Axles (2000 Series/ChassiPak)

Beam & Brackets	6/Unl/P, 1/Unl/L
Wheel End Systems[1]	
Standard System	1/Unl/P&L
AxlePak7	7/P&L
Beam and Brackets	7/P, 1/L

[1] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram)[1]	
Major Structural Components	5/Unl/P, 1/Unl/L
Curbing Damage Warranty[2]	5/500/P, 1/100/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/Unl/P&L
PinLoc Air Actuator	3/Unl/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs and Rebound Straps	2/Unl/P, 1/Unl/L
Bushings[3]	5/Unl/P, 3/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)
[1] Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor
[2] "Curbing damage" is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.
[3] Raw wood applications 3/Unl/P, 1/Unl/L

TAG/Pusher Axles

TQ, TQD, TR, TRD Beam and Brackets[1]	3/Unl/P, 1/Unl/L
MC14002, MC16003, FH946	2/Unl/P&L

(For brake components and ABS coverage, refer to appropriate product warranties.)
[1] 3/Unl/P&L if sold with PreSet by Meritor.

Meritor® Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Heavy Service/Specialty Vehicle

- Airport Rescue Fire Fighting (ARFF)
- Airport Shuttle*
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Mixer
- Demolition
- Drill Rig
- Dump
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Rear Loader (Refuse)
- Recycling Truck
- Residential Pick-Up (Refuse)
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus*
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Utility Truck
- Winch Truck

*Commercial chassis only

Heavy Service/Specialty Vehicle Typically Is

- Moderate mileage operation (less than 60,000 miles per year)
- On/Off road vocations (10% or more off-road)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Drive/Non-Drive Steer Axles – 2/Unl/P&L

FD-965	FL-941	MFS-10-143A-N	MFS-12-143A-N	MFS-13-144A-N	MFS-18-193A-N	MX-12-120
FF-941	FL-943	MFS-10-144A-N	MFS-12-144A-N	MFS-13-155	MFS-20-133A-N	MX-12-120 EVO
FF-942	MFS-6-151A-N	MFS-12-122	MFS-12-155	MFS-14-122	MFS-20-135A-N	MX-14-120
FF-943	MFS-6-153B	MFS-12E-122	MFS-13-122	MFS-14-124A-N	MFS-20-192A-N	MX-16-120
FF-944	MFS-6-162B	MFS-12-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N	MX-18-120
FF-946	MFS-6-162C	MFS-12E-122B-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N	MX-17-140
FF-961	MFS-7-113C-N	MFS-12-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N	MX-19-140
FF-966	MFS-7-153C-N	MFS-12E-122C-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N	MX-21-140
FF-967	MFS-7-163C-N	MFS-12-124A-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N	MX-21-160
FG-941	MFS-8-113B-N	MFS-12-132B-N	MFS-13B-132B-N	MFS-16-143A-N	RF-16-145	MX-23-160
FG-943	MFS-8-153B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-18-133A-N	RF-21-160	MX-810
FH-941	MFS-8-163B-N	MFS-12-132C-N	MFS-13B-132C-N	MFS-18-135A-N	MX-10-120	
FH-946	MFS-10-122A	MFS-12E-132C-N	MFS-13-143A-N	MFS-18-192A-N	MX-10-120 EVO	

Front Drive/Non-Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

Rear Drive Single Axles – 2/Unl/P&L

MS-17-14X	RS-21-160	RS-24-160	MS-35-380
RS-17-144/145/A	RC-22-145	RS-25-160	RS-38-380
MS-19-14X	RC-23-160	MS-26-616	RC-25-160
RS-19-144	RH-23-160	MS-26-616-SP	RC-26-633
MS-21-114	RS-23-160	RS-26-185/380	MT-58-616
MS-21-14X	RC-23-161	MS-30-616	MT-58-616-SP
RS-21-145	RS-23-161	MS-30-616-SP	
RS-21-145/A	RS-23-186/380	RS-30-185/380	

Rear Drive Axles – 1/Unl/P&L

11170	RND-14H
523	RND-16A

Drivelines

RPL	3/Unl/P, 1/Unl/P&L
92N	1/Unl/P&L
MXL	1/Unl/P&L

Transmission – 1/Unl/P&L

516
FAT 30

PTO – 1/Unl/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P
RT-34-144/P/A
MT-40-14X/P
RT-40-145/A
MT-44-14X/P
RT-44-145/P
RT-46-169
RT-58-160
MT-52-616
MT-52-616-SP
RT-52-185/380[1,2]
MT-58-616
MT-58-616-SP
RT-58-185/380[1,2]
RT-70-380
MT-70-380
RZ-188

[1] Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.
[2] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Brake Components

Cam P	3/Unl/P
Cam P[3]	2/100/P
Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™[2]	2/100/P&L
ASA	3/Unl/P
ASA[2]	2/100/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake	2/100/P&L

[1] Based on stamped wear diameter max.
[2] Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.
[3] Warranty for all non-Meritor ASAs supplied by Meritor for all Heavy Service vocations is 1/100/P.

Rear Drive Tandem/Tridem - 3/Unl/P&L

RT-40-160/P/A[3]
RT-46-160/P/A[1,3]
RT-46-164EH/P/A[2,3]
RT-50-160/P/A[3]
RZ-166

[1] U.S. only. Canadian warranty = 1/Unl/P for combination vehicles only.
[2] Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.
[3] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L

Trailer Air Suspension Systems

MTA (Trailing Arm)	
Major Structural Components[1]	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings[1]	5/Unl/P, 3/Unl/L

[1] Raw wood applications 3/Unl/P, 1/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)

Trailer Axles

Beam and Brackets[1]	5/Unl/P, 1/Unl/L
Wheel End Systems[2]	
Standard System[3]	1/Unl/P&L

[1] 9000 Series is 3/Unl/P, 1/Unl/L.
[2] Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.
[3] When installed by Meritor.

(For brake components and ABS coverage, refer to appropriate product warranties.)

Gearboxes – 1/Unl/P&L

MGX-240
MGX-279
MGX-279D
MGX-280
MGX-285
MGX-292
MGX-314
MGX-376
MGX-377
MGX-378
MGX-380
MGX-384
MGX-402
MGX-413
MGX-448
MGX-456
MGX-478
MGX-480
MGX-487
MGX-488
MGX-505
MGX-506
MGX-514
MGX-519
MGX-520
MGX-522
MGX-524
MGX-527
MGX-528
MGX-533
MGX-534
MGX-536
MGX-537
MGX-541
MGX-545
MGX-546
MGX-550

Transfer Cases – 1/Unl/P

MTC-4213
MTC-4210
MTC-4208
MTC-4206-FV (TC-38)
MTC-3106-FV (TC-137)
MTC-3111 (T-2111)
MTC-3112-CV (529 & 548C)
MTC-3116 (T-2111)
MTC-3118-FV (TC-180 & TC-180-23)
MTC-3118-CV (358)
MTC-3120-FV (TC-143)
MTC-3124 (T-2119)
MTC-3205-GV (MTC-25/247)
MTC-3205-GV (MTC-25/350)
MTC-3205-GV (RTC-25/350)
MTC-3206-FV (TC-237)
MTC-3206-CS (544)
MTC-3208-GV (RTC-50)
MTC-3209-GV (RTC-60/420)
MTC-3209-GV (RTC-60/380)
MTC-3209-GV (MTC-60/420)
MTC-3209-GV (MTC-60/380)
MTC-3212-CV (315 & 548B)
MTC-3312-FV (TC-270)
MTC-3220-FC (TC-142)
MTC-2212-CV (306)

FIRE AND EMERGENCY WARRANTY INFORMATION

Fire and Emergency Vehicles

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Command Vehicle
- Crash Fire Rescue (CFR)
- Pumper
- Rapid Intervention Vehicle (RIV)
- Tanker

Fire and Emergency Typically Is

- Lower mileage operations (less than 20,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/Unl/P&L

FL-941	MFS-18-193A-N	MFS-22-135A-N
FL-943	MFS-20-133A-N	MFS-22H-135A-N
MFS-18-133A-N	MFS-20-135A-N	MFS-22-193A-N
MFS-18-135A-N	MFS-20-193A-N	MFS-22H-193A-N

Front Drive Steer Axles – 2/Unl/P&L

MX-19140	MX-21160	MX-23810
MX-21140	MX-23160	

Rear Drive Single Axles – 5/Unl/P&L

RC-23-160	RS-23-186	RS-26-185	RS-25-160
RS-23-160	RS-24-160	RS-30-185	
RS-23-161	RC-25-160	RS-35-380	

[1] 3/Unl/P&L if PreSet by Meritor.

Rear Drive Tandem/Tridem Axles – 5/Unl/P&L

MT-40-14X/P	RT-44-145/P	MT-52-616
MT-40-144/P	RT-46-160/P	RT-52-185[1]
RT-40-145/A	RT-46-164EH/P	MT-58-616
RT-40-160/P	RT-46-169	RT-58-185[1]
MT-44-14X/P	RT-50-160/P	MT-70-380

[1] Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake™	2/Unl/P&L

[1] Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.

Drivelines

RPL	4/400/P, 1/Unl/L
MXL	3/350/P, 1/Unl/L
155N	1/Unl/P
92N	1/Unl/P

Transfer Cases – 1/Unl/P

MTC-4208	MTC-3111 (T-2111)
MTC-4210	MTC-3116 (T-2111)
MTC-4213	MTC-3124 (T-2119)

TRANSIT BUS WARRANTY INFORMATION

Transit Bus Vehicles

- Airport Shuttle
- City Bus
- Commuter Coach
- Shuttle Bus
- Transit Bus
- Trolley

Transit Bus Typically Is

- Moderate mileage operation (less than 50,000 miles per year)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

Front Drive/Non-Drive Steer Axles – 5/300/P&L

FH-946	MFS-12-155
FH-941[1]	MFS-13-155

[1] Commuter coach only – 2/Unl/P&L

Rear Drive Single Axles – 5/300/P&L

RS-23-160	79163	RS-21-160
RC-23-161	RC-23-162[1]	
71163	RC-23-165[1]	

[1] Commuter coach only – 2/Unl/P&L

Brake Components

Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™[1]	2/100/P&L
ASA[1]	2/100/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake	2/100/P&L

[1] Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

Drivelines

RPL	3/Unl/P, 1/Unl/L
92N	1/Unl/P&L
MXL	1/Unl/P&L

Tag Axles – 2/Unl/P&L

MC-14002
MC-16003
FH-946

Center Non-drive Axles – 5/300/P&L

MC-26000
71063
79063

OFF-HIGHWAY SERVICE WARRANTY INFORMATION

Industrial And Off-Highway Service Vehicles

- Load-On/Load-Off
- Port Tractor
- Rail Yard Spotter
- Roll-On/Roll-Off
- Stevedoring Tractor
- Trailer Spotter
- Yard Jockey
- All-Terrain Crane
- Rough Terrain Crane
- Forestry
- Material Handling
- Specialized Heavy Haul
- Specialized Mining
- Excavator
- Compactor
- Fertilizer Spreader
- Snow Blower
- Mining
- Rail Car Mover
- Loader
- Tow Tractor
- Pushback Tractor

Industrial And Off-Highway Service Typically Is

- Low mileage operation
- Low speed vehicle speed restriction
- Vehicles are not typically licensed for highway use
- Six (6) starts/stops per mile (typical)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Contact Meritor regarding specific application approval questions on any product line.

Drivelines – 1/Unl/P

RPL MXL

Front Non-Drive Steer Axles – 1/Unl/P

FF - 941	MFS-12-144A-N	MFS-18-193A-N
FF - 943	MFS-13-143A-N	MFS-20-133A-N
FF - 961	MFS-13-144A-N	MFS-20-135A-N
FF - 966	MFS-14-143A-N	MFS-20-192A-N
FG - 941	MFS-16-122A-N	MFS-20-193A-N
FG - 943	MFS-16-133A-N	MFS-22-135A-N
FL - 941	MFS-16-135A-N	MFS-22H-135A-N
FL - 943	MFS-16-143A-N	MFS-22-193A-N
FN - 951	MFS-18-133A-N	MFS-22H-193A-N
MFS-12-143A-N	MFS-18-135A-N	MON-20 FAMILY

Brake Components

Cam P	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P

Planetary Axles – 1/Unl/P

MOB	MOF	MOS	MOZ
MOC	MOG	MOT	
MOD	MOH	MOX	
MOE	MOR	MOY	

Gearboxes – 1/Unl/P&L

MGX-240	MGX-376	MGX-448	MGX-506	MGX-528	MGX-546
MGX-279	MGX-377	MGX-456	MGX-514	MGX-533	MGX-550
MGX-279D	MGX-378	MGX-478	MGX-519	MGX-534	
MGX-280	MGX-380	MGX-480	MGX-520	MGX-536	
MGX-285	MGX-384	MGX-487	MGX-522	MGX-537	
MGX-292	MGX-402	MGX-488	MGX-524	MGX-541	
MGX-314	MGX-413	MGX-505	MGX-527	MGX-545	

Transfer Cases – 1/Unl/P

MTC-4213	MTC-3116 (T-2111)	MTC-3205-GV (RTC-25/350)	MTC-3209-GV (MTC-60/380)
MTC-4210	MTC-3118-FV (TC-180 & TC-180-23)	MTC-3206-FV (TC-237)	MTC-3212-GV (315 & 548B)
MTC-4208	MTC-3118-CV (358)	MTC-3206-CS (544)	MTC-3312-FV (TC-270)
MTC-4206-FV (TC-38)	MTC-3120-FV (TC-143)	MTC-3208-GV (RTC-50)	MTC-3220-FC (TC-142)
MTC-3106-FV (TC-137)	MTC-3124 (T-2119)	MTC-3209-GV (RTC-60/420)	MTC-2212-CV (306)
MTC-3111 (T-2111)	MTC-3205-GV (MTC-25/247)	MTC-3209-GV (RTC-60/380)	
MTC-3112-CV (529 & 548C)	MTC-3205-GV (MTC-25/350)	MTC-3209-GV (MTC-60/420)	

TERMS AND CONDITIONS

Coverage Exclusions

Product Description

All
The cost of any repairs, replacements or adjustments to a covered component (1) associated with noise; (2) resulting from the use or installation of non-genuine Meritor components or materials; (3) due to vibration associated with improper operation or misapplication of drivetrain components; and (4) damage resulting from corrosion.

For axle assemblies supplied by Meritor with suspension and interface brackets designed and/or attached by non-Meritor parties, Meritor warranty coverage does not apply to the brackets, bracket attachment methods, and field issues caused by brackets or bracket attachments to any covered component unless specified in a separate OEM agreement.

Front Axles
King Pin Bushings.

Rear Axles
Self-contained traction equalizers and oil filters. The use of NoSPIN differentials will result in the exclusion of axle shafts from warranty considerations. NoSPIN is a product of Eaton.

ASA
Boot and bushing. Bent, broken, over-torqued, missing or otherwise damaged pawl assemblies.

Cam Brake
Brake lining wear and brake shoe "rust-jacking."

Disc Brake
Pad wear, rotor wear.

Coverage Limitations

Product Description

All
Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program. Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Front Axles
Tie rod and tie rod ends limited to 3-year/300,000-mile or published vocational coverage, whichever is less. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

Rear Axles
Pinion and through shaft seals limited to 3-year/300,000-mile or published vocational coverage, whichever is less, if yoke is installed by Meritor. If yoke is not installed by Meritor, then Meritor does not warrant pinion seals. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

Rear Axles
The Meritor® breather part number A-2297-C-8765 with A-3196-J-1336 hose must be used for eligibility of any potential warranty consideration relating to contamination and/or loss of lube in axles.

Cam Brake
Limited to bracket, brake spider and camshaft structural integrity.

STEELite X30
Wearable life is up to the discard diameter of the drum.

Disc Brake
Warranty coverage for boots, seals, bushings and pins is 2/200/P. Warranty coverage for pads is 1/100/P.

Warranty coverage on vehicles with 1,850 lb-ft engine torque and over may be reduced on individual drivetrain components. Contact your Meritor representative for specific details.

TERMS AND CONDITIONS

(1) What is Covered by this Commercial Warranty?
Meritor Heavy Vehicle Systems, LLC warrants to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment in vehicles licensed for on-highway use, will be free from defects in material and workmanship. This warranty coverage begins only after the expiration of the OEM's vehicle warranty for the applicable covered components. Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed elsewhere in this warranty statement.

Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Components (whether new, used or remanufactured) installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

For certain components, coverage requires the use of specific extended drain interval or synthetic lubricants. For further information about lubrication and maintenance, see Meritor publication Maintenance Manual Number I and the applicable Meritor maintenance manual for the product in question. Other conditions and limitations applicable to this warranty are detailed below.

(2) Designation of Vocational Use Required.
To obtain warranty coverage, each Owner must notify Meritor through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Meritor components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Meritor directly. Failure to notify Meritor of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Meritor as to the intended vocational use of the vehicle. This notification can be sent directly to Meritor or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Meritor's warranty requires that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

(3) What is the Cost of this Warranty?
There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty?
This warranty does not cover normal wear and tear; nor does it cover a component that fails, malfunctions or is damaged as a result of (I) improper installation, adjustment, repair or modification (including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by Meritor), (II) accident, natural disaster, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the axle and/or driveline capacity), or (III) improper or insufficient maintenance (including deviation from approved lubricants, change intervals, or lube levels). This warranty does not cover any component or part that is not branded by Meritor. For vehicles that operate full or part time outside of the United States and Canada, a one year, unlimited mileage, parts only warranty (1/Unl/P) will apply.

(5) Remedy.
The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Meritor's option. Meritor reserves the right to require that all applicable failed materials are available and/or returned to Meritor for review and evaluation.

(6) Disclaimer of Warranty.
THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESSED, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

(7) Limitation of Remedies.
In no event shall Meritor be liable for special, incidental, indirect, or consequential damages of any kind or under any legal theory, including, but not limited to, towing, downtime, lost productivity, cargo damage, taxes, or any other losses or costs resulting from a defective covered component.

(8) To Obtain Service.
If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Meritor or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Meritor service location. The dealer will inspect the vehicle and contact Meritor for an evaluation of the claim. When authorized by Meritor, the dealer will repair or replace during the term of this warranty any defective Meritor component covered by this warranty.

(9) Entire Agreement.
This is the entire agreement between Meritor and the Owner about warranty and no Meritor employee or dealer is authorized to make any additional warranty on behalf of Meritor. This agreement allocates the responsibilities for component failure between Meritor and the Owner.

Product models, brands, names and trademarks depicted herein are the property of their respective owners and, except where otherwise indicated, are not in any way associated with Meritor Heavy Vehicle Systems, LLC, or any parent or affiliate, thereof.

MERITOR

Meritor Heavy Vehicle Systems, LLC
2135 West Maple Road
Troy, Michigan 48084 USA

For more information:
call Ontrac at 866-668-7221
or visit meritor.com

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Litho in USA, SP-95155
Revised 1-19 (47865/11900)

Waterous Seven-Year Limited Warranty

WATEROUS warrants, to the original Buyer only, that products manufactured by WATEROUS will be free from defects in material and workmanship under normal use and service for a period of seven (7) years from the date the product is first placed in service, or seven and one-half (7-1/2) years from the date of shipment by WATEROUS, whichever period shall be the first to expire; provided the Buyer notifies WATEROUS, in writing, of the defect in said product within the warranty period, and said product is found by WATEROUS to be nonconforming with the aforesaid warranty. When required in writing by WATEROUS, defective products must be promptly returned by Buyer to WATEROUS at WATEROUS' plant at South St. Paul, Minnesota, or at such other place as may be specified by WATEROUS, with transportation and other charges prepaid. A Returned Material Authorization (RMA) is required for all products and parts and may be requested by phone, fax, email, or mail. The aforesaid warranty excludes any responsibility or liability of WATEROUS for:

(a) damages or defects due to accident, abuse, misuse, abnormal operating conditions, negligence, accidental causes, use in non-firefighting applications, or improper maintenance, or attributable to written specifications or instructions furnished by Buyer;

(b) defects in products manufactured by others and furnished by WATEROUS hereunder, it being understood and agreed by the parties that the only warranty provided for such products shall be the warranty provided by the manufacturer thereof which, if assignable, WATEROUS will assign to Buyer, if requested by Buyer;

(c) any product or part, altered, modified, serviced or repaired other than by WATEROUS, without its prior written consent;

(d) the cost of dismantling, removing, transporting, storing, or insuring the defective product or part and the cost of reinstallation; and

(e) normal wear items (packing, strainers, filters, light bulbs, anodes, intake screens, mechanical seals, etc.).

ALL OTHER WARRANTIES ARE EXCLUDED, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER CAUSE OF ACTION, SHALL WATEROUS BE LIABLE FOR ANY PUNITIVE, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR PERSONAL INJURY OR PROPERTY DAMAGES.

The exclusive remedy of Buyer and the sole liability of WATEROUS, whether based on contract, warranty, tort or any other basis of recovery whatsoever, is expressly limited at the election of WATEROUS to:

(a) the replacement at the agreed point of delivery of any product or part, which upon inspection by WATEROUS or its duly authorized representative, is found not to conform to the limited warranty set forth above, or

(b) the repair of such product or part, or

(c) the refund or crediting to Buyer of the net sales price of the defective product or part.

BUYER'S REMEDIES CONTAINED HEREIN ARE EXCLUSIVE OF ANY OTHER REMEDY OTHERWISE AVAILABLE TO BUYER.

Waterous Company
125 Hardman Avenue South
South St. Paul, MN 55075 USA
www.waterousco.com

WATEROUS

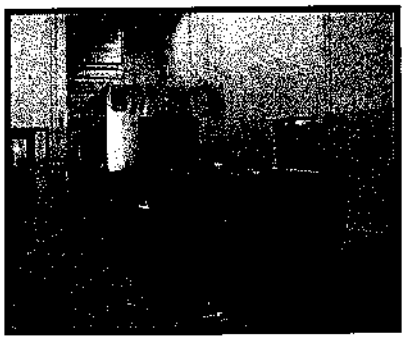
F-2891 (04/15/20)

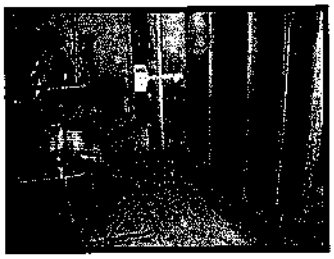
SECTION 6

Certification Document CD0028
Engine Installation – Velocity & Impel ISL/ISC 2007

Pierce Manufacturing, Inc. certifies that the Cummins ISL/ISC Engine as installed in a Velocity or Impel chassis meets the engine installation requirements of the engine manufacturer, the NFPA 1901 and NFPA 1906 guidelines as applicable, and Pierce engine design standards.

Validation testing was conducted in the Pierce wind tunnel chassis dynamometer and cooling test laboratory. Test results have been reviewed and accepted by representatives of the engine supplier.





VALIDATION TEST: RD1317

Pierce Manufacturing, Inc.

WISCONSIN JAMES R. LACKORE E-28228 APPLETON, WI PROFESSIONAL ENGINEER

James Roger Lackore, PE
December 13, 2008

NPower

May 4, 2007

Mr. Kevin Hanegraaf
Pierce Manufacturing Inc.
2600 American Drive
Appleton, WI 54913

Dear Kevin:

We have reviewed the installation of the Cummins 2007 ISC and ISL engines in the Pierce Velocity and Impel chassis and have found that the engine models listed below are installed in concurrence with our installation recommendations. Please notify us if there are any changes to the installation of these engines. If any changes are made, they must be reviewed and a new statement will be issued regarding concurrence.

Engine Models Reviewed:		
	ISC 260	
	ISC 285	ISL 345
	ISC 300	ISL 365
	ISC 315	ISL 370
	ISC 330	ISL 400
	ISC 360	ISL 425

Please let me know if you need any additional information.

Sincerely,

Michael Bertkowski
OEM Account Manager

cc: Jon Stege, Jim Vanden Boogard

Cummins NPower LLC
800 W. Ryan Road
Oak Creek, WI 53154
Phone +1 414 768 7400
www.npower.cummins.com

Certification Document CD0001
Velocity® & Impel®
Cab Doors

Pierce Manufacturing certifies the integrity of the Velocity® & Impel® cab doors.

Specimens representing the substantial structural configuration of the Velocity and Impel cab front and crew doors have been successfully tested to meet the following objectives:

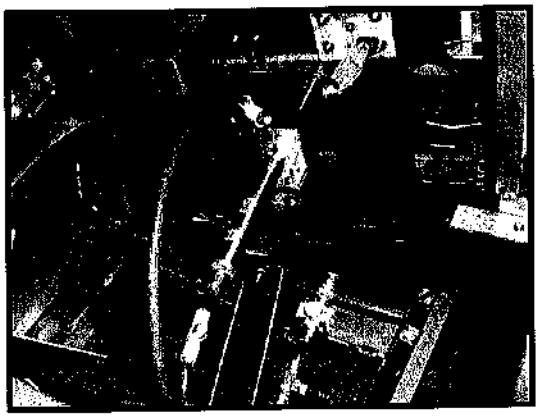
OBJECTIVES:

- Survive a 200,000-cycle door slam test with a slam acceleration up to 20 g's on one representative
- Validate the assembly concept of the main structure of the door by evaluating the durability of the bonding technique.
- Evaluate components, structure, and mounting of the door during and the end of the test for fatigue and failure to ensure durability.
- Verify that the door seals function properly at the end of the test.
- Evaluate the new extrusions and castings of the cab doorframe during and at the end of the test for fatigue, failure, and deformation of seal flanges.
- Evaluate various mounting options for the electronic control module for durability during portions of the slam test.

CONCLUSIONS:

- The door structure and doorframe successfully completed a 200,000-cycle door slam test with a door slam acceleration of 50 g's.

VALIDATION TEST: RD1239, RD1350



Pierce Manufacturing, Inc.



James Roger Lackore, PE
March 16, 2008

PIERCE MANUFACTURING INC.®

AN OSHKOSH CORPORATION® COMPANY

Certification Document CD0005
Velocity® & Impel®
Windshield Wiper System

Pierce Manufacturing certifies the integrity of the Velocity® & Impel® Windshield Wiper System.

Specimens representing the configuration of the Velocity® & Impel® windshield wipers have been successfully tested to meet the following objectives:

OBJECTIVES:

- Complete 3,000,000 cycles of windshield wiper operation per SAE J198 § 6.2
- Inspect wiper motor, pivots, linkages, and mounts frequently to validate cumulative wiper system integrity.

CONCLUSIONS:

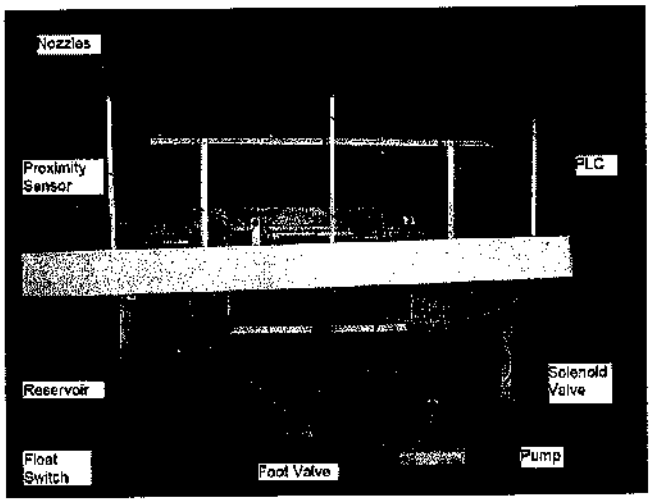
- The wiper linkage, pivots, and mounts successfully completed 4,254,000 cycles.
- The low speed circuit on the wiper motor failed at 2,954,000 cycles but it continued to operate on high speed. The low speed failure was determined to be due to water intrusion. The production wiper motors are coated in "EL-Cast Resin with a 641 hardener additive" to seal them from water intrusion to prevent failure.

VALIDATION TEST: RD1240

Pierce Manufacturing, Inc.

WISCONSIN JAMES R. LACKORE E-26228 APPLETON, WI PROFESSIONAL ENGINEER

James Roger Lackore, PE
March 16, 2008



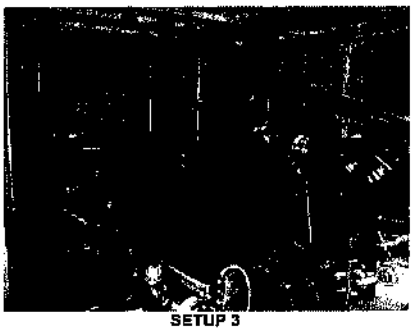
Certification Document CD0018
Velocity® & Impel®
Seats and Seat Belts

Pierce Manufacturing certifies the conformance of the Velocity® & Impel® cab seats and seat belts to Federal Motor Vehicle Safety Standards. Representative Velocity® & Impel® Seat and Seat Belt designs have been tested successfully in accordance with FMVSS 207.

Physical testing was performed to qualify passenger seats to meet Federal Motor Vehicle Safety Standards (FMVSS) 207 and 210. This requires that a minimum of 3,000 lbf be applied to both the lap and shoulder belts via appropriate body blocks. A third force of twenty times the mass of the seat must be applied at the center-of-gravity (CG) of the seat. All three forces are applied at the same time, reached within thirty seconds of the start of the test, and be held for a minimum of ten seconds.

A force equal to twenty times the mass of the seat was applied to each seat in the direction opposite to the combination pull. A moment of 275 lb-ft was applied to the seat with reference to the H-point.

This testing ensures that the seat mounting and seat belt anchors are adequate to retain the seats and occupants in a crash. The Federal requirements are based on the high deceleration rates of passenger vehicles, so the design requirements are significantly more conservative considering the slower crash speeds of heavy trucks.



SETUP 3

Velocity Test Cab – Hydraulic Cylinder Mounting

VALIDATION TESTS:

RD1274
RD1335
RD1352
RD1405
RD1437
RD1446

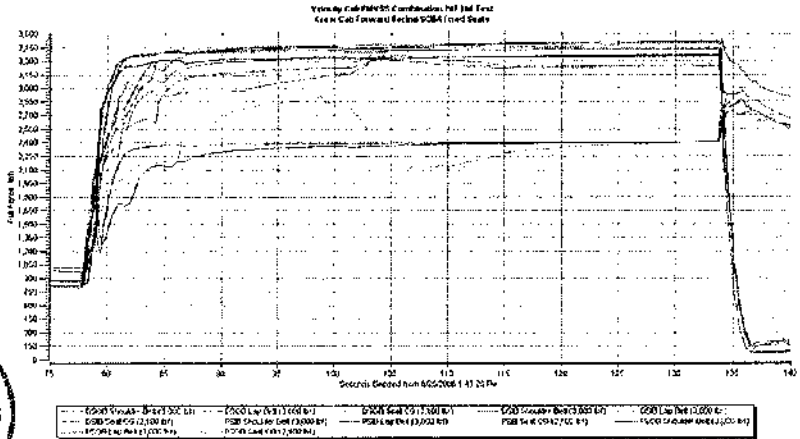


CHART G1

Velocity Test Cab – Crew Cab Forward-Facing Locations Test Results

Pierce Manufacturing, Inc.



James Roger Lackore, PE
June 17, 2008

Certification Document CD0004
Velocity® & Impel®
Window Regulators

Pierce Manufacturing certifies the integrity of the Velocity® & Impel® window regulators.

Specimens representing the substantial structural configuration of the Velocity® & Impel® window regulators have been successfully tested to meet the following objectives:

OBJECTIVES:

- Electric window regulators withstand 30,000 up-down cycles.

CONCLUSIONS:

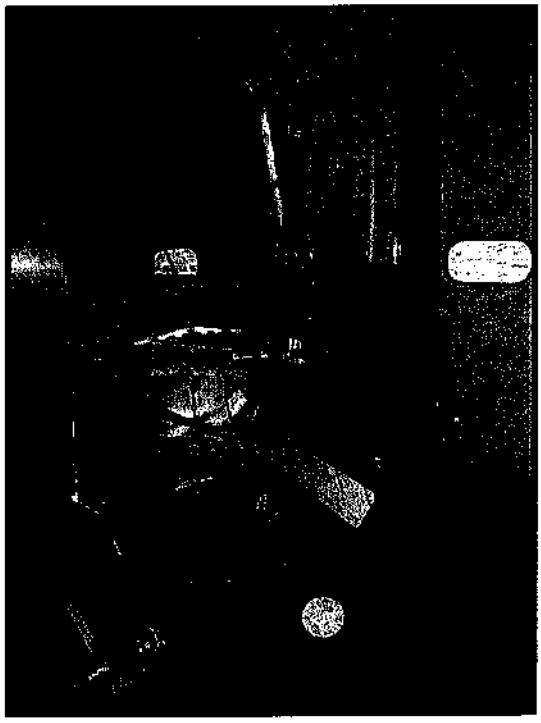
- The electric window regulators withstood 30,000 cycles without failure.

VALIDATION TEST: RD1350, RD1368

Pierce Manufacturing, Inc.

WISCONSIN JAMES R. LACKORE E-26228 APPLETON, WI PROFESSIONAL ENGINEER

James Roger Lackore, PE
March 16, 2008



PIERCE MANUFACTURING INC.®

AN OSHKOSH TRUCK CORPORATION® COMPANY

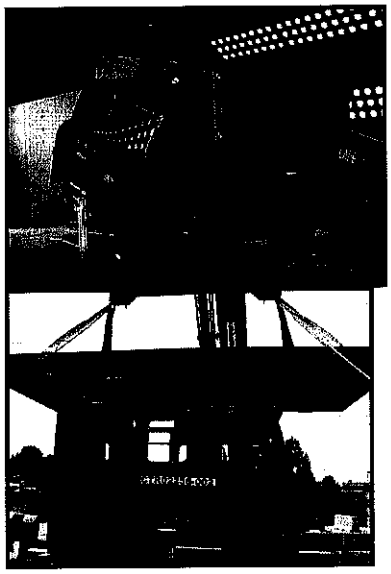
Certification Document CD0009
Velocity® & Impel®
Cab Integrity Certification

Pierce Manufacturing certifies the integrity of the Velocity/Impel cab relative to occupant protection.

A specimen representing the substantial structural configuration of the Velocity and Impel cab models has been successfully tested in accordance with the following standards.

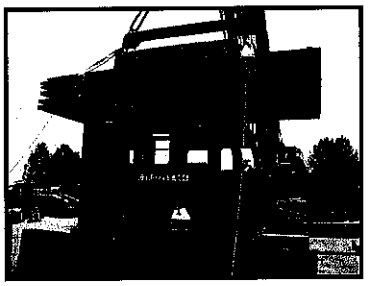
- SAE J2422 Cab Roof Strength Evaluation – Quasi-Static Loading Heavy Trucks.
- European Occupant Protection Standard ECE Regulation No. 29.
- SAE J2420 COE Frontal Strength Evaluation – Dynamic Loading Heavy Trucks.

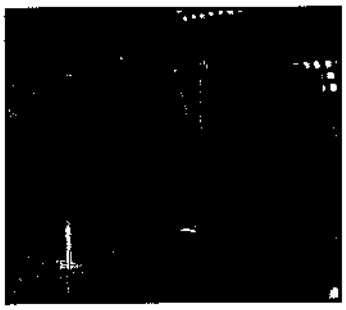
Side Impact: The test cab was subjected to dynamic preload where a 13,275 lb moving barrier was slammed into the side of the cab at 5.5 mph, striking with an impact of 13,000 ft-lbs of energy. This test is not required to meet the ECE 29 standard, but is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a roll-over incident.



Roof Crush: This same test cab was then subjected to a roof crush force of 22,050 lbs. This value meets the ECE 29 criteria, which must be equivalent to the front axle rating up to a maximum of 10 metric tons.

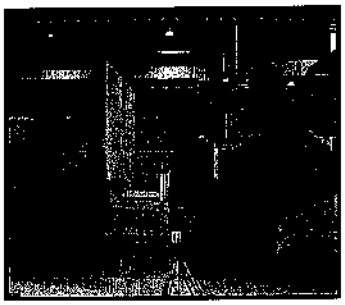
Additional Roof Crush: The same cab was then loaded with 58,000 lbs, 85,000 lbs, and finally 100,000 lbs on the roof, exceeding the ECE test by 4.5 times!





Frontal Impact: The test cab was struck by the 13,275 lb moving barrier at a speed sufficient to impart the required 32,600 ft-lbs of energy.

The cab survived this second blow without compromising the survival space of any occupant area.



Additional Frontal Impact: The same cab was then struck a third time at a higher speed to impart 65,200 ft-lbs of energy into the cab (twice the ECE 29 level of energy).

The cab survived this third blow, again without compromising the survival space of any occupant area.



Side Crush: As an additional test of the Velocity/Impel strength, the same test cab was set on its side and loaded to 100,000 lbs. The cab in this test withstood the load without any appreciable damage or occupant space intrusion.

Pass-Fail criteria of the SAE tests and the ECE 29 test is a measure of whether the "survival space" inside the cab is compromised during any of the test loads. The Pierce cab withstood all integrity tests on the same cab without any measurable intrusion into the survival space of the occupant area.

Witnessed and Certified by:

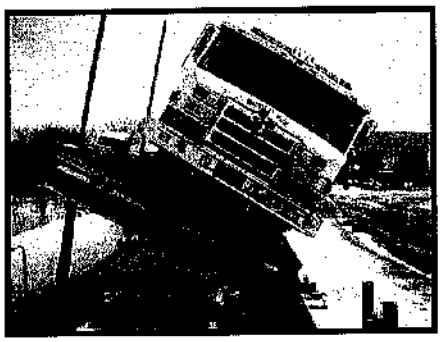
Pierce Manufacturing, Inc.

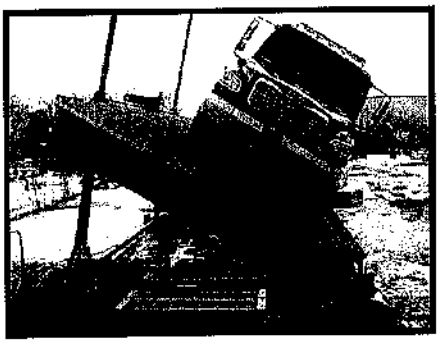
WISCONSIN JAMES R. LACKORE E-26226 APPLETON, WI PROFESSIONAL ENGINEER

James Roger Lackore, PE
January 24, 2008

Certification Document CD0156
Statement of Compliance to NFPA 1901-2016
Vehicle Stability

Pierce fire apparatus comply with NFPA 1901 Section 4.13 Vehicle Stability using the tilt table method. As prescribed by the standard, each apparatus is compared to a substantially similar apparatus that has been loaded as required and tested on a tilt table per the SAE J2180 test procedure. If the apparatus configuration was not expected to meet the minimum tilt table criteria, then it will be equipped with the Electronic Stability Control option. A listing of all tested apparatus is maintained by the Research and Development lab and is available for inspection at the Appleton factory.





4.13 Vehicle Stability.

4.13.1* Rollover Stability. The apparatus shall meet the criteria defined in 4.13.1.1, or it shall be equipped with a stability control system in accordance with 4.13.1.2.

4.13.1.1 The apparatus shall meet the criteria defined in either of the following:

(1)*The apparatus shall remain stable to 26.5 degrees in both directions when tested on a tilt table in accordance with SAE J2180, *A Tilt Table Procedure for Measuring the Static Roll over Threshold for Heavy Trucks*.

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

4.13.1.1.1 Compliance shall be certified by testing, calculating, or measuring the apparatus or by comparing the apparatus to a compliant, substantially similar example apparatus, and the certification shall be delivered with the fire apparatus.

4.13.1.1.2 The example apparatus shall be considered substantially similar if it includes a chassis with the same or higher CG height, the same or narrower rear axle track width, the same or greater water tank size and CG height, the same type of front and rear suspension, and the same type and size of aerial device.

4.13.1.1.3 For purposes of 4.13.1.1, the apparatus shall be loaded with fuel, fire fighting agents, hose, ladders, a weight of 250 lb in each seating position, and weight equivalent to the miscellaneous equipment allowance as defined in Table 12.1.2.

4.13.1.1.3.1 If the apparatus is designed to meet a specified higher equipment loading or larger hose bed capacity or to carry additional ground ladders, these greater loads shall be included in the testing, calculating, or measuring.

4.13.1.1.3.2 The weight added to the fire apparatus for the purpose of test, calculation, or measurement shall be distributed to approximate typical in-service use of the fire apparatus while not exceeding the manufacturer's published individual compartment weight ratings.

4.13.1.2 If the apparatus is equipped with a stability control system, the system shall have, at a minimum, a steering wheel position sensor, a vehicle yaw sensor, a lateral accelerometer, and individual wheel brake controls.

VALIDATION TEST: Multiple Tests

Pierce Manufacturing, Inc.

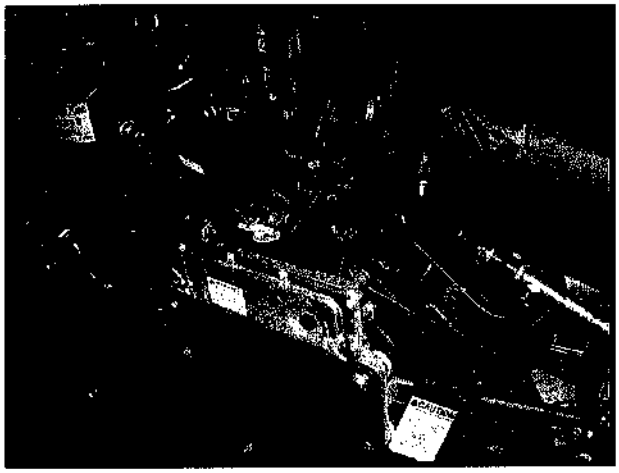
David W. Archer
Vice President of Engineering
June 1, 2017

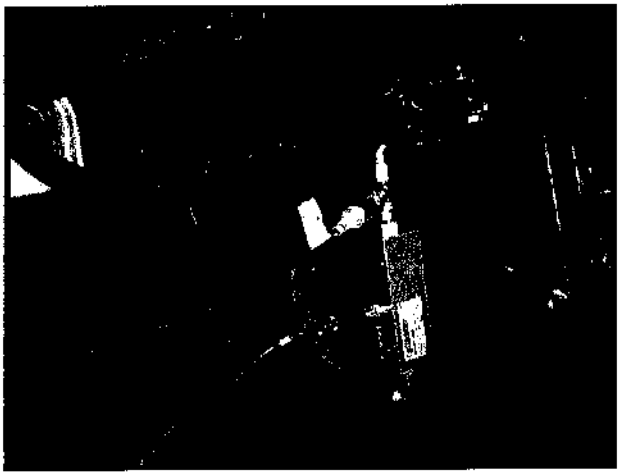
PIERCE MANUFACTURING INC.®

AN OSHKOSH CORPORATION® COMPANY

Certification Document CD0098
Power Steering System

Pierce Manufacturing, Inc. certifies that the power steering system as installed in our custom chassis meets the requirements of the component supplier, the NFPA 1901 and NFPA 1906 guidelines as applicable, and Pierce internal design standards.





VALIDATION TEST: RD1987, RD2055
RD2056, RD2057, RD2058, RD2059

Pierce Manufacturing, Inc.

David W. Archer
Director of Engineering
June 03, 2011

PIERCE MANUFACTURING INC.®

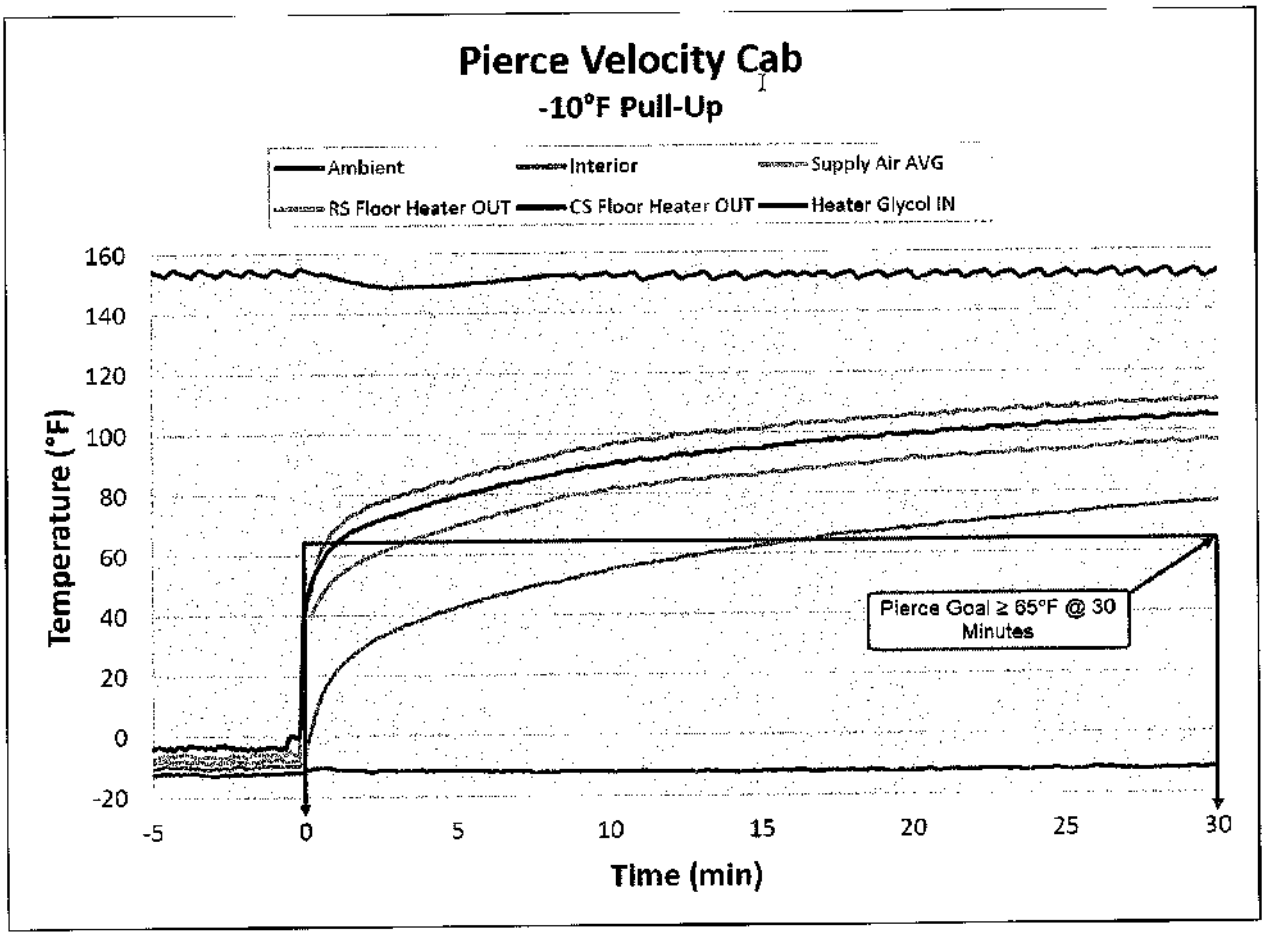
AN OSHKOSH CORPORATION® COMPANY

Certification Document CD0166
Velocity® & Impel®
Cab Heater

Pierce Manufacturing certifies the performance of the Velocity® & Impel® cab heat system.

The Velocity® & Impel® Heater System was tested successfully in an environmental chamber.

Heater testing was performed using the coolant supply procedures from SAE J381. The average cab temperature increased 86.5° F from -10° F to 75.6° F within the prescribed 30 minutes utilizing the right side under seat auxiliary heater. The cab was contained in a cold chamber at -10° F during the duration of the test.



VALIDATION TEST: TR#19-0047 R00

Pierce Manufacturing, Inc.



David Archer, Vice President of Engineering

PIERCE MANUFACTURING INC.®

AN OSHKOSH CORPORATION® COMPANY

Certification Document CD0168
Velocity® & Impel®
Air Conditioning & Defrost

Pierce Manufacturing certifies the performance of the Velocity® & Impel® cab air conditioning and defrost system.

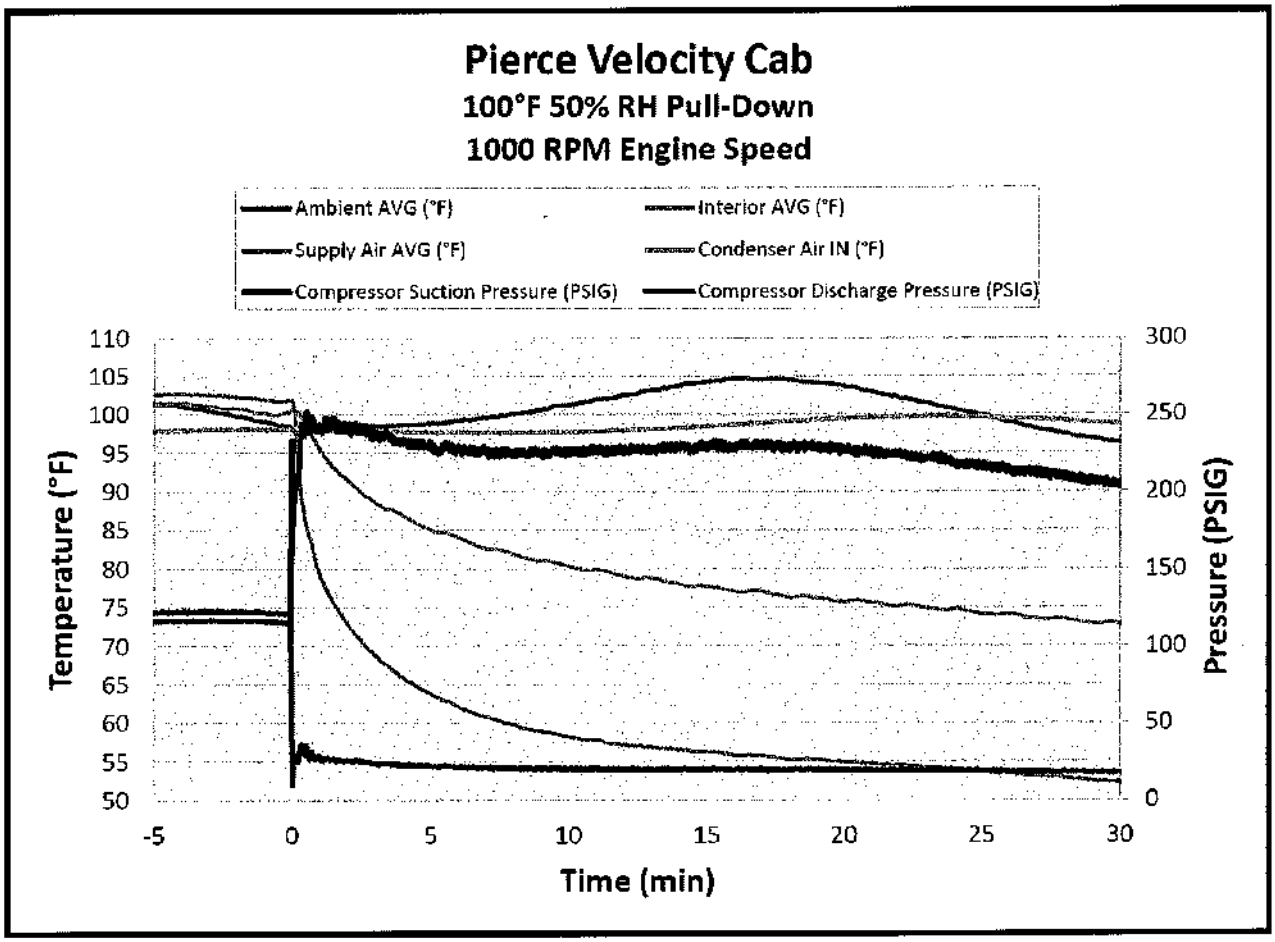
The air conditioning and defrost system was tested successfully in an environmental chamber.

Air Conditioning:

Air conditioning performance testing was conducted at an ambient of 100°F and 50 percent relative humidity. Engine speed was maintained at 1000 rpm with the controls set to maximum cooling.

All temperature probes were monitored to confirm temperature stabilization. The transient test began when all the vehicle doors were closed, and the air conditioning was turned on.

The average cab temperature dropped to 72.6 ° F at the end of the 30-minute test.



Defrosting
Defroster testing was performed in accordance with *SAE J381 Windshield Defrosting Systems Test Procedure and Performance Requirements-Trucks, Buses, and Multipurpose Vehicles.*

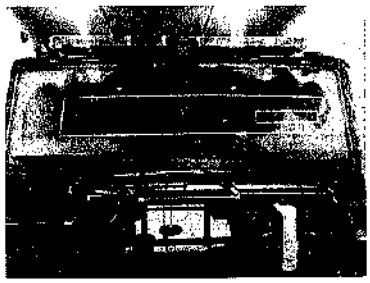
This SAE Recommended Practice establishes uniform test procedures and performance requirements for the defrosting system of enclosed cab trucks, buses, and multipurpose vehicles. Current engineering practice prescribes that for laboratory evaluation of defroster systems, an ice coating of known thickness be applied to the windshield and left- and right-hand side windows to provide more uniform and repeatable test results, even though under actual conditions such a coating would necessarily be scraped off before driving. The test condition, therefore, represents a more severe condition than the actual condition, where the defroster system must merely be capable of maintaining a cleared viewing area.

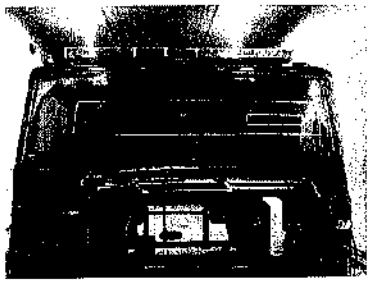
During the test, the vehicle is cold-soaked to 0° F in a cold chamber. A prescribed layer of ice is applied to the windshield. The defroster is then run and the advancing melt boundary marked as the test proceeds.

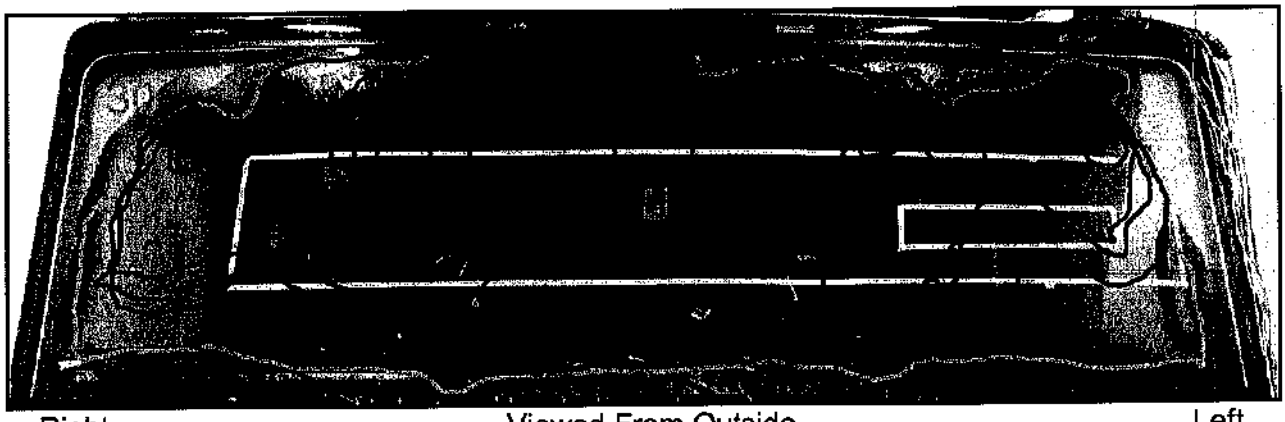
The SAE prescribed area of the windshield was 100% cleared within the specified 30 minute period.

Defrost Results


Start of Test


15 Minutes


30 Minutes


Right Viewed From Outside Left

VALIDATION TEST: MCC Test Report TR#19-0047 R00

Pierce Manufacturing, Inc.



David Archer
Vice President of Engineering

SECTION 7

Electrical Analysis

10/15/2020

Bid #: 1149 **Job #:**

Desc: Paducah Pumper **Sales Rep:** Puckett, Keith

Customer: PADUCAH FIRE DEPARTMENT **Organization:** Finley Fire Equipment Co, Inc

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0001244	High Idle w/Electronic Engine, Custom		0.00	1.20	0.00
0010670	ABS Wabco Brake System, Single rear axle		0.00	6.00	0.00
0016065	Control, Air Horn, Horn Ring, PS Chrome Push Button		0.00	0.83	0.00
0016080	Siren, Federal Q2B		0.00	100.00	0.00
0032189	Mirrors, Ramco, 6000PCHR, Heated/Remote, w/Heated/Remote		0.00	0.00	8.00
0072153	Primer, Trident, Air Prime, Air Operated		0.00	0.01	0.00
0079166	Batteries, (4) Exide Grp 31, 950 CCA ea, Threaded Stud		0.00	3.00	0.00
0122466	Cab Lift, Elec/Hyd, w/Manual Override, Imp/Vel		0.00	180.00	0.00
0535457	Speedometer, Class 1 w/LED, Officer Recessed Into Dashboard,		0.00	0.00	0.16
0543751	Light, Do Not Move Apparatus		0.00	0.80	0.00
0546006	Wiring, Spare, 15 A 12V DC 2nd		0.00	0.00	30.00
0549333	Indicators, Engine, Included with Pressure Controller		0.00	0.35	0.00
0561471	Lights, Backup, Wln M6BUW, LED, For Tail Lt Housing		0.00	3.20	0.00
0583824	Light, Pump Compt, Wln 3SC0CDCR LED White		0.00	0.36	0.00
0583938	Lights, Engine Compt, Custom, Auto Sw, Wln 3SC0CDCR, 3" LED,		0.00	0.30	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0602637	Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016		0.00	0.50	0.00
0620741	Light, HiViz FT-B-46-*, 46", 2nd		0.00	0.00	30.00
0620745	Light, HiViz FT-B-46-*, 46", 1st		0.00	0.00	30.00
0645683	Lights, Rear Scene, Wln, M9LZC LED		0.00	0.00	12.00
0650352	Spotlight, Golight Stryker, Model 30**4, LED, 2 Lts		0.00	0.00	3.00
0653533	Camera, Pierce, 7" LCD, Rear Camera Only		0.00	1.20	0.00
653937	Flasher, Headlight Alternating		0.00	0.00	0.08
0667902	Controls, Electric Windows, All Cab Doors, Impel/Velocity FR		0.00	26.00	0.00
0686687	Wiring, Spare, 37.5 A 12V DC, Customer Install Radio, 30A Sw Bat,		0.00	0.00	37.50
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine		0.00	0.42	0.00
0709257	Lights, Fog, PIAA RF6 07210 White LED, pair, Below Bumper		0.00	1.26	0.00
0768541	Light, Hose Bed, Amdor AY-LB-12HW040, 40" LED		0.00	0.00	1.20
0768882	Light, Roof Mt, HiViz LED, FT-B-54-2PKIT-*, Dual Lts, Cnt Feature		0.00	0.00	17.50
0741239	HVAC, Impel/Velocity FR, CARE	LM	0.00	0.00	136.00
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0013671	Compt, Rear, Rollup, 30.75" FF, 25.88" D	NFPA	0.90	0.00	0.90
0062586	Gauge, Water Level, Class 1, Pierce Std	NFPA	1.23	0.00	0.00
0063662	LS 161" Rollup, Full Height Front & Rear, FDLER	NFPA	4.50	0.00	4.50
0063669	RS 161" Rollup, Full Height Front & Rear, FDLER	NFPA	4.50	0.00	4.50
0088745	Light, Rear Zone Upper, Wln L31HRFN LED Beacon, Red LED	NFPA	3.20	4.80	0.00
0092582	Load Manager/Sequencer, MUX	NFPA	0.56	0.56	0.00
0509649	Lights, Cab and Crew Cab Access Steps, P25, LED w/Bezel, 1Lt Per	NFPA	1.00	0.00	0.00
0525667	Siren, Wln 295SLSA1, 100 or 200 Watt	NFPA	1.56	14.06	0.00
0540460	Light, Front Zone, Wln M6*C LED, Clear Lens, 4lts Q Bezel	NFPA	1.80	5.40	1.80
0540692	Lights, Side Zone Lower, Wln M6*C LED, Clear Lens, 3pr, Ovr 25	NFPA	5.40	8.10	0.00
0555486	Steps, 4-Door Cab, Dual, Imp/Vel	NFPA	2.14	0.00	0.00
0555915	Wiper Control, 2-Speed with Intermittent, MUX, Impel/Velocity	NFPA	2.10	8.40	0.00
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	NFPA	1.00	0.00	0.00
0564655	Lights, Rear Zone Lower, Wln M6*C LED, Clear Lens, For Tail Lt	NFPA	1.80	2.70	0.00
0564683	Lights, Tail, Wln M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir	NFPA	0.83	2.49	0.00
0568012	Air Dryer, Wabco System Saver 1200, Heater, 2010	NFPA	7.81	0.00	0.00
0586382	Gauges, Engine, Included With Pressure Controller	NFPA	0.30	0.00	0.00
0594554	Cab Instruments, Blk Gags, Blk Bez, Impel 2010	NFPA	1.26	0.00	0.00
0595087	DEF Tank, 4.5 Gallon, DS Fill, Forward of Rear Axle	NFPA	0.60	11.40	0.00

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply

Electrical Analysis

10/15/2020

Bid #: 1149 **Job #:**

Desc: Paducah Pumper **Sales Rep:** Puckett, Keith

Customer: PADUCAH FIRE DEPARTMENT **Organization:** Finley Fire Equipment Co, Inc

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0605126	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	NFPA	1.00	0.00	0.00
0607820	Lightbar, Wln, Freedom IV-V, 81", R_R_R__R____R__R_R_R	NFPA	9.61	0.00	4.95
0610240	Vehicle Data Recorder w/Seat Belt Monitor	NFPA	0.50	0.00	0.00
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	NFPA	0.10	0.90	0.00
0627282	Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	NFPA	1.75	0.00	0.00
0642572	Trans, Allison 5th Gen, 3000 EVS P, w/Prognostics,	NFPA	2.00	2.00	0.00
0646614	Compt, Storage, (2) Rear Facing, Overhead, 22 W x 10 H x 34 D,	NFPA	0.10	0.10	0.00
0647647	Lights, Dome, FRP Dual LED 4 Lts	NFPA	0.80	0.80	0.00
0648074	Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts	NFPA	0.49	0.00	0.00
0648425	Light, Directional, Wln 600 Cmb, Cab Crn, Imp/Vel/AXT/Qtm/DCF	NFPA	0.70	0.70	0.00
0664481	Bracket, License Plate & Light, P25 LED	NFPA	0.07	0.00	0.00
0668322	Cab, Impel FR, 7010 Raised Roof	NFPA	6.80	10.20	0.00
0679660	Light Shield, S/S, On Scene Night Axe, LED	NFPA	2.00	0.00	0.00
0689891	Lights, Deck, Wln (2) PFBP12C LED Rear Flood Lights	NFPA	3.40	0.00	0.00
0709438	Light, Walking Surf, FRP Flood, LED	NFPA	2.00	0.00	0.00
0736447	Engine, Cummins L9, 450 hp, 1250 lb-ft, W/OBD, EPA 2021, Imp/Vel	NFPA	1.00	0.00	0.00
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure	NFPA	0.10	0.00	0.00
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	NFPA	0.10	0.00	0.00
0767672	Cabinet, Rear Facing, RS, 19 W x 40.5 H x 26.5 D, Roll, Imp/Vel	NFPA	0.22	0.22	0.00
0769420	Lights, Perimeter Cab, Amdor AY-LB-12HW020 LED 4Dr	NFPA	1.20	0.00	0.00
0769572	Lights, Perimeter Pump House, Amdor AY-LB-12HW020 LED 2lts	NFPA	0.58	0.00	0.00
0770056	Lights, Perimeter Body, Amdor AY-LB-12HW020 LED 2lts, Rear Step	NFPA	0.60	0.00	0.00
'70200	Handrail, Exterior, Hansen, Knurled, Alum, LED Backlit, 4-Door Cab	NFPA	0.80	0.00	0.00
J771857	Cabinet, Rear Facing, LS, 21 W x 40.5 H x 30.5 D, Roll, Imp/Vel	NFPA	0.41	0.41	0.00
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	NFPA	4.20	4.20	0.00
0783657	Cabinet, Forward Facing, Center, 42 W x 58 H x 24 D, Roll, Imp/Vel	NFPA	0.58	0.58	0.00
0791528	Light, Traffic Directing, Wln TAL65, 36.00" Long, TACTL5	NFPA	0.60	1.20	0.00
0794959	Controller, Pressure, Pierce, Pump Boss, PBA300	NFPA	1.80	0.00	0.00
0658019	Alternator, 360 amp, Niehoff C531/C537	S	0.00	0.00	0.00
		Load Totals:	**91.00**	**405.15**	**322.09**

Note: Minimum Continous Load is in "Blocking Right of Way" mode.(Reference current edition of NFPA 1901)
Note: Intermittent Load items are not factored in on any alternator load comparisons. These items are included on the report for reference only and should be looked at as amp draw exclusion items. (Reference current edition of NFPA 1901)
Note: Total Connected Load "Demand" represents Total Connected Load minus any Load Managed items

Alternator Output at Idle: 221.00

Minimum Continuous Load	
Supply:	221.00
Demand:	91.00
Variance:	130.00

Alternator Output at Governed Speed: 345.00

Total Connected Load	
Supply:	345.00
Demand:	277.09
Variance:	67.91

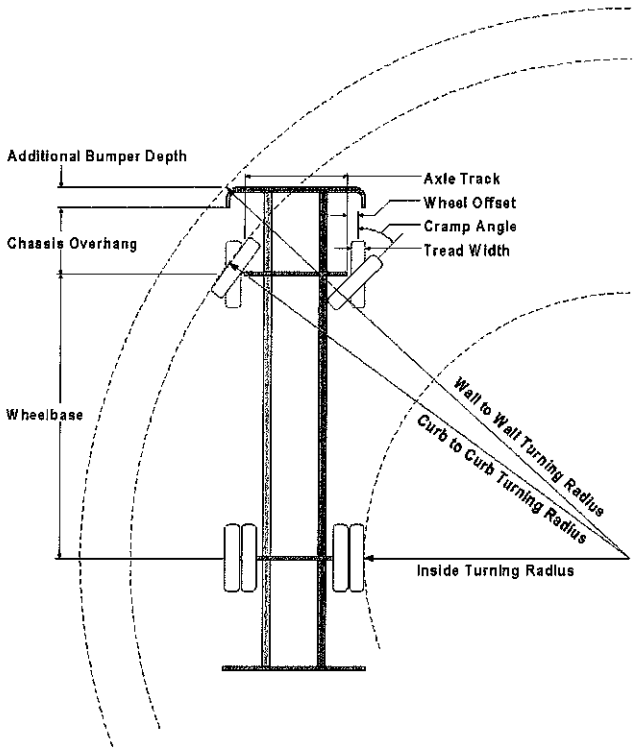
* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply

Turning Performance Analysis

10/15/2020

Bid Number: 1149
Department: PADUCAH FIRE DEPARTMENT

Chassis: Impel Chassis, 2010
Body: Pumper, Long, Aluminum, 2nd Gen



Parameters:

*Inside Cramp Angle:	45°
Axle Track:	81.92 in.
Wheel Offset:	4.68 in.
Tread Width:	16.3 in.
Chassis Overhang:	78 in.
Additional Bumper Depth:	19 in.
Front Overhang:	97 in.
Wheelbase:	197 in.

Calculated Turning Radii:

Inside Turn:	15 ft. 4 in.
Curb to curb:	29 ft. 6 in.
Wall to wall:	34 ft. 6 in.

Category	Option	Description
Axle, Front, Custom	0641600	Axle, Front, Meritor MFS-20 21,500 lb, w/assist, Imp/Vel
Wheels, Front	0019611	Wheels, Front, Alcoa, 22.50" x 12.25", Aluminum, Hub Pilot
Tires, Front	0594821	Tires, Front, Goodyear, G296 MSA, 425/65R22.50, 20 ply
Bumpers	0123625	Bumper, 19" Extended, Imp/Vel

Notes:

*Actual Inside cramp angle may be less than shown.

Curb to Curb turning radius calculated for 9.00 inch curb.

Definitions:	
Inside CrampAngle	Maximum turning angle of the front inside fire.
Axle Track	King-pin to King-pin distance of front axle.
heel Offset	Offset from the center line of the wheel to the King-pin.
Tread Width	Width of the tire tread.
Chassis Overhang	Distance of the center line of the front axle to the front edge of the cab. This does not include the bumper depth.
Additional Bumper Wheel	Depth that the bumper assembly adds to the front overhang.
Wheelbase	Distance between the center lines of the vehicles front and rear axles.
Inside Turning Radius	Radius of the smallest circle around which the vehicle can turn.
Curb to Curb Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures assumes a curb height of 9 inches.
Wall to Wall Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures takes into account any front overhang due to chassis , bumper extensions and or aerial devices.

SECTION 8

NO REGRETS WHEN
YOU CHOOSE
PIERCE.

A LOT'S RIDING ON YOUR INVESTMENT.

The safety of firefighters and families, the security of property, and the well-being of the entire community depend on your decision. Lives and reputations ride on your investment. Make sure help is always on the way.

Go with longevity. Go with the #1 industry authority that protects the legacies great community leaders leave behind. When you invest in Pierce® fire apparatus, you're making the right call for the long haul.



No other manufacturer has a stronger foundation of expertise, stability, and support.

Unmatched Support

- Finley Fire Equipment has been a full sales & service Pierce dealer since 1972
- 3 state-of-the-art service facilities operated by 80 dedicated sales, service, & support staff
- Specially-trained sales & service staff available 24/7/365

Untouchable Fire Apparatus Expertise

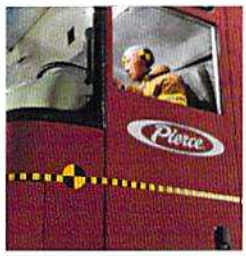
- Over 30,000 custom chassis built
- More than 30 patents attributed to our continued investment in research, development, & safety
- Thousands of years of cumulative experience
- First single-source manufacturer of custom fire apparatus in North America to achieve ISO 9001 certification
- Only manufacturer to have third party, Underwriters Laboratories certification on the entire apparatus

Unshakable Stability

- Rock-solid financials as an Oshkosh Corporation Company
- Oshkosh named a World's Most Ethical Company by Ethisphere Institute
- Recognized as a 2016 Best Governance, Risk, & Compliance Program by NYSE Governance Services
- Complete transparency of a public traded company
- Greater strength from shared engineering & technology across all of Oshkosh Corporation
- With over 100 years of history & numerous industry-first contributions, we're not going anywhere
- America's Best Large Employers list by Forbes

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#1
RESEARCH, DEVELOPMENT, & SAFETY
PIERCE

1,600+
MANUFACTURING EMPLOYEES
PIERCE



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PARTS INVENTORY
PIERCE



METROPOLITAN FIRE CHIEFS

24/7
RESPONSE
FINLEY FIRE EQUIPMENT

VOLUNTEER & COMBINATION OFFICERS SECTION

Pierce leads the industry in sponsorships that support families of fallen firefighters, recognize outstanding achievement, and further the education and safety of the fire service.

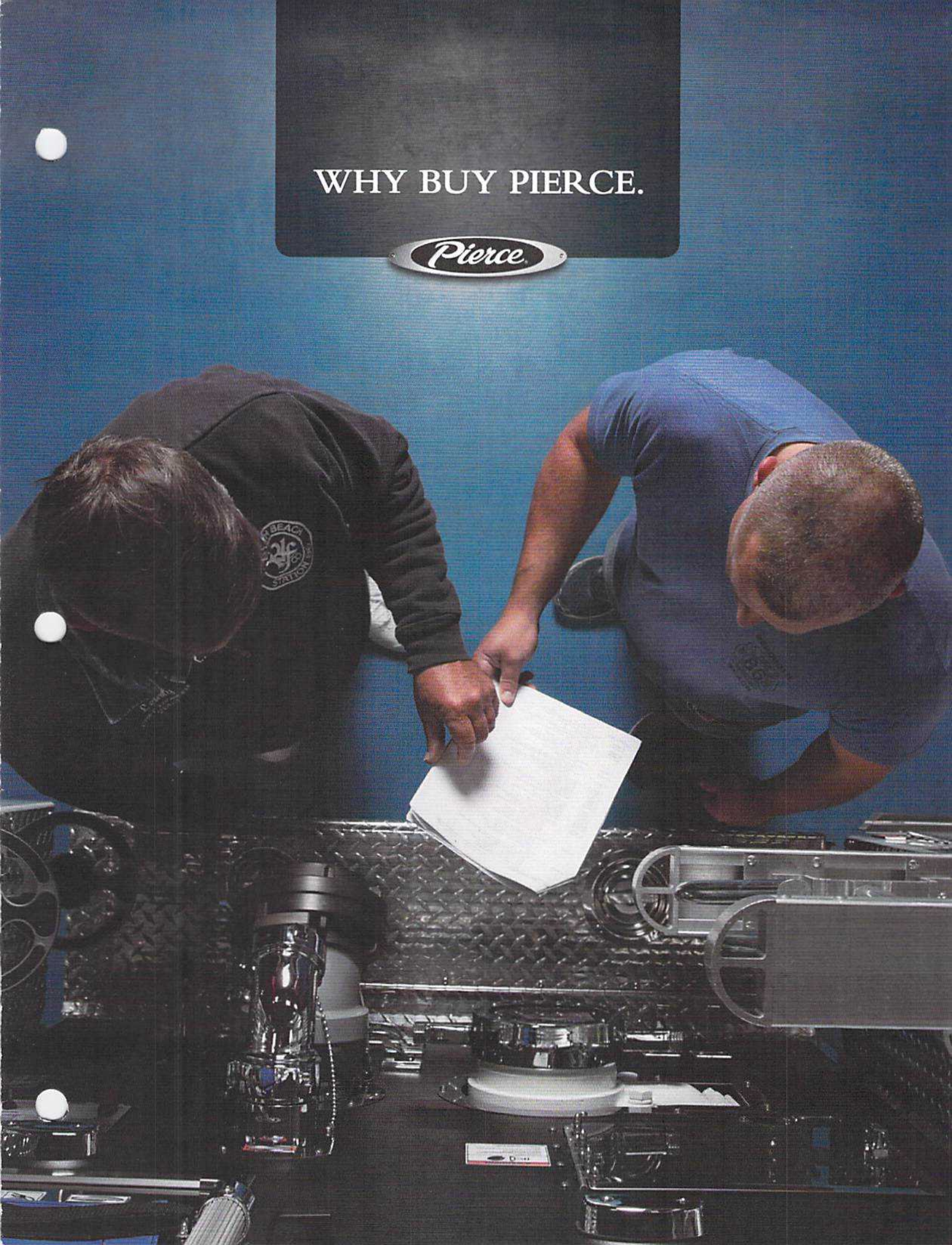
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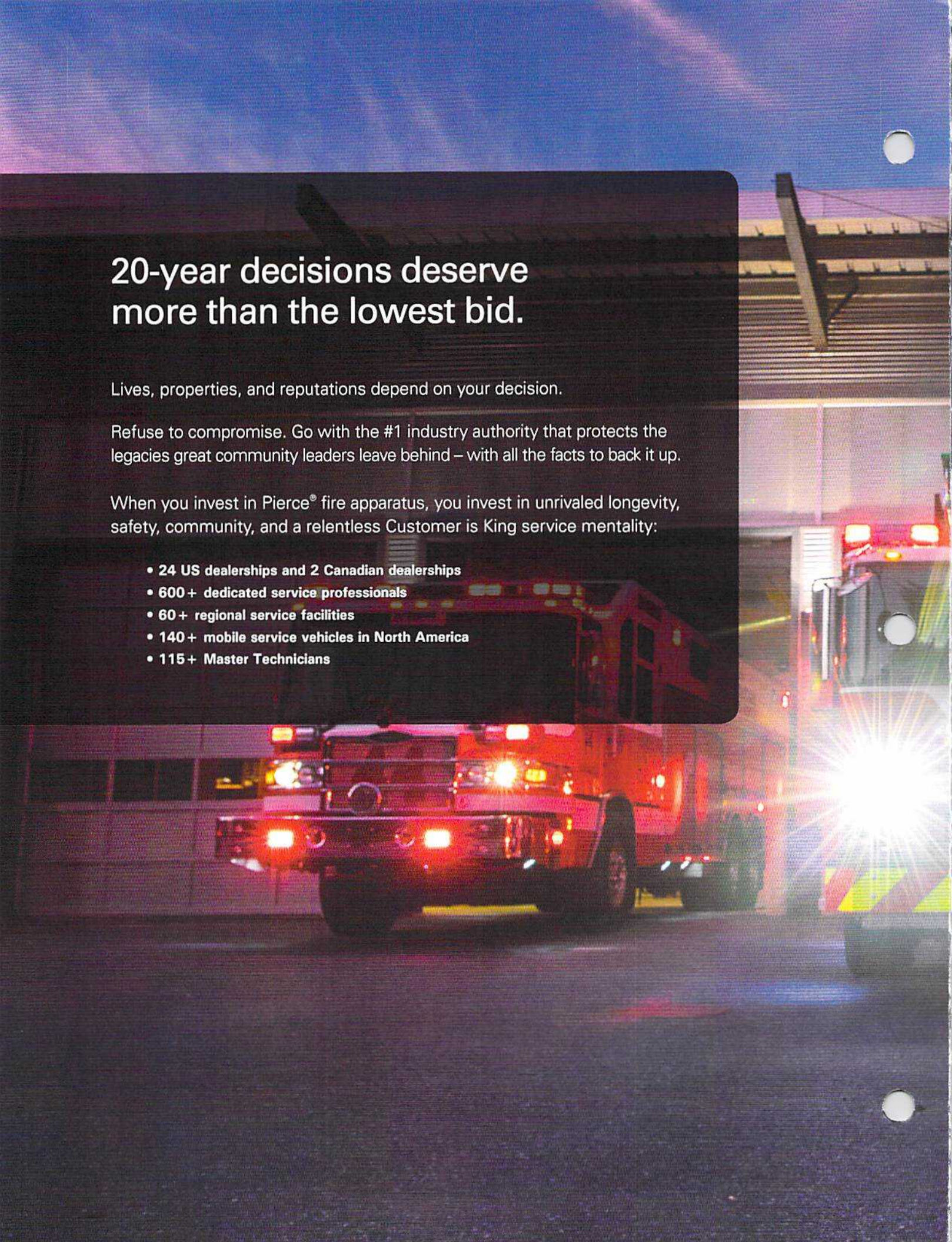
FINLEY FIRE EQUIPMENT

Pierce Manufacturing Inc., An Oshkosh Corporation Company
P.O. Box 2017, Appleton WI 54912-2017 USA

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P-0108-SLLSTBLTYSS-FNLY 3/18


WHY BUY PIERCE.
Pierce



20-year decisions deserve more than the lowest bid.

Lives, properties, and reputations depend on your decision.

Refuse to compromise. Go with the #1 industry authority that protects the legacies great community leaders leave behind – with all the facts to back it up.

When you invest in Pierce® fire apparatus, you invest in unrivaled longevity, safety, community, and a relentless Customer is King service mentality:

- **24 US dealerships and 2 Canadian dealerships**
- **600+ dedicated service professionals**
- **60+ regional service facilities**
- **140+ mobile service vehicles in North America**
- **115+ Master Technicians**


Lowest risk.
Highest return.
Strongest why.
Make sure help is always on the way.

Over a century of continuous leadership.



While other fire apparatus manufacturers have come, gone, and come again, one has continued to serve and advance.

Over 60,000 custom chassis in service. More than 30 patents in research, development, and safety. Thousands of years of cumulative experience.

Others claim leadership. Pierce delivers it.

STABILITY AND EXPERIENCE

105+ years of manufacturing experience

A brand committed to all-out performance, quality, & safety

3,000+ employees with average work force experience of 14 years

Over 1/4 of work force with 30-40 years of experience

More than 200 full-time engineers on staff

Subsidiary of Oshkosh Corporation, a leading global manufacturer of specialty vehicles with annual sales of $6.8 billion



Voice of the firefighter in all we do.

No one invests more time and resources into research, development, and safety than Pierce.

Learning how firefighters prepare and make decisions helps us constantly set new standards in protection and performance.

Pierce was featured on National Geographic's "Ultimate Factories" alongside companies such as Ford, Corvette, Harley-Davidson, and John Deere

INDUSTRY STEWARDSHIP

Comprehensive product line of custom pumpers, commercial pumpers, aerials, rescues, tankers/pumper tankers, & mini-pumpers

Dedicated class of Ascendant® aerials, including the world's first 107' heavy-duty aerial ladder on a single axle

First to offer frontal air bags & Side Roll Protection

Only manufacturer to provide Oshkosh® TAK-4® Independent Front Suspension to dramatically shorten stopping distance & improve ride quality

Only manufacturer to eliminate the need to build the entire body around the pump/pumphouse via PUC™

Only manufacturer to engineer multiplex systems purpose-built for the fire industry via Command Zone™ electronics





The only things outsourced here are the certifications.

Serving the specific needs of every department means you invest in more than a handful of engineers. We dedicate an entire engineering department to offer virtually limitless customization.

7 custom chassis. Bumper-to-bumper single source manufacturing. With rigorous testing and UL/ULC third-party certification on the pump, electrical and aerial.

MANUFACTURING EXPERTISE

First single-source manufacturer of custom fire apparatus in North America to achieve ISO 9001 certification

Third party Total Vehicle Assessment Certification by Underwriters Laboratories

State-of-the-art facilities & equipment, including over 1 million sq ft of engineering space

Superior engineering utilizing 3-D CATIA-V5 software

Dedicated Research & Development center

Industry-leading warranties

Heaviest-duty frame, cross members, & cab/body construction

80,000 psi steel under-slung body support

Fuel & air tank mounting - stainless steel straps standard

Oshkosh E-Coat immersion for superior corrosion prevention

Best-in-class 7-step paint process with 10-yr warranty

Integrated fire suppression systems





Support after the sale and beyond the fire.

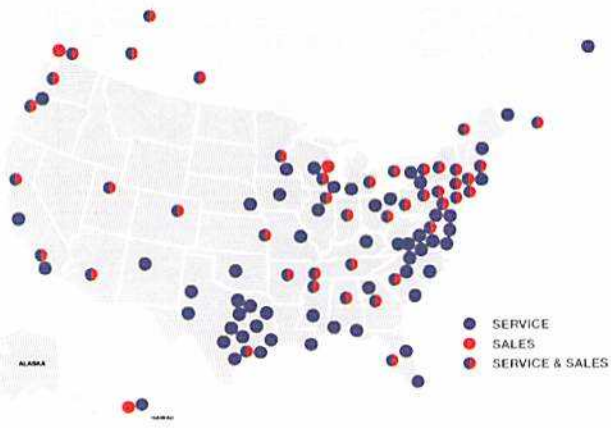
The most prepared, productive firefighter response requires the most robust dealer presence with relentless investment in programs that support, protect, and advance the fire service.

It doesn't stop at the sale. It can't stop at the truck.

We have a responsibility to advocate for men and women who never hesitate to risk it all. For them, we give our all.

COMMITMENT TO THE FIRE SERVICE

- Strongest dealer network in the fire industry
- 24/7 Pierce dedicated parts & service
- 100,000 sq ft parts warehouse with $10 million of on-hand inventory
- Flexible financing & pre-payment options
- Volunteer & Combination Officers Section sponsor
- International Association of Fire Chiefs sponsor
- Fire Chief of the Year Awards sponsor
- Congressional Fire Services Institute sponsor
- National Fallen Firefighters Foundation partner
- Firefighter Cancer Support Network partner



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THE RIGHT CALL FOR THE LONG HAUL.

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P.O. Box 2017, Appleton WI 54912-2017 USA

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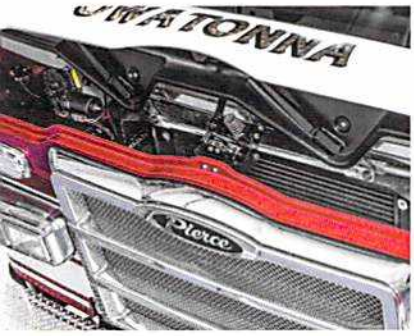
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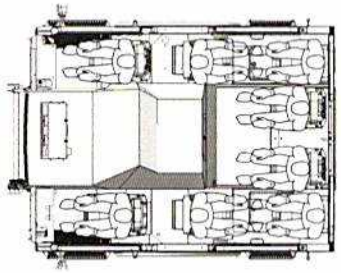
PERFORMANCE ON YOUR TERMS.

A fire truck designed and built for one department may not be the best configuration for another.

It's why Pierce partnered the Velocity® chassis with the Impel® chassis – to offer an excellent value with a long list of standard features and available options.







Visibility & Space

- The large single-piece bonded windshield and daylight windows increase visibility. The three-blade wiper system provides better coverage of the panoramic windshield surface.
- At 100" wide, the Impel cab provides ample room to carry up to 10 personnel comfortably or additional compartments and equipment.
- The forward roof design offers a cathedral ceiling feel with increased frontal visibility and more configurable space.

Ergonomics

- Large exterior door handles are generously sized to fit the firefighter's gloved hands.
- Wide cab doors make entry safer and exit quicker and more efficient for firefighters.
- Gauges and switches are within easy reach of the driver without interrupting lines of sight.

Serviceability

- One-piece, full width, lift-up hood allows for easy maintenance and fast access to the windshield washer fluid, coolant overflow, power steering, windshield wiper motor and cab lift controls.
- Electrical systems, breakers, components and modules are easy to access and service on the officer's side of cab.
- In-cab access for chassis fluids make servicing easier.

Maneuverability

- Massive 13 ⅜" 120 ksi steel frame rails for superior handling and reduced frame deflection.

Specifications

Engine	Cummins ISL 9
Engine Horsepower	370 – 450 HP
Transmission	Allison 3000 EVS
Alternator	270 – 430 Amp
Front GAWR (maximum)	23,000 lb
Front Axle Suspension	Leaf or TAK-4® Independent Front Suspension
Cramp Angle (maximum)	45°
Rear GAWR (maximum)	54,000 lb
Rear Axle Suspension	Leaf, Rubber, Air, TAK-4®, or TAK-4® T3, Single or Tand
Frame Rail	13-3/8"
Cab Width	100"
Cab Length	60", 70" or 84"
Cab Roof Style	Flat or Raised (10" or 20")
Seating Capacity	10
Doors	Barrier or Full Height
Side Roll Protection	Default
Frontal Air Bags	Default
Electrical System	Command Zone™

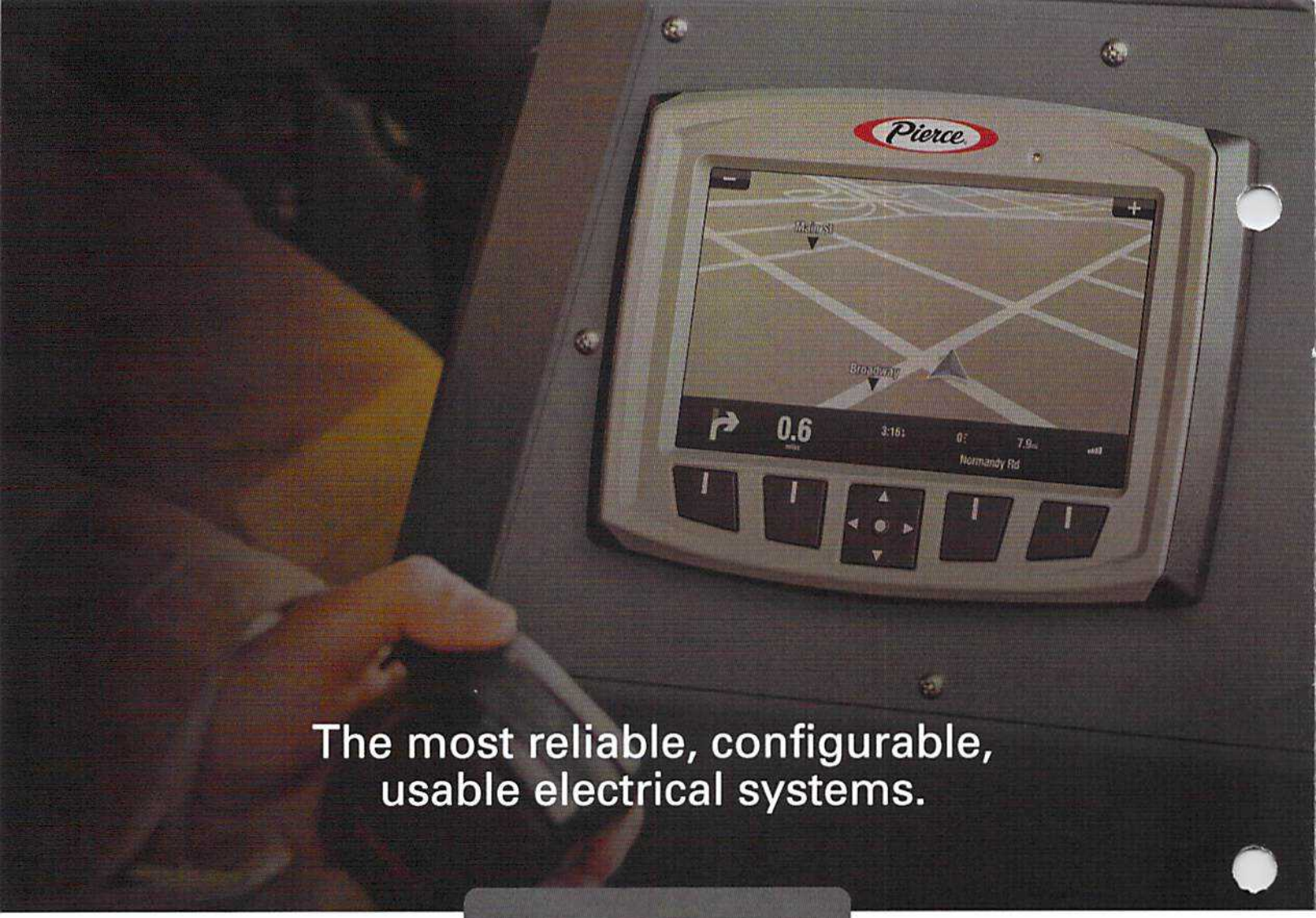
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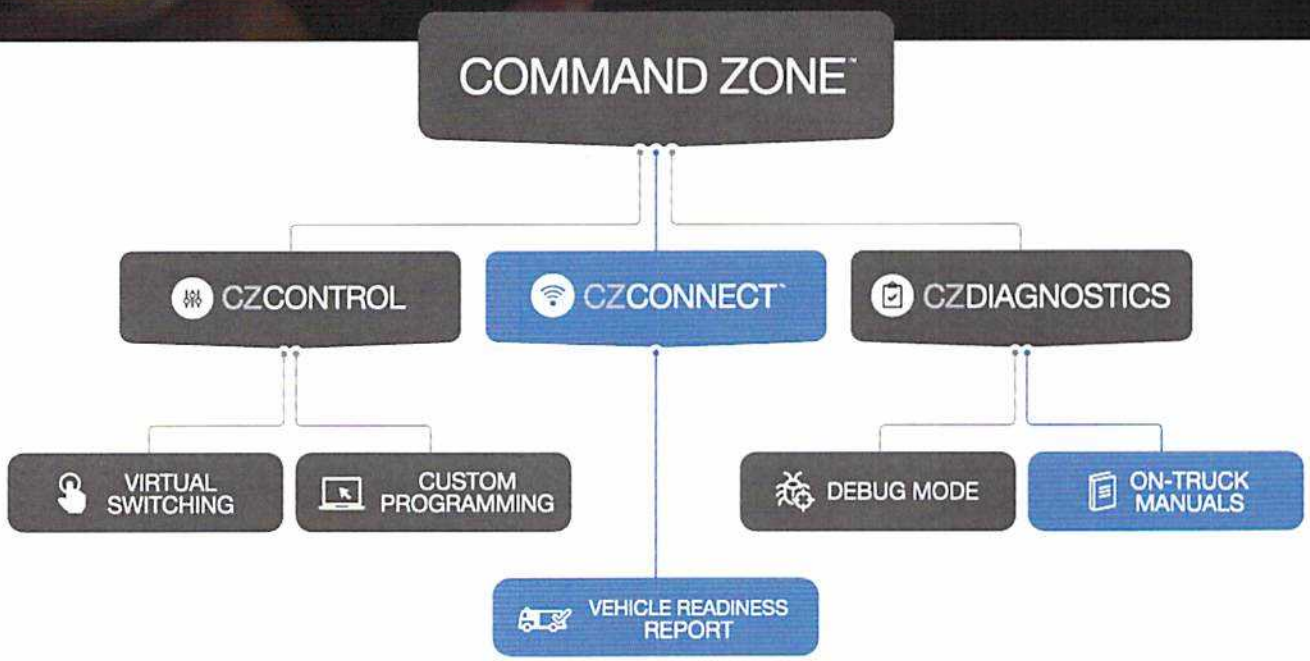
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P-0073-IMPSS 1/16


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0MPH
FUEL LEVEL
LOW
WHELEN®
TRAFFIC ADVISOR™
HIGH
OFF
LOW
LEFT
RIGHT
SPLIT
FLASH
DIRECTION INDICATOR
POWER
FUNCTION
CAUTION
DISENGAGE RETARDER
WHEN VEHICLE IS ON WET
OR SLIPPERY SURFACES.
CAUTION



The most reliable, configurable, usable electrical systems.





It's time to change the conversation. Every modern firefighting apparatus contains elements of multiplexed and hardwired electrical systems. Only Pierce engineers systems that are purpose-built to serve the fire industry with features poised to seamlessly evolve with technology.

No clunky retrofits or complicated third-party software. No troubleshooting your troubleshooting. Utilizing proven military-grade hardware and wire harnesses, Pierce® electrical systems give you technology built from the ground up for your department. If you have questions, you speak directly to the people who engineered your system, who just so happen to have lunch with the people who welded your frame rails.

One source. One intuitive, singular system. Available in feature packages that provide your desired level of interface, diagnostics, prognostics, maintenance, navigation, and more.

FEATURE PACKAGE	FOUNDATION	CZ WIFI	CZ TOUCHSCREEN	FULL COMMAND ZONE
Saber®	S	O	O	
Enforcer™	S	O	O	O
Arrow XT™	S	O*	O*	O
Impel®	S	S	O	S
Velocity®	S	S	S	S
Dash® CF	S	S	S	S
Quantum®	S	S	S	S

*Features only available with Full Command Zone package

S = Standard O = Optional

At a glance chassis/system availability of feature packages

FEATURE PACKAGES

FOUNDATION

SABER® | ENFORCER® | ARROW XT® | IMPEL® | VELOCITY® | DASH® CF | QUANTUM®

Every Pierce® custom chassis comes standard with:

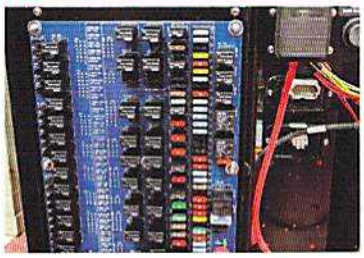
- Electrical distribution centers located strategically throughout the vehicle
- Serviceable electrical components readily accessible
- Power/signal protection & control components protected against corrosion, heat, vibration, physical damage, & water spray
- Distribution centers that contain battery power & ground studs for ease of customer supplied component installation
- Wiring run in conduit or loom where exposed; wire raceways built into cab structure
- IP67 waterproof connectors specified throughout the chassis

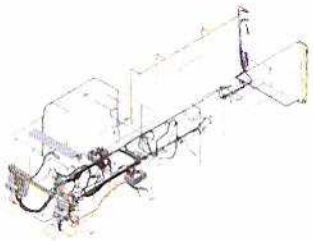
Component Specification

- Circuit breakers that conform to SAE J1553, J258, J554, J1284, J1888, J2077 standards
- Wire, relays, & solenoids sized to 125% of maximum current
- Wire harnesses that conform to SAE, NFPA, NEC, UL, ASTM, & WHMA standards
- Wire harnesses that include color, function, & number coding; function & circuit number stamped at 2" intervals.
- Wire insulation is high temperature crosslink

Validation

- Voluntary third party (UL) auditing for electrical compliance to NFPA 1901
- Third party EMI/RFI chamber testing to ensure emissions are suppressed at the component source
- R&D cycle testing of new components







CZ WIFI

SABER® | ENFORCER® | ARROW XT® | IMPEL® | VELOCITY® | DASH® CF | QUANTUM®

For those interested in using a WiFi enabled device to interface with their apparatus. This package includes the features of the Foundation package with the ability to:

- Connect up to five WiFi enabled devices within 300' of the vehicle
- Review active or historic faults with both text descriptions & SPN/FMI numbers
- View real time data transmitted on the driveline J1939 data bus
- Receive prognostics alerts for maintenance intervals
- View seat belt status

Hardware

- Telematics Control Unit (TCU)
- Control module
- Roof mounted WiFi/GPS antenna

Connectivity

- Uses the vehicle's local WiFi network & embedded web page to display vehicle information
- Auto connects to station WiFi network to upload truck data (no app or subscription required)

CZCONTROL

- Heat, defrost, & air conditioning control from touchscreen & WiFi enabled device (not available on Quantum)

CZCONNECT

- Vehicle Readiness Report e-mailed directly to your computer or mobile device

CZDIAGNOSTICS

- Truck-specific electronic manuals stored on vehicle and accessed through your WiFi enabled device

Optional Integration Packages

- Bendix SmartTire tire pressure monitoring







CZ TOUCHSCREEN

SABER* | ENFORCER® | ARROW XT® | IMPEL® | VELOCITY® | DASH® CF | QUANTUM®

A higher level of on-board interaction, including all the features of the Foundation and CZ WiFi packages plus these touchscreen specific features:

- Active or historic faults with text descriptions & real time J1939 data bus information available at your fingertips (gloved or not)
- Prognostics alerts for maintenance intervals
- Auto day/night display backlighting mode
- Administrator setup features accessed through a configurable password security level
- Opportunity to integrate seat belt monitoring, tire pressure monitoring, pump gauges, navigation, & camera images in one touchscreen display
- Primary Screens: Transit Gauges, Scene Gauges, Notifications/Faults, Diagnostics, Prognostics, Timer/Clock/Date/Ambient Temperature, OneTouch Camera Selection

Hardware

- 7" color resistive touchscreen
- Telematics Control Unit (TCU)
- Control module
- Roof mounted WiFi/GPS antenna

CZCONTROL

- Heat, defrost, & air conditioning control from touchscreen & WiFi enabled device (not available on Quantum)

CZCONNECT

- Vehicle Readiness Report e-mailed directly to your computer or mobile device

CZDIAGNOSTICS

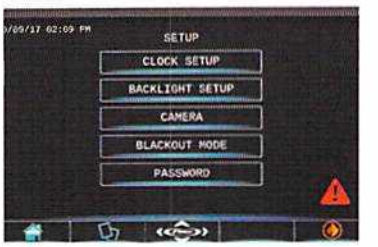
- Truck-specific electronic manuals stored on vehicle and accessed through your WiFi enabled device

Optional Integration Packages

- Bendix SmartTire tire pressure monitoring
- Streetwise Navigation
- Streetwise Scene Management
- Camera Systems
- Ascendant® Setup Determination
- Wabco Collision Mitigation







FULL COMMAND ZONE

SABER* | ENFORCER® | ARROW XT® | IMPEL® | VELOCITY® | DASH® CF | QUANTUM®

The highest level of Command Zone™ interface, control, diagnostic, & prognostic capability. Includes all the features of the Foundation, CZ WiFi, and CZ Touchscreen packages plus:

- Full complement of D-Series Command Zone solid state input/output modules (optional diagnostic LEDs integrated into each module)
- Strategically located modules throughout apparatus reduces wire harness bulk
- Command Zone debug diagnostics available on the touchscreen and WiFi enabled device (password protected ability to force inputs & outputs on to aid troubleshooting)
- Virtual switch panels allowing control from the touchscreen & WiFi enabled device
- Virtual switch panel configuration through administrator setup menu
- Dynamic or static Graphical Do Not Move Truck screen

Hardware

- D-Series power, input, & output modules
- 7" color resistive touchscreen
- Telematics Control Unit (TCU)
- Control module
- Roof mounted WiFi/GPS antenna

CZCONTROL

- Heat, defrost, & air conditioning control from touchscreen & WiFi enabled device (not available on Quantum)
- Virtual switch panels on display & WiFi enabled devices
- Truck-specific I/O configuration

CZCONNECT

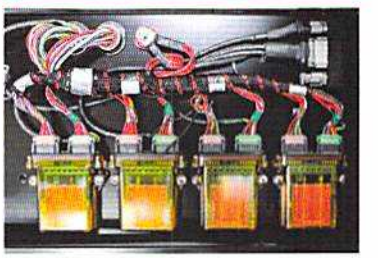
- Vehicle Readiness Report e-mailed directly to your computer or mobile device

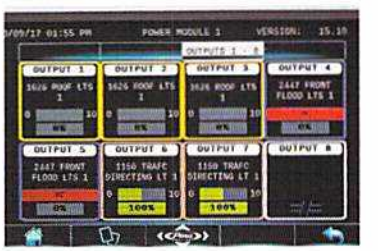
CZDIAGNOSTICS

- Visual Do Not Move Truck indication
- Command Zone I/O debug mode
- Load manager status
- Pump & throttle interlock status
- Truck-specific electronic manuals stored on vehicle

Optional Integration Packages

- Bendix SmartTire tire pressure monitoring
- Streetwise Navigation
- Streetwise Scene Management
- Camera Systems
- Ascendant Setup Determination
- Wabco Collision Mitigation







STANDARD | OPTIONAL | NOT AVAILABLE

*Excludes Saber with Ford Power Train

OPTIONAL INTEGRATION FEATURES

STREETWISE NAVIGATION

SABER® | ENFORCER® | ARROW XT® | IMPEL® | VELOCITY® | DASH® CF | QUANTUM®

Turn-by-turn routing & navigation to a manually entered target location.

Apparatus weight/height restrictions auto-customize routes to avoid bridges & overpasses.

**Only available with the CZ Touchscreen or Full Command Zone™ packages.*

- Maps are stored within the apparatus devices to ensure access, even when coverage does not exist
- Maps include pan & zoom via touchscreen display



STREETWISE MANAGEMENT

SABER® | ENFORCER® | ARROW XT® | IMPEL® | VELOCITY® | DASH® CF | QUANTUM®

Streetwise CADlink cloud server system.

Automatic incoming alerts from client 911 CAD system viewed on touchscreen display.

**Only available with the CZ Touchscreen or Full Command Zone packages.*

- Includes Streetwise Navigation Package
- Interaction with vehicle systems including GPS & Command Zone
- Preplans viewable on touchscreen display from Streetwise cloud server



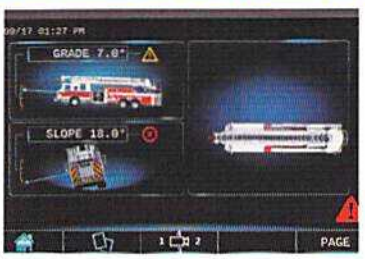
ASCENDANT®

SABER® | ENFORCER® | ARROW XT® | IMPEL® | VELOCITY® | DASH® CF | QUANTUM®

Setup determination & aerial information on chassis touchscreen.

**Only available with the CZ Touchscreen or Full Command Zone packages.*

- Understand if the vehicle is properly placed to use the aerial prior to leaving the cab



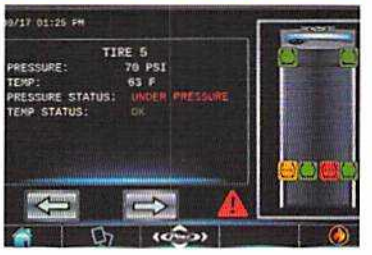
TIRE PRESSURE MONITORING

SABER | ENFORCER | ARROW XT | IMPEL | VELOCITY | DASH CF | QUANTUM

Bendix Smarttire system monitors each tire's pressure & temperature.

3 Alert Levels

- Critical Low Pressure
- Pressure Deviation
- High Temperature



COLLISION MITIGATION

SABER | ENFORCER | ARROW XT | IMPEL | VELOCITY | DASH CF | QUANTUM

Detects objects up to 650' away and in adjacent lanes.

Audible & visual driver alerts for potential rear-end collisions.

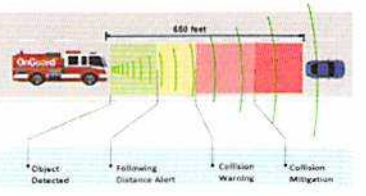
Application of service brake up to 50% in event of impending collision.

Audible & visual driver alerts for potential stationary object collision.

**Only available with the CZ Touchscreen or Full Command Zone packages.*

- Meritor Wabco OnGuard™ far-range & near range, self aligning radar sensor collision mitigation system





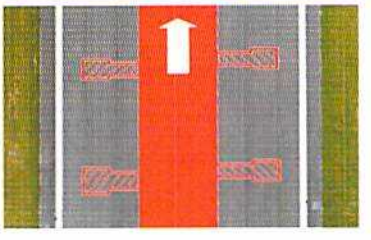
AERIAL STABILIZER CAMERAS

SABER | ENFORCER | ARROW XT | IMPEL | VELOCITY | DASH CF | QUANTUM

Provides a top down view of where the aerial stabilizers will be planted.

**Only available with the CZ Touchscreen or Full Command Zone packages.*

- Outline of extended stabilizers overlaid on camera image



STANDARD | OPTIONAL | NOT AVAILABLE

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P-0125-CZELSYSTBR 6/18









Proven to outperform and outlast.

No manufacturer offers a more robust range of proprietary finishing solutions. Get severe-duty Corrosion Protection, Top Coat, Welding, Fabrication and Assembly from one of the most expansive and exacting facilities in America.

DURABLE, CONSISTENT PROTECTION.

Oshkosh's electrocoating (E-Coat) immersion process provides coverage of complex parts and a uniform thickness without runs or drips. E-Coat delivers a superior corrosion and chemical resistance, while maintaining a high-quality, resilient surface for paint of any color or finish.

The 150,000 square foot facility is home to one of the country's largest Programmable Hoist Systems (PHS), as well as a state-of-the-art indexing system, which allows processing of parts of virtually all shapes and sizes.

In addition to advanced systems and rigorous quality assurance processes, Oshkosh corrosion protection leverages expertise from Oshkosh's proven experience serving the Department of Defense. Economic and efficient corrosion protection provides durable resistance from the most severe conditions.

Program Benefits

- High-performing cathodic epoxy coatings are paired with zinc-phosphate pre-treatment
- Final coatings provide superior salt spray, humidity and cyclic corrosion resistance
- PHS tank sizes: 36 ft. length, 3.5 ft. width and 8 ft. depth; maximum weight capacity of 5,000 lbs.
- Indexing system capabilities: 8 ft. length, 10 ft. width and 8 ft. depth; maximum part weight capacity of 2,500 lbs.
- Immersion process offers uniform coverage and thickness of complex parts
- Accredited laboratory for performance testing and certification of the overall coating process
- Process application range: military, maritime, agriculture & construction, automotive parts & accessories, heavy duty trucks, mining, recreation, electrical equipment
- Specifications including but not limited to: TT-C-490E, Mil-DTL-53084
- Substrates including but not limited to: armor, steel, aluminum (commercial applications), iron alloys, galvanized



"E-Coat offers a superior corrosion and chemical resistance when compared to conventional priming and painting methods. We chose to E-Coat our frame rails and liners because of its proven corrosion protection, its durability and versatility."

Pierce® Quantum® Pumper

Jim Johnson
President | Pierce Manufacturing

Film Technical Properties

PROPERTY	TEST METHOD	PERFORMANCE
Color	–	Black
Film Thickness	–	0.5 - 1.5 Mils
Gloss - 60 Degree	ASTM D523	65 - 85
Pencil Hardness	ASTM D3363	2H Minimum
Direct Impact	ASTM D2794	100 in. - lbs. Minimum
Reverse Impact	ASTM D2794	60 in. - lbs. Minimum
Crosshatch Adhesion	ASTM D3359	4B - 5B
Humidity	ASTM D1735	1000 Hours Minimum
Water Immersion	ASTM D870	250 Hours Minimum
Gravelometer	GM9508P	6 Minimum
Throwpower	GM9535P	12 - 15 in.

Cold rolled steel lab panels, Zinc Phosphate pretreatment, 0.6 mils average film thickness, cured 20 minutes @ 350°F.

PROPERTY	SUBSTRATE PRETREATMENT	SALT SPRAY* 1000 HOURS
Corrosion Resistance	CRS / Zinc Phos / Non-Chrome	1 - 2 mm

*Salt Spray - ASTM B117, cold rolled steel lab panels cured 20 minutes @ 350°F. (Average Total Scribe Creep)

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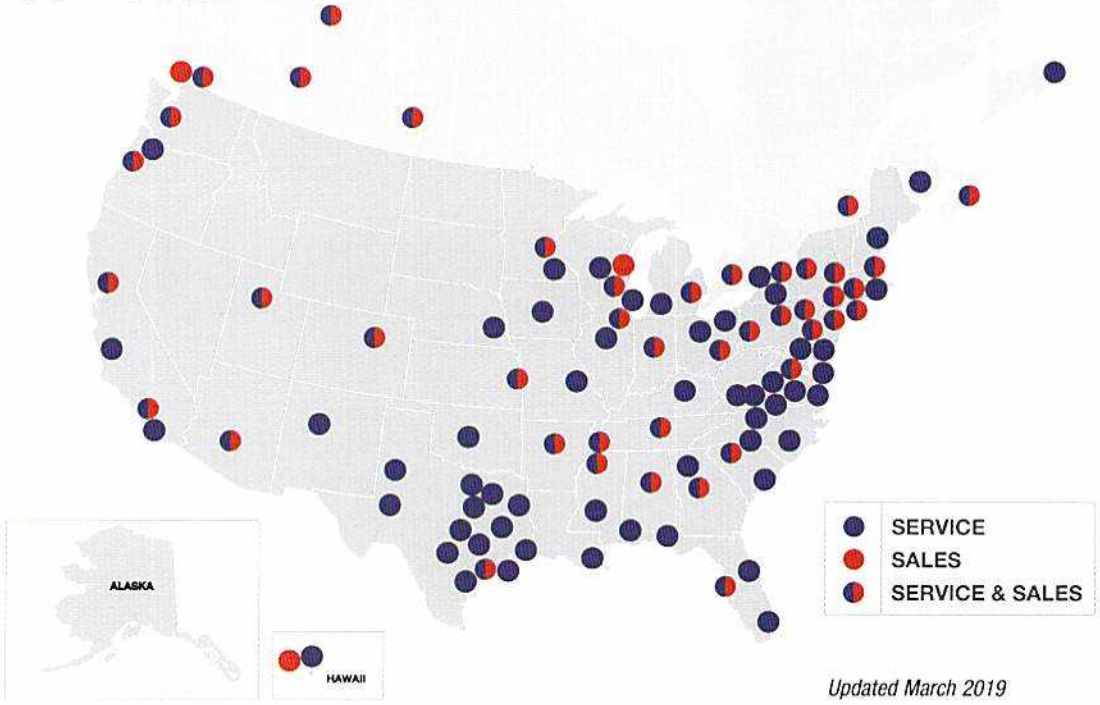
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Oshkosh Corporation
P.O. Box 2566
Oshkosh, WI 54903-2566 USA

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Pierce

The ultimate dealer network.



Updated March 2019

Pierce dealers are your single-source experts for parts, training, warranties, and aftermarket service. No other fire apparatus manufacturer on the planet has a stronger, more committed dealer sales and support network.

Find the dealer near you at **piercemfg.com**

Dealership performance

- 24/7 warranty assistance
- Chassis preventive maintenance
- Repairs: Fabrication, assembly, & paint
- Communication system upgrades
- Vehicle body remounts & reconditions
- Mobile service unit fleet comes to you
- Maintenance & operational training



Master Technicians.

Every. Working. Detail. Mastered. Our certified technicians know the intricacies of every last aerial, chassis, electrical, and pumper component. Hundreds of Master Technicians are standing by to help you train, troubleshoot, and maintain any way you need. On the phone. Through e-mail. At your facility or ours.

Schedule your training now

Gain access to hands-on training specific to your Pierce apparatus.

Pierce Product Support Contact Center
Phone: 888.974.3723 (1.888.Y.PIERCE)
International: 920.832.3534
Email: contactcenter@piercemfg.com

Factory Direct Training

Choose a topic below, or customize your class.

- Electrical systems
- Steering & suspension
- Pump & foam systems
- Aerial devices
- Preventive maintenance

Regional Training Locations

Come to an area below, or we will come to you.

- Appleton, WI
- Bradenton, FL
- Las Vegas, NV

WE'VE GOT YOUR BACK
PRODUCT SUPPORT
Pierce

Maximum vehicle readiness.

With over $16M and 120,000 square feet dedicated to inventory, Pierce stocks a robust parts supply that responds to every maintenance need for the life of the vehicle.

Get a 24/7, vehicle-specific parts bill of material (BOM) with up-to-date stock parts and accessories.

- Strong, local inventory stocked through dealer warehouses
- Extensive factory inventory distributed through Global Logistics Center
- New & legacy parts/accessories
- Product upgrades (e.g. Command Zone™) with user training available
- Backed by OEM-limited warranties
- Custom accessory fabrications & graphics

Contact your local dealer to order.



Product Upgrades



Factory Inventory

Pierce Product Support Contact Center
Phone: 888.974.3723 (1.888.Y.PIERCE)
International: 920.832.3534
Email: contactcenter@piercemfg.com






Online factory support.

Aftermarket Support Website

The same comprehensive factory support available to Pierce dealers is accessible by Pierce customers through a guest login. **Pierceparts.com** connects you to our:

- Online parts catalog
- Component catalogs
- Current operator manuals
- Select service manual groups
- Service training information
- Select learning modules
- Warranty information
- Campaigns & bulletin details
- Pictures of graphics & apparatus



Parts Catalogs

Truck-specific parts catalogs, based on the BOM of the vehicle, feature:

- Part numbers with full descriptions
- A library of over 60,000 illustrations
- Individual parts search for single items

Operator Manuals

Operator manuals are available for the following Pierce products:

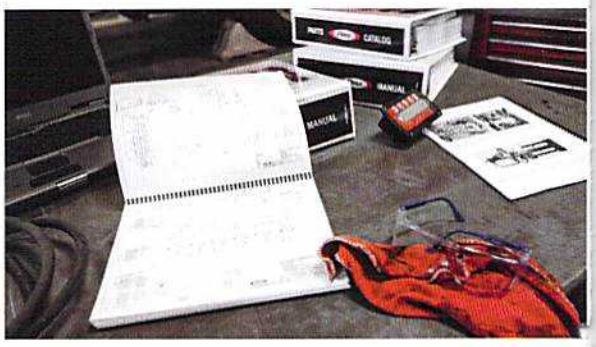
- Custom chassis
- Commercial chassis
- Aerials
- Foam systems
- Pump

Service Manuals

Truck-specific service manuals are available for registered users, based on the design configuration of the vehicle. Service manuals typically include information on the following (as applicable): troubleshooting, front axle/suspension, brakes, engine, tires, wheels, cab, electrical, air systems, plumbing, foam system, aerial device, and more.

pierceparts.com

We've got your back.



Technical Call Center

Staffed with industry-certified professionals in areas of electrical, aerial, pumper, and chassis, we pull from a century of combined experience to offer our customers 24/7/365 support, fixing the toughest issues around the clock.

Factory and Field Service

Every customer matters. Every truck is unique. Our trusted service technicians work hand-in-hand with our dealer network to provide our customers with individual solutions, in-house or in-field.

Engineering

Details, details, details. Our dedicated engineers are ready to innovate custom solutions in anything from field service to design work that will meet our customers' individual needs.

Warranty

We're ready to answer questions regarding warranties administered by Pierce, supplier warranties, or general questions related to warranty administration.



Extending the lifecycle of your legacy.

Apparatus refurbishment can add another 10-15 years of peak front-line service to your vehicle. When you choose the Midwest Refurbishment Center, we guarantee competitive pricing and legendary quality of single-service support before, during, and after the job.

Backed by over 30 years of experience, every job is handled in-house by our fire apparatus experts, ensuring maximum performance of each refurbished component.



Accidents

Restore your vehicle to its original quality standards



Aerial Overhauls

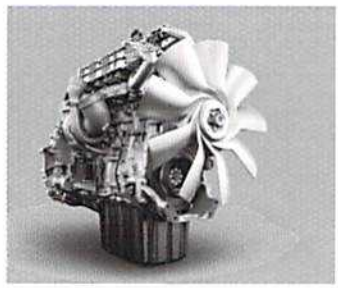
- Remount your aerial device on a new Pierce custom chassis with a completely new body
- Refurbish & remount using your existing aerial body
- Re-certification, service, & testing are included
- Complete aerial overhauls
- NFPA updates



Upgrades

Apparatus adjustments and improvements are available to comply with current NFPA standards:

- Chevron striping
- New LED warning lights
- Stainless steel plumbing upgrades
- Auxiliary braking devices
- And more



Aftermarket Repair

- Engine & transmission replacement
- Pump overhaul
- Water tank replacement
- Body replacement
- Retrofit: TAK-4® Independent Front Suspension, CAFS Foam Systems, Side Roll Protection System, ANNEX-D (1901 NFPA standards)

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Pierce FINANCIAL SOLUTIONS

PNC EQUIPMENT FINANCE



All kinds of plans for all kinds of departments.

The same logic behind our custom chassis applies to our financial services: Tailor the product to the department, not the other way around.

Through the Pierce Financial Solutions program, PNC Equipment Finance provides the industry's most extensive line of lease plans for fleet replacement.

With industry-leading tax exempt rates, zero documentation fees, flexible payment plans and quick approvals that can bypass voter referendums, we make it easy to get behind the wheel of your new Pierce.







Lease Purchase Plan

With a lease purchase plan, you can purchase the apparatus gradually over time. This allows you to use available capital for operations or other needs. At the end of the lease, you can purchase the apparatus for just $1. Terms for this plan range from 2 to 15 years (10 years for apparatus with commercial chassis).

Choose a lease purchase if:
You prefer ownership of the apparatus and need to spread capital costs over time.

Turn-In Lease Plan

The turn-in lease plan contains a "balloon payment" for the estimated resale value of the apparatus at the end of the lease. A department has two options at lease term:

1. Purchase the apparatus by paying off or refinancing the "balloon payment."
2. Return the apparatus to Pierce and lease a new Pierce apparatus (Pierce pays off the "balloon payment").

Terms for this plan range from 2 to 10 years. This lease contains mileage and apparatus condition provisions, with 10,000 and 15,000 annual mileage options available.

Choose a turn-in lease if:
You want to pay for the use of the apparatus over the lease term and need a flexible, cost-effective fleet management program.

Program Benefits

- All departments qualify
- Highly competitive tax-exempt interest rates
- 100% financing with no documentation fees
- Flexible payment plans
- One year deferred payment plans
- Prepay program that lowers payments while eliminating interest rate risk
- Dedicated Account Executive to assist you through the entire financing process

www.piercemfg.com

Pierce Manufacturing Inc., An Oshkosh Corporation Company
P.O. Box 2017, Appleton WI 54912-2017 USA

Specifications, descriptions and illustrative material in this literature are as accurate as known at the time of publication, but are subject to change without notice.
Illustrations may include optional equipment and accessories and may not include all standard equipment. All measurements are nominal values.
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Finley Fire Equipment is pleased to submit a proposal to Paducah Fire Department for a **Pierce® triple combination pumper** per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications.

PIERCE MANUFACTURING was founded in 1913. Since then we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land.

Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification.

In accordance with the current edition of NFPA 1901 standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment.

Images and illustrative material in this proposal are as accurate as known at the time of publication, but are subject to change without notice. Images and illustrative material is for reference only, and may include optional equipment and accessories and may not include all standard equipment.

GENERAL DESIGN AND CONSTRUCTION

To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system.

QUALITY AND WORKMANSHIP

Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested

and certified to meet the American welding Society codes upon hire and every three (3) years thereafter. Pierce also employs and American Welding Society certified welding inspector in plant during working hours to monitor weld quality.

Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal.

In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to insure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce.

To demonstrate the quality of our products and services, a list of at least two (2) fire departments/municipalities that have purchased vehicles for a second time is provided.

DELIVERY

The apparatus will be delivered under its own power to insure proper break-in of all components while the apparatus is still under warranty. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered.

MANUAL AND SERVICE INFORMATION

At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.

SAFETY VIDEO

At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance.

PERFORMANCE TESTS

A road test will be conducted with the apparatus fully loaded and a continuous run of no less than ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet NFPA 1901 acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by Finley Fire Equipment by operating a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within two hundred (200) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of $5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operators manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24 hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

COMMERCIAL GENERAL LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Personal and Advertising Injury$1,000,000

General Aggregate$2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit:$1,000,000

UMBRELLA/EXCESS LIABILITY INSURANCE

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate:$3,000,000

Each Occurrence:$3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

PRODUCT LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence$1,000,000

Products/Completed Operations Aggregate$1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

UMBRELLA/EXCESS LIABILITY INSURANCE

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Each Occurrence:$25,000,000

Aggregate:$25,000,000

The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described polices be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.

SINGLE SOURCE MANUFACTURER

Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.

Your apparatus will be manufactured in Bradenton, Florida.

NFPA 2016 STANDARDS

This unit will comply with the NFPA standards effective January 1, 2016, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions.

Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.

All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are

shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.

A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating.

The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.

An official of the company will designate, in writing, who is qualified to witness and certify test results.

NFPA COMPLIANCY

Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in the current edition at time of contract execution. Fire Department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA."

PUMP TEST

The rated water pump will be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details will be forwarded to the Fire Department.

GENERATOR TEST

If the unit has a generator, the generator will be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results will be provided to the Fire Department at the time of delivery.

INSPECTION TRIP(S)

The bidder will provide three (3) factory inspection trip(s) for 2 customer representative(s). The inspection trip(s) will be scheduled at times mutually agreed upon between the manufacturer's representative and the customer. All costs such as travel, lodging and meals will be the responsibility of the bidder.

BID BOND

A bid bond as security for the bid in the form of a 10% bid bond will be provided with the proposal. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language which assures that the bidder/principal will give a bond or bonds, as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.

PERFORMANCE BOND

Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.

APPROVAL DRAWING

A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.

A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.

ELECTRICAL WIRING DIAGRAMS

Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.

SABER FR CHASSIS

The Pierce Saber FR® is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt-type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy-duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required. The chassis will be the manufacturer's first line tilt cab.

WHEELBASE

The wheelbase of the vehicle will be 197.00.

GVW RATING

The gross vehicle weight rating will be 48,500.

FRAME

The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will be heat-treated steel measuring 10.25" x 3.50" x 0.375".

Each rail will have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.

FRAME REINFORCEMENT

A full-length mainframe "C" liner will be provided.

The liner will be an internal "C" design, heat-treated steel measuring 9.38" x 3.13" x 0.25". Each reinforcement member will have a section modulus of 3.90 cubic inches, yield strength of 120,000 psi and resisting bending moment (rbm) of 938,762 in-lb.

FRONT AXLE

The front axle will be a reverse "I" beam type with inclined king pins. It will be a Meritor® axle, Model MFS-20, with a rated capacity of 20,000 lb.

FRONT SUSPENSION

The front springs will be a Standens, three (3)-leaf, taper leaf design, 54.00" long x 4.00" wide, with a ground rating of 20,000 lb.

The two (2) top leaves will wrap the forward spring hanger pin. The top leaf will also wrap the rear spring hanger pin. Both the front and rear eyes will be Berlin style wraps that will place the eyes in the horizontal plane within the main leaf. This will reduce bending stress from acceleration and braking.

A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.

SHOCK ABSORBERS

To provide a smoother ride, the front axle will be furnished with heavy-duty telescoping shock absorbers.

FRONT OIL SEALS

Oil seals with viewing window will be provided on the front axle.

FRONT TIRES

Front tires will be Goodyear® 315/80R22.50 radials, 20 ply G289 WHA tread, rated for 20,400 lb maximum axle load and 68 mph maximum speed.

The tires will be mounted on Alcoa 22.50" x 9.00" polished aluminum disc wheels with a ten (10) stud, 11.25" bolt circle.

REAR AXLE

The rear axle will be a Meritor™, Model RS-26-185, with a capacity of 27,000 lb.

TOP SPEED OF VEHICLE

A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph.

REAR SUSPENSION

The rear suspension will be Standens, semi-elliptical, 3.00" wide x 53.00" long, 12-leaf pack with a ground rating of 27,000 lb. The spring hangers will be castings.

The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger. To reduce bending stress due to acceleration and braking, the front eye will be a berlin eye that will place the front spring pin in the horizontal plane within the main leaf.

A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.

REAR OIL SEALS

Oil seals will be provided on the rear axle(s).

REAR TIRES

Rear tires will be four (4) Goodyear® 12R22.50 radials, 16 ply all season G622 RSD tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.

The tires will be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud 11.25" bolt circle.

TIRE BALANCE

All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.

TIRE PRESSURE MANAGEMENT

There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of six (6) tires.

The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi.

Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.

FRONT HUB COVERS

Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.

REAR HUB COVERS

A pair of stainless steel high hat hub covers will be provided on rear axle hubs.

CHROME LUG NUT COVERS

Chrome lug nut covers will be supplied on front and rear wheels.

MUD FLAPS

Mud flaps with a Pierce logo will be installed behind the front and rear wheels.

WHEEL CHOCKS
There will be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks, with easy-grip handle provided.

Wheel Chock Brackets
There will be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets will be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets will be mounted below the left side rear compartment.

ANTI-LOCK BRAKE SYSTEM
The vehicle will be equipped with a Meritor WABCO 4S4M, anti-lock braking system. The ABS will provide a 4-channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.

BRAKES
The service brake system will be full air type by Meritor™.

Front brakes will be Model EX225 Disc Plus, disc type with automatic pad wear adjustment and 17.00" ventilated rotors for improved stopping distance.

The rear brakes will be Meritor™ 16.50" x 7.00" cam operated with automatic slack adjusters. Dust shields will be provided.

BRAKE SYSTEM AIR COMPRESSOR
The air compressor will be a Cummins/WABCO with 18.7 cubic feet per minute output.

BRAKE SYSTEM
The brake system will include:

- Brake treadle valve
- Heated automatic moisture ejector on air dryer
- Total air system minimum capacity of 4,272 cubic inches
- Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi
- Spring set parking brake system
- Parking brake operated by a push-pull style control valve
- A parking "brake on" indicator light on instrument panel
- Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi
- A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa)

- 1/4 turn drain valves on each air tank

The air tank will be primed and painted to meet a minimum 750 hour salt spray test.

To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.

BRAKE SYSTEM AIR DRYER

The air dryer will be a WABCO System Saver 1200 IWT, with internal wet tank, spin-on coalescing filter cartridge and 100 watt heater.

BRAKE LINES

Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.

AIR INLET

One (1) air inlet with 3D series male coupling will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will be located forward in the driver side lower step well of cab. A check valve will be provided to prevent reverse flow of air. The inlet will discharge into the "wet" tank of the brake system. A mating female fitting will also be provided with the loose equipment.

ADDITIONAL AIR TANK FOR AIR HORN

An additional air tank with 1,454 cubic inch displacement will be provided to increase the capacity of the air system. This tank will be dedicated for air horn use.

The air tank will be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.

The output flow of the engine air compressor varies with engine rpm. Full compressor output is only achieved at governed engine speed. Engine speed may be limited by generators, pumps and other PTO driven options.

ENGINE

The chassis will be powered by an electronically controlled engine as described below:

Make:	Cummins
Model:	L9
Power:	450 hp at 2100 rpm
Torque:	1250 lb-ft at 1400 rpm
Governed Speed:	2200 rpm
Emissions Level:	EPA 2021
Fuel:	Diesel
Cylinders:	Six (6)
Displacement:	543 cubic inches (8.9L)
Starter:	Delco 39MT™
Fuel Filters:	Spin-on style primary filter with water separator and water-in-fuel sensor.

	Secondary spin-on style filter.

The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected.

HIGH IDLE

A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm. A switch will be installed, at the cab instrument panel, for activation/deactivation.

The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided, adjacent to the switch. The light will illuminate when the above conditions are met. The light will be labeled "OK to Engage High Idle."

ENGINE BRAKE

A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.

The driver will be able to turn the engine brake system on/off and have a high, medium and low setting.

The engine brake will activate when the system is on and the throttle is released.

The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine.

The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.

The ABS system will automatically disengage the auxiliary braking device, when required.

CLUTCH FAN

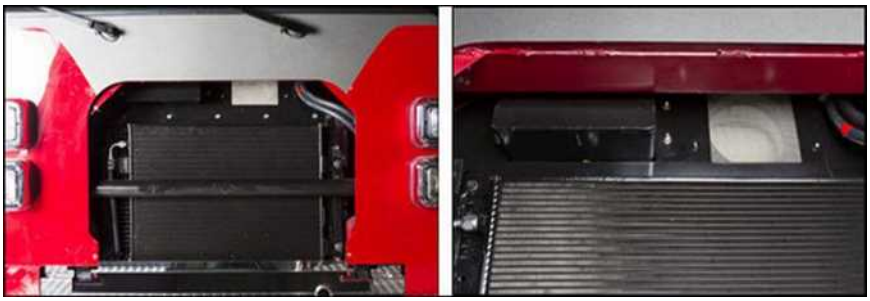
A fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.

ENGINE AIR INTAKE

The engine air intake will be located above the engine cooling package. It will draw fresh air from the front of the apparatus through the radiator grille.

A stainless steel metal screen will be installed at the inlet of the air intake system that will meet NFPA 1901 requirements.

The air cleaner and stainless steel screen will be easily accessible by tilting the cab.



EXHAUST SYSTEM

The exhaust system will be stainless steel from the turbo to the engine's aftertreatment device, and will be 4.00" in diameter. The exhaust system will include a single module aftertreatment device to meet current EPA standards. An insulation wrap will be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device . The exhaust will terminate horizontally ahead of the right side rear wheels. A tailpipe diffuser will be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.

RADIATOR

The radiator and the complete cooling system will meet or exceed NFPA and engine manufacturer cooling system standards.

For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The radiator core will consist of aluminum fins, having a serpentine design, brazed to aluminum tubes.

The radiator core will have a minimum front area of 1060 square inches.

Supply tank will be made of heavy duty glass-reinforced nylon and the return tank will be mode of aluminum. Both tanks will be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There will be a full steel frame around the inserts to enhance cooling system durability and reliability.

The radiator will be compatible with commercial antifreeze solutions.

The radiator assembly will be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain.

The radiator will include a de-aeration/expansion tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap.

A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.

Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.

COOLANT LINES

Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing.

Hose clamps will be stainless steel constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.

FUEL TANK

A 65 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps.

A 0.75" drain plug will be located in a low point of the tank for drainage.

A fill inlet will be located on the left hand side of the body and is covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only."

A 0.50" diameter vent will be installed from tank top to just below fuel fill inlet.

The fuel tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.

All fuel lines will be provided as recommended by the engine manufacturer.

DIESEL EXHAUST FLUID TANK

A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body forward of the rear axle.

A 0.50" drain plug will be provided in a low point of the tank for drainage.

A fill inlet will be located on the driver's side of the body and be covered with a hinged, spring loaded, polished stainless steel door that is marked "Diesel Exhaust Fluid Only".

The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing.

The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.

TRANSMISSION

An Allison 5th generation, Model EVS 3000P, electronic torque converting automatic transmission will be provided.

The transmission will be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display will indicate when service is due.

Two (2) PTO openings will be located on both sides of converter housing (positions 4 o'clock and 8 o'clock) as viewed from the rear.

A transmission temperature gauge with red light and audible alarm will be installed on the cab dash.

TRANSMISSION SHIFTER

A five (5)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation.

The transmission ratio will be:

1st	3.49 to 1.00
2nd	1.86 to 1.00
3rd	1.41 to 1.00
4th	1.00 to 1.00
5th	0.75 to 1.00
R	5.03 to 1.00

TRANSMISSION COOLER

A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.

DRIVELINE

Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1710 universal joints.

The shafts will be dynamically balanced before installation.

A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.

STEERING

Dual steering gear, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and Vickers® V20NF hydraulic pump with integral pressure and flow control. All power steering lines will have wire braded lines with crimped fittings.

A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.

STEERING WHEEL

The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.

LOGO AND CUSTOMER DESIGNATION ON DASH

The dash panel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row.

The first row of text will be: PADUCAH

The second row of text will be: FIRE

The third row of text will be: DEPARTMENT

BUMPER

A one (1)-piece, ten (1) gauge, 304-2B type polished stainless steel bumper, a minimum of 10.00" high, will be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength.

The bumper will be extended 19.00" from front face of cab.

Gravel Pan

A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face. The gravel pan will be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.

CENTER HOSE TRAY

A hose tray, constructed of aluminum, will be placed in the center of the bumper extension.

The tray will have a capacity of 125' of 1.75" double jacket cotton-polyester hose.

Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.

Center Hose Tray Cover

A bright aluminum treadplate cover will be provided over the center hose tray.

The cover will be attached with a stainless steel hinge.

One (1) D-ring latch will secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position.

LIFT AND TOW MOUNTS

Mounted to the frame extension will be lift and tow mounts. The lift and tow mounts will be designed and positioned to adapt to certain tow truck lift systems.

The lift and tow mounts with eyes will be painted the same color as the frame.

TOW HOOKS

Two (2) chromed steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks will not be used for lifting of the apparatus.

LED LIGHTS

There will be two (2) PIAA, Model RF6, 26-07106, 6.00" long, white LED lamps provided, one (1) on each side under the front bumper.

The lamp switch will be properly identified and installed on the switch panel with in reach of the driver. The switch will be powered with the low beam headlamps on and will be deactivated when the high beam headlights are activated. An indicator in the switch will indicate when the lights are on.

CAB

The cab will be designed specifically for the fire service and manufactured by the chassis builder.

The cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises.

For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards.

The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar will be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar will be constructed from 0.13" wall extrusions. The rear wall will be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.



The front of the cab will be constructed of a 0.13" firewall plate, covered with a 0.090" front skin (for a total thickness of 0.22"), and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support will run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.

The cab floors will be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.375" of structural material at the front floor area. The front floor area will also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing will run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.

The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability.

The forward cab section will have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 109.00". The overall height listed will be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed.

The floor to ceiling height inside the crew cab will be 64.50" in the center and outboard positions.

The crew cab floor will measure 46.00" from the rear wall to the front of the rear facing seat risers.

The engine tunnel, at the rearward highest point (knee level), will measure 61.50" to the rear wall.

The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.

The cab will be a full tilt cab style.

A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.

CAB ROOF DRIP RAIL

For enhanced protection from inclement weather, a drip rail will be furnished on the sides of the cab. The drip rail will be painted to match the cab roof, and bonded to the sides of the cab. The drip rail will extend the full length of the cab roof.

INTERIOR CAB INSULATION

The cab will include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.

FENDER LINERS

Full circular inner fender liners in the wheel wells will be provided.

PANORAMIC WINDSHIELD



A 1-piece safety glass windshield will be provided with over 2,775 square inches of clear viewing area. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.

WINDSHIELD WIPERS



Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements.

The washer reservoir will be able to be filled without raising the cab.

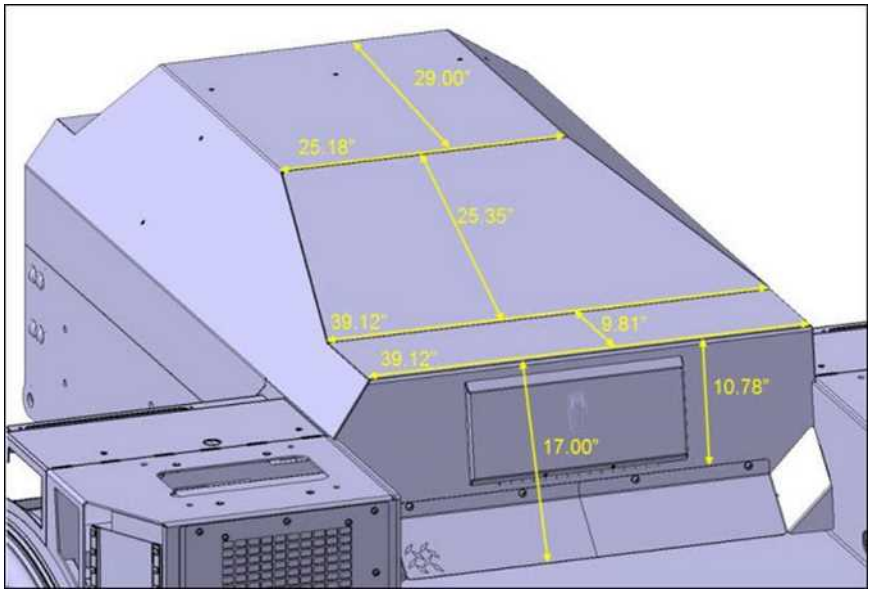


ENGINE TUNNEL

Engine hood side walls will be constructed of 0.375" aluminum. The top will be constructed of 0.125" aluminum and will be tapered at the top to allow for more driver and passenger elbow room.

The engine hood will be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current NFPA 1901 standards.

The engine tunnel will be no higher than 17.00" off the crew cab floor.



INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING)

The interior rear wall of the crew cab will have mounting holes every 2.75" to allow for adjustability of the forward facing crew cab seating along the rear wall. Seats will be adjustable with use of simple hand tools allowing departments flexibility of their seating arrangement should their department needs change.



CAB REAR WALL EXTERIOR COVERING

The exterior surface of the rear wall of the cab will be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.

CAB LIFT

A hydraulic cab lift system will be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.



Lift controls will be located on the right side pump panel or front area of the body in a convenient location.

The cab will be capable of tilting 43 degrees to accommodate engine maintenance and removal.

The cab will be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system will be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms will return to the normally closed and locked position.



The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position.

For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the left side between the chassis and cab

frame when the cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered.

Cab Lift Interlock
The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.

GRILLE
A single piece polished stainless steel grille and framework will be provided on the front center of the cab.

DOOR JAMB SCUFFPLATES
All cab door jambs will be furnished with a polished stainless steel scuffplate, mounted on the striker side of the jamb.

TRIM BAND ON CAB FACE
A band of 22 gauge polished stainless steel trim will be installed across the front of the cab, from door hinge to door hinge. The trim band will be centered on the warning light bezel located above the headlights and applied with two-sided tape. A 0.625" self-adhesive trim strip will be applied around the perimeter of the trim band.

SIDE OF CAB MOLDING
Chrome molding will be provided on both sides of cab.

MIRRORS
One (1) Ramco, Model 6000-PCHR, polished aluminum mirror will be mounted on each of the cab doors. The mirrors will be 9.25" wide x 13.50" high with a convex section. The mirror head will have a highly polished aluminum finish.

The flat glass in each mirror will be heated and adjustable, with remote controls that are convenient to the driver.

The convex section in each mirror will be heated and adjustable, with remote controls that are convenient to the driver.

DOORS
To enhance entry and egress to the cab, the forward cab door openings will be a minimum of 37.50" wide x 63.37" high. The crew cab doors will be located on the sides of the cab and will be constructed in the same manner as the forward cab doors. The crew cab door openings will be a minimum of 34.30" wide x 73.25" high.

The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins will be constructed from 0.090" aluminum.

A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands.



[Exterior Door Handle]



[Interior Door Handle]

Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.

The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed.

A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.

A chrome grab handle will be provided on the inside of each cab door for ease of entry.

A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted.

The bottom cab step at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.

Door Panels

The inner cab door panels will be constructed out of brushed stainless steel.

ELECTRIC OPERATED CAB DOOR WINDOWS

All four (4) cab doors will be equipped with electric operated windows with one (1) flush mounted automotive style switch on each door. The driver's door will have four (4) switches, one (1) to control each door window.

Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second.

CAB STEPS

A dual step will be provided below each cab and crew cab door. The steps will be designed with a grip pattern punched into bright aluminum treadplate material providing support, slip resistance, and drainage. The steps will be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps will be a minimum 25.00" wide, and the crew cab steps will be 21.50" wide with a 7.00" minimum depth. The step design raises the middle step higher and closer to the cab floor, resulting in a 11.50" distance from the step to cab floor in the cab and a 10.25" distance from the step to cab floor in the crew cab. Stepping distances from the ground to first step will be approximately 14.00" and from first step to middle step will be approximately 12.00".

The vertical surface of the upper step well will be aluminum treadplate.

The first step will be lit by a white 12 volt DC LED light provided on the step.

CAB EXTERIOR HANDRAILS

A Hansen knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress. Each handrail will be provided with red LED lights. The lights will be activated when the headlight switch is activated and the parking brake is applied. The LED lights may be load managed.

STEP LIGHTS

There will be six (6) white LED step lights installed for cab and crew cab access steps.

- One (1) light for the driver's access steps.
- Two (2) lights for the driver's side crew cab access steps.
- Two (2) lights for the passenger's side crew cab access steps.
- One (1) light for the passenger's side access step.

In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.

The lights will be activated when the battery switch is on and the adjacent door is opened.

FENDER CROWNS

Stainless steel fender crowns will be installed at the cab wheel openings.

STORAGE COMPARTMENTS

Provided on each side of the cab, to the rear of the crew cab access doors, will be a storage compartment. The compartments will be 12.75" wide x 24.00" high x 15.00" deep. The clear door opening will be 11.75" wide.

The doors will be two (2) single pan doors painted to matche the cab exterior with a non-locking lift and turn latch, one (1) on each side of the cab. A chain for each exterior door will be used as a doorstop.

The compartment interior will be painted spatter gray.

Compartment Light
There will be two (2) red Amdor, LED strip lights provided, one (1) each hinged side of compartment door openings.

MOUNTING PLATE ON ENGINE TUNNEL
Equipment installation provisions will be installed on the engine tunnel.

A 0.188" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel 1.00" to allow for wire routing below the plate.

The mounting surface will be painted to match the cab interior.

CAB INTERIOR
The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service.

The officer side dash will be a flat faced design to provide easy maintenance and will be constructed out of painted aluminum.

The instrument cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument cluster.

The engine tunnel will be painted aluminum to match the cab interior.

For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum.

The headliner will be installed in both forward and rear cab sections. Headliner material will be vinyl. A sound barrier will be part of its composition. Material will be installed on an aluminum sheet and securely fastened to interior cab ceiling.

The forward portion of the cab headliner will permit easy access for service of electrical wiring or other maintenance needs.

All wiring will be placed in metal raceways.

CAB INTERIOR UPHOLSTERY
The cab interior upholstery will be 36 oz dark silver gray vinyl.

CAB INTERIOR PAINT
The cab interior metal surfaces, excluding the rear heater panels, will be painted fire smoke gray, vinyl texture paint.

The rear heater panels will be painted black, vinyl textured paint.

CAB FLOOR
The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.

The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.

DEFROST/AIR CONDITIONING SYSTEM

A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.

Cab Defroster

A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defrost will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following:

- One (1) adjustable will be directed towards the left side cab window
- One (1) adjustable will be directed towards the right side cab window
- Six (6) fixed outlets will be directed at the windshield

The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.

Cab/Crew Auxiliary Heater

There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat risers with a dual scroll blower. An aluminum plenum incorporated into the cab structure used to transfer heat to the forward positions.

Air Conditioning

A condenser will be a 59,644 BTU output that meets and exceeds the performance specification will be mounted on the radiator.

The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.

The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab.

The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications.

Adjustable air outlets will be strategically located on the forward plenum cover per the following:

- Four (4) will be directed towards the seating position on the left side of the cab
- Four (4) will be directed towards the seating position on the right side of the cab

Adjustable air outlets will be strategically located on the evaporator cover per the following:

- Five (5) will be directed towards crew cab area

A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be secured with four (4) screws.

The air conditioner refrigerant will be R-134A and will be installed by a certified technician.

Climate Control

An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control.



The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature.

The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position.

The system controller will be located within panel position #12.

Gravity Drain Tubes

Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.

SUN VISORS

Two (2) smoked Lexan™ sun visors provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab.

There will be no retention bracket provided to help secure each sun visor in the stowed position.

GRAB HANDLES

A black rubber covered grab handle will be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles will be securely mounted to the post area between the door and windshield.



ENGINE COMPARTMENT LIGHTS

There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination.

These light(s) will be activated automatically when the cab is raised.

ACCESS TO ENGINE DIPSTICKS



For access to the engine oil and transmission fluid dipsticks, there will be a door on the engine tunnel, inside the crew cab. The door will be on the rear wall of the engine tunnel, on the vertical surface.

The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling.

The door will have a rubber seal for thermal and acoustic insulation. One (1) flush latch will be provided on the access door.

CAB SAFETY SYSTEM

The cab will be provided with a safety system designed to protect occupants in the event of a side roll or frontal impact, and will include the following:

- A supplemental restraint system (SRS) sensor will be installed on a structural cab member behind the instrument panel. The SRS sensor will perform real time diagnostics of all critical subsystems and will record sensory inputs immediately before and during a side roll or frontal impact event.
- A slave SRS sensor will be installed in the cab to provide capacity for eight (8) crew cab seating positions.

- A fault-indicating light will be provided on the vehicle's instrument panel allowing the driver to monitor the operational status of the SRS system.
- A driver side front air bag will be mounted in the steering wheel and will be designed to protect the head and upper torso of the occupant, when used in combination with the 3-point seat belt.
- A passenger side knee bolster air bag will be mounted in the modesty panel below the dash panel and will be designed to protect the legs of the occupant, when used in combination with the 3-point seat belt.
- Air curtains will be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall.
- Suspension seats will be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event.
- Seat belts will be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event.

FRONTAL IMPACT PROTECTION

The SRS system will provide protection during a frontal or oblique impact event. The system will activate when the vehicle decelerates at a predetermined G force known to cause injury to the occupants. The cab and chassis will have been subjected, via third party test facility, to a crash impact during frontal and oblique impact testing. Testing included all major chassis and cab components such as mounting straps for fuel and air tanks, suspension mounts, front suspension components, rear suspensions components, frame rail cross members, engine and transmission and their mounts, pump house and mounts, frame extensions and body mounts. The testing provided configuration specific information used to optimize the timing for firing the safety restraint system. The sensor will activate the pyrotechnic devices when the correct crash algorithm, wave form, is detected.

The SRS system will deploy the following components in the event of a frontal or oblique impact event:

- Driver side front air bag
- Passenger side knee bolster air bag
- Air curtains mounted in the outboard bolster of outboard seat backs
- Suspension seats will be retracted to the lowest travel position
- Seat belts will be pre-tensioned to firmly hold the occupant in place

SIDE ROLL PROTECTION

The SRS system will provide protection during a fast or slow 90 degree roll to the side, in which the vehicle comes to rest on its side. The system will analyze the vehicle's angle and rate of roll to determine the optimal activation of the advanced occupant restraints.

The SRS system will deploy the following components in the event of a side roll:

- Air curtains mounted in the outboard bolster of outboard seat backs
- Suspension seats will be retracted to the lowest travel position
- Seat belts will be pre-tensioned to firmly hold the occupant in place

SEATING CAPACITY

The seating capacity in the cab will be four (4).

DRIVER SEAT

A seat will be provided in the cab for the driver. The seat design will be a cam action type, with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have an adjustable reclining back. The seat back will be a high back style with side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A suspension seat safety system will be included. When activated in the event of a side roll, this system will pretension the seat belt and retract the seat to its lowest travel position.

The seat will be furnished with a 3-point, shoulder type seat belt.

OFFICER SEAT

A seat will be provided in the cab for the passenger. The seat will be a cam action type, with air suspension. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat back will be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A suspension seat safety system will be included. When activated, this system will pretension the seat belt and then retract the seat to its lowest travel position.

The seat will be furnished with a 3-point, shoulder type seat belt.

REAR FACING LEFT SIDE CABINET

A rear facing cabinet will be provided in the crew cab at the left side outboard position.

The cabinet will be 23.00" wide x 40.25" high x 26.75" deep. The interior door will be web netting. The netting is to be made with 1.00" wide nylon material with 2.00" openings. The nylon webbing will be permanently fastened at the top side of the cabinet and have 1.00" cam buckle fasteners on the opposite side to secure it. The clear door opening will be 20.50" wide x 37.25" high.

The cabinet will include two (2) infinitely adjustable shelves with a 0.75" up-turned lippainted to match the cab interior.

The cabinet will include no louvers.

The cabinet will be constructed of smooth aluminum and painted to match the cab interior.

Cabinet Light
There will be one (1) Amdor H2O LED strip light installed on the left side of the interior cabinet door opening. The lights will be controlled by a rocker switch on the cabinet exterior.

REAR FACING RIGHT SIDE CABINET
A rear facing cabinet will be provided in the crew cab at the right side outboard position.

The cabinet will be 22.00" wide x 40.25" high x 26.75" deep. The interior door will be web netting. The netting is to be made with 1.00" wide nylon material with 2.00" openings. The nylon webbing will be permanently fastened at the top side of the cabinet and have 1.00" cam buckle fasteners on the opposite side to secure it. The interior clear door opening will be 19.50" wide x 37.25" high.

The cabinet will include two (2) infinitely adjustable shelves with a 0.75" up-turned lippainted to match the cab interior.

The cabinet will include no louvers.

The cabinet will be constructed of smooth aluminum and painted to match the cab interior.

Cabinet Light
There will be one (1) Amdor H2O LED strip light installed on the right side of the interior cabinet door opening. The lighting will be controlled by a rocker switch on the front of the cabinet.

FORWARD FACING DRIVER SIDE OUTBOARD SEAT
There will be one (1) forward facing, seat provided at the driver side outboard position in the crew cab. For optimal comfort, the seat will be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat back will be an SCBA style with 90 degree back. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position
- A seat safety system will be included. When activated, this system will pretension the seat belt.

The seat will be furnished with a 3-point, shoulder type seat belt.

FORWARD FACING CENTER CABINET
A forward facing cabinet will be provided in the crew cab at the center position.

The cabinet will be 38.50" wide x 60.00" high x 20.00" deep. The interior door will be web netting. The netting will be made with 1.00" wide nylon material with 2.00" openings. The nylon webbing will be

permanently fastened at the top side of the cabinet and have 1.00" cam buckle fasteners on the opposite side to secure it. The clear door opening will be 36.00" wide x 57.00" high.

The cabinet will include two (2) infinitely adjustable shelves with a 1.25" up-turned lippainted to match the cab interior.

The cabinet will include louvers provided on the left side of the cabinet for ventilation.

The cabinet will be constructed of smooth aluminum, and painted to match the cab interior.

Cabinet Light

There will be one (1) Amdor H2O LED strip light installed on the left side of the interior cabinet door opening. The lighting will be controlled by a rocker switch on the front of the cabinet.

FORWARD FACING PASSENGER SIDE OUTBOARD SEAT

There will be one (1) forward facing, seat provided at the passenger side outboard position in the crew cab. For optimal comfort, the seat will be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control).

The seat back will be an SCBA style with 90 degree back. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location

The seat will include the following features incorporated into the side roll protection system:

- Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.
- A seat safety system will be included. When activated, this system will pretension the seat belt.

The seat will be furnished with a 3-point, shoulder type seat belt.

REAR FACING OVERHEAD STORAGE COMPARTMENT

There will be two (2) overhead rear facing storage compartments installed at the raised roof within the crew cab, on each side of the air conditioner. The compartments will be approximately 21.00" wide x 9.00" high x 34.00" deep at the bottom.

Each compartment will include one (1) lift up compartment door. Non-locking latch, paddle handle, and gas operated stay arms will be provided.

The compartment will be constructed of smooth aluminum and painted to match the cab interior.

Compartment Light

The storage compartment lighting will consist of one (1) white Amdor LED strip light installed horizontally above each compartment door opening.

SEAT UPHOLSTERY

All seat upholstery will be leather grain 36 oz black vinyl resistant to oil, grease and mildew. The cab will have four (4) seating positions.

AIR BOTTLE HOLDERS

All SCBA type seats in the cab will have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket will include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp will constrain the SCBA bottle in the seat and will exceed the NFPA standard of 9G.

There will be a quantity of three (3) SCBA brackets.

SEAT BELTS

All cab and tiller cab (if applicable) seating positions will have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards.

The 3-point shoulder type seat belts will include height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.

The 3-point shoulder type belts will also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location.

Any flip up seats will include a 3-point shoulder type belts only.

To ensure safe operation, the seats will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.

HELMET STORAGE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided.

There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.

CAB DOME LIGHTS

There will be four (4) dual LED dome lights with black bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed and located, one (1) on each side of the crew cab.

The color of the LED's will be red and white.

The white LED's will be controlled by the door switches and the lens switch.

The color LED's will be controlled by the lens switch.

In order to ensure exceptional illumination, each white LED dome light will provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.

CAB SPOTLIGHT

There will be two (2) Golight® Stryker™, Model 30**4, white LED spotlights located on the cab roof, Each side of cab roof, final location at drawing approval. The spotlights will be mounted to the surface of the cab roof.

These lights may be load managed when the parking brake is applied.

SPOTLIGHT CONTROLLER

There will be one (1) wired dash mounted remote provided for each spotlight.

SPOTLIGHT CONTROLLER LOCATIONS

The remotes to control the spotlights will be located one (1) within reach of the driver and one (1) within reach of the officer.

PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 5.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus.

The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.

CAB INSTRUMENTATION

The cab instrument panel will be a molded ABS panel and include gauges, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.

Gauges

The gauge panel will include the following ten (10) black faced gauges with black bezels to monitor vehicle performance:

- Voltmeter gauge (volts):
    - Low volts (11.8 VDC)
        - Amber telltale light on indicator light display with steady tone alarm
    - High volts (15.5 VDC)
        - Amber telltale light on indicator light display with steady tone alarm
- Engine Tachometer (RPM)
- Speedometer MPH (Major Scale), KM/H (Minor Scale)
- Fuel level gauge (Empty - Full in fractions):
    - Low fuel (1/8 full)
        - Amber indicator light in gauge dial with steady tone alarm
- Engine Oil pressure Gauge (PSI):
    - Low oil pressure to activate engine warning lights and alarms

        - Red indicator light in gauge dial with steady tone alarm
- Front Air Pressure Gauges (PSI):
    - Low air pressure to activate warning lights and alarm
        - Red indicator light in gauge dial with steady tone alarm
- Rear Air Pressure Gauges (PSI):
    - Low air pressure to activate warning lights and alarm
        - Red indicator light in gauge dial with steady tone alarm
- Transmission Oil Temperature Gauge (Fahrenheit):
    - High transmission oil temperature activates warning lights and alarm
        - Amber indicator light in gauge dial with steady tone alarm
- Engine Coolant Temperature Gauge (Fahrenheit):
    - High engine temperature activates an engine warning light and alarms
        - Red indicator light in gauge dial with steady tone alarm
- Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):
    - Low fluid (1/8 full)
        - Amber indicator light in gauge dial

Indicator Lamps

To promote safety, the following telltale indicator lamps will be located on the instrument panel in clear view of the driver. The indicator lamps will be "dead-front" design that is only visible when active. The colored indicator lights will have descriptive text or symbols.

The following amber telltale lamps will be present:

- Low coolant
- Trac cntl (traction control) (where applicable)
- Check engine
- Check trans (check transmission)
- Air rest (air restriction)
- DPF (engine diesel particulate filter regeneration)
- HET (engine high exhaust temperature) (where applicable)
- ABS (antilock brake system)
- MIL (engine emissions system malfunction indicator lamp) (where applicable)
- Regen inhibit (engine emissions regeneration inhibit) (where applicable)
- Side roll fault (where applicable)
- Front air bag fault (where applicable)
- Aux brake overheat (auxiliary brake overheat) (where applicable)
- The following red telltale lamps will be present:
- Ladder rack down
- Parking brake
- Stop engine
- The following green telltale lamps will be present:
- Left turn
- Right turn

- Battery on
- Ignition
- Aux brake (auxiliary brake engaged) (where applicable)
- The following blue telltale lamps will be present:
- High beam

Alarms

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning condition is active.

Indicator Lamp and Alarm Prove-Out

A system will be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms will perform prove-out for 3 to 5 seconds when the ignition switch is moved to the on position with the battery switch on.

Control Switches

For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches will have backlit labels for low light applications.

Headlight/Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking and headlights. The second switch position will activate the parking lights. The third switch will activate the headlights.

Panel back lighting intensity control switch: A three (3)-position momentary rocker switch will be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times will allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use.

Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will turn off and deactivate vehicle ignition. The second switch position will activate vehicle ignition and will perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position will temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position will terminate the alarm silence feature and reset function of cab alarm system.

Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.

Hazard switch will be provided on the instrument panel or on the steering column.

Heater and defroster controls.

Turn signal arm: A self-canceling turn signal with high beam headlight controls.

Windshield wiper control will have high, low, and intermittent modes.

Parking brake control: An air actuated push/pull park brake control.

Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.

High idle engagement switch: A maintained rocker switch with integral indicator lamp will be provided. The switch will activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.

"OK To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

Emergency switching will be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included.

An additional "Emergency Master" button will be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground.

Custom Switch Panels

The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.



[Gauge Cluster and Lower Switch Panels]



[Overhead Switch Panels]

Diagnostic Panel

A diagnostic panel will be provided and accessible while standing on the ground. The panel will be located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist.

The diagnostic panel will include the following:

- ENGINE/TRANSMISSION/ABS J1939 Diagnostic Port
- ABS Diagnostic Switch and Indicator - The switch and amber indicator will allow access to diagnostic mode and display of standard ABS system fault blink codes that may be generated by the ABS system
- DPF REGEN (Diesel Particulate Filter Regeneration Switch) (where applicable) will be provided to request regeneration of the engine emission system. An amber indicator will be provided on top of the switch that will illuminate in a "CHECK ENGINE" condition
- REGEN INHIBIT (Diesel Particulate Filter Regeneration Inhibit Switch) (where applicable) will be provided that will request that regeneration be temporarily prevented. A green indicator will be provided on top of the Regen Inhibit switch that will illuminate when the Regen Inhibit feature is active. Regen Inhibit will be disabled upon cycling of the ignition switch to the off state.

AIR RESTRICTION INDICATOR

A high air restriction warning indicator light (electronic) will be provided.

OFFICER SPEEDOMETER
A Class I digital display speedometer will be recessed into the instrument panel Determined at drawing approval.

"DO NOT MOVE APPARATUS" INDICATOR
A flashing red indicator light, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On."

The same circuit that activates the Do Not Move Apparatus indicator will activate a pulsing alarm when the parking brake is released.

SWITCH PANELS
The built-in switch panels will be located in the lower console or overhead console of the cab. Switches will be rocker type with an indicator light, of which is an integral part of the switch.

WIPER CONTROL
Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls.

SPARE CIRCUIT
There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus.

The above wires will have the following features:

- The positive wire will be connected directly to the ignition switched power.
- The negative wire will be connected to ground.
- Wires will be protected to 15 amps at 12 volts DC.
- Power and ground will terminate Passenger forward area of engine tunnel.
- Termination will be with 15 amp, power point plug with rubber cover.
- Wires will be sized to 125 percent of the protection.

This circuit(s) may be load managed when the parking brake is set.

CUSTOMER SUPPLIED RADIO WIRING
There will be one (1) 12 volt combination wiring leads of which each will include one (1) battery switched, one (1) ignition and one (1) negative for use with radio equipment.

Each lead will be 18.00" long and be provided Officer Dash. The leads will be clearly marked in a coil and terminate with butt splices.

A breaker rated for 30 amps will be provided for circuit protection of the battery switched lead with a minimum of 10 gauge wire.

A breaker rated for 7.5 amps will be provided for circuit protection of the ignition lead.

The wires will be colored coded as follows:

- red for battery switched

- yellow for ignition
- black for ground

INFORMATION CENTER

There will be a LCD display integral to the cab gauge panel provided that will display the following information:

- Total distance
- Trip distance
- Total hours
- Trip hours
- PTO "A" hours
- PTO "B" hours

COLLISION MITIGATION

There will be a HAAS Alert®, Model HA5 Responder-to-Vehicle (R2V) collision avoidance system provided on the apparatus. The HA5 cellular transponder module will be installed behind the cab windshield, as high and near to the center as practical, to allow clear visibility to the sky. The module dimensions are 5.40" long x 2.70" wide x 1.30" high, and operating temperature range is -40 degree C to 85 degree C.

The transponder will be connected to the vehicle's emergency master circuit and battery direct power and ground.

While responding with emergency lights on, the HA5 transponder sends alert messages via cellular network to motorists in the vicinity of the responding truck that are equipped with the WAZE app.

While on scene with emergency lights on, the HA5 transponder sends road hazard alerts to motorists in the vicinity of the truck that are equipped with the WAZE app.

The HA5 Responder-to-Vehicle (R2V) collision avoidance system will include the transponder and a 5 year cellular plan subscription.

Activation of the HAAS Alert system requires a representative of the customer to accept the End User License Agreement (EULA) via an on-line portal.

VEHICLE DATA RECORDER

There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.

The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.

The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs:

- Vehicle Speed - MPH
- Acceleration - MPH/sec
- Deceleration - MPH/sec
- Engine Speed - RPM
- Engine Throttle Position - % of Full Throttle
- ABS Event - On/Off
- Seat Occupied Status - Yes/No by Position
- Seat Belt Buckled Status - Yes/No by Position
- Master Optical Warning Device Switch - On/Off
- Time - 24 Hour Time
- Date - Year/Month/Day

Seat Belt Monitoring System

A seat belt monitoring system (SBMS) will be provided. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:

- Seat Occupied & Buckled = Green LED indicator illuminated
- Seat Occupied & Unbuckled = Red LED indicator with audible alarm
- No Occupant & Buckled = Red LED indicator with audible alarm
- No Occupant & Unbuckled = No indicator and no alarm

The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.

RADIO ANTENNA MOUNT

There will be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed on the right side on the cab roof with high efficiency, low loss, coaxial cable(s) routed to the instrument panel area. A weatherproof cap will be installed on the mount.



VEHICLE CAMERA SYSTEM

There will be a color vehicle camera system provided with the following:

- One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse.

The camera image will be displayed on a 7.00" LCD display located in view of the driver in the custom dash, per instrument panel layout. The display will include manual camera activation capability and audio from the active camera.

The following components will be included:

- One (1) MO700136DC, display
- One (1) SV-CW134639CAI, camera
- All necessary cables

ELECTRICAL POWER CONTROL SYSTEM

A compartment will be provided in or under the cab to house the vehicle's electrical power and signal circuit protection and control components. The power and signal protection and control compartment will contain circuit protection devices and power control devices. Power and signal protection and control components will be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray.

Serviceable components will be readily accessible.

Circuit protection devices, which conform to SAE standard, will be utilized to protect each circuit. All circuit protection devices will be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258. When required, automotive type fuses conforming to SAE J554, J1284, J1888 or J2077 will be utilized to protect electronic equipment.

Power control relays and solenoids will have a direct current (dc) rating of 125 percent of the maximum current for which the circuit is protected.

Visual status indicators will be supplied to identify control safety interlocks and vehicle status. In addition to visual status indicators, audible alarms designed to provide early warning of problems before they become critical will be used.

VOLTAGE MONITOR SYSTEM

A voltage monitor system will be provided to indicate the status of each battery system connected to the vehicle's electrical load. The monitor system will provide visual and audio warning when the system voltage is above or below optimum levels.

POWER AND GROUND STUDS

Spare circuits will be provided in the primary distribution center for two-way radio equipment.

The spare circuits will consist of the following:

- One (1) 12-volt DC, 30 amp battery direct spare
- One (1) 12-volt DC ground and un-fused switched battery stud located in or adjacent to the power distribution center

EMI/RFI PROTECTION

The electrical system proposed will include means to control undesired electromagnetic and radio frequency emissions. State of the art electrical system design and components will be used to ensure radiated and conducted EMI (electromagnetic interference) and RFI (radio frequency interference) emissions are suppressed at their source.

The apparatus proposed will have the ability to operate in the electromagnetic environment typically found in fire ground operations. The contractor will be able to demonstrate the EMI and RFI testing has been done on similar apparatus and certifies that the vehicle proposed meets SAE J551 requirements.

EMI/RFI susceptibility will be controlled by applying immune circuit designs, shielding, twisted pair wiring and filtering. The electrical system will be designed for full compatibility with low level control

signals and high powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI-RFI susceptibility.

ELECTRICAL

All 12-volt electrical equipment installed by Pierce Manufacturing will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.

Electrical wiring and equipment will be installed utilizing the following guidelines:

1. All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.
2. Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body.
3. Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also, a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.
4. Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will have this compound in the plug to prevent corrosion and for easy separation (of the plug).
5. All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.
6. All electrical terminals in exposed areas will have silicon (1890) applied completely over the metal portion of the terminal.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection.

Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

The results of the tests will be recorded and provided to the purchaser at time of delivery.

BATTERY SYSTEM

There will be four (4) 12 volt Exide®, Model 31S950X3W, batteries that include the following features will be provided:

- 950 CCA, cold cranking amps

- 190 amp reserve capacity
- High cycle
- Group 31
- Rating of 3800 CCA at 0 degrees Fahrenheit
- 760 minutes of reserve capacity
- Threaded stainless steel studs

Each battery case will be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover will be manifold vented with a central venting location to allow a 45 degree tilt capacity.

The inside of each battery will consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.

BATTERY SYSTEM

There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.

MASTER BATTERY SWITCH

There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.

An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.

BATTERY COMPARTMENTS

Batteries will be placed on non-corrosive mats and stored in well ventilated compartments located under the cab.

Heavy-duty, 2/0 gauge, color coded battery cables will be provided. Battery terminal connections will be coated with anti-corrosion compound.

Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound.

JUMPER STUDS

One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.

BATTERY CHARGER

There will be an IOTA™, Model DSL 75, battery charger with IQ4, controller provided.

The battery charger will be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.

There will be a Kussmaul™, Model #091-94-12, remote indicator included.

The battery charger will be located in the left body compartment mounted on the left wall as high as possible.

The battery charger indicator will be located on the driver's seat riser.

AUTO EJECT FOR SHORELINE

There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus.

The shoreline inlet(s) will include red weatherproof flip up cover(s).

There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting.

The shoreline(s) will be connected to the battery charger.

There will be a mating connector body supplied with the loose equipment.

There will be a label installed near the inlet(s) that state the following:

- Line Voltage
- Current Ratting (amps)
- Phase
- Frequency

The shoreline receptacle will be located on the driver side of cab, above wheel.

ALTERNATOR

There will be a C.E Niehoff, Model C531 or C537 alternator provided. It will have a rated output current of 360 amps, as measured by SAE method J56. It will have a custom three (3)-set point voltage regulator, manufactured by C. E. Niehoff. The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

ELECTRONIC LOAD MANAGEMENT

An electronic load management (ELM) system that monitors the vehicles 12-volt electrical system, and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system.

The ELM will monitor the vehicle's voltage while at the scene (parking brake applied). It will sequentially shut down individual electrical loads when the system voltage drops below a preset value. Two (2) separate electrical loads will be controlled by the load manager. The ELM will sequentially re-energize electrical loads as the system voltage recovers.

HEADLIGHTS

There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights mounted in the front quad style, chrome housing on each side of the cab grille:

- the outside light on each side will contain a part number 055***1 low beam module
- the inside light on each side will contain a part number 055***1 high beam module
- the headlight to include chrome bezels

The low beam lights will be activated when the headlight switch is on.

The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.

DIRECTIONAL LIGHTS

There will be two (2) Whelen®, Model C6T*, 5.12" high x 7.56" wide x 1.56" deep amber LED populated arrow directional lights provided on the front of the cab, above the headlights. Each light will be housed in the same quad common bezel as the front warning light. The lens color(s) to be clear.

INTERMEDIATE LIGHT

There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.

CAB CLEARANCE/MARKER/ID LIGHTS

There will be seven (7) amber LED lights provided per the following:

- Three (3) amber LED identification lights will be installed in the center of the cab above the windshield.
- Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield as close to the outside of the apparatus as practical.
- Two (2) amber LED clearance lights will be installed, one (1) on each side of the cab as high and far forward as practical.

FRONT CAB SIDE DIRECTIONAL/MARKER LIGHTS

There will be two (2) Weldon, Model 9186-8580-29, amber LED lights installed front of the cab door, one (1) on each side of the cab.

The lights will activate as marker lights with the headlight switch and directional lights with the corresponding directional circuit.

REAR CLEARANCE/MARKER/ID LIGHTING

There will be a three (3) LED light bar used as identification lights located at the rear of the apparatus per the following:

- As close as practical to the vertical centerline
- Centers spaced not less than 6.00" or more than 12.00" apart
- Red in color
- All at the same height

There will be two (2) LED lights installed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:

- To indicate the overall width of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color

- To be visible from the rear
- All at the same height

There will be two (2) LED lights installed on the side of the apparatus used as marker lights as close to the rear as practical per the following:

- To indicate the overall length of the vehicle
- One (1) each side of the vertical centerline
- As near the top as practical
- Red in color
- To be visible from the side
- All at the same height

There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.

Per FMVSS 108 and CMVSS 108 requirements.

REAR FMVSS LIGHTING

The rear stop/tail and directional LED lighting will consist of the following:

- Two (2) Whelen®, Model M6BTT, red LED stop/tail lights
- Two (2) Whelen, Model M6T, amber LED arrow turn lights

The lights will be provided with color lenses.

The lights will be mounted in a polished combination housing.

There will be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing.

LICENSE PLATE BRACKET

There will be one (1) license plate bracket mounted on the rear of the body.

A white LED light will illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.

LIGHTING BEZEL

There will be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.

BACK-UP ALARM

A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.

CAB PERIMETER SCENE LIGHTS

There will be four (4) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" white LED strip lights provided, one (1) for each cab door.

These lights will be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.

PUMP HOUSE PERIMETER LIGHTS

There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens each, 20.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, one (1) each side.

If the combination of options in the vehicle does not permit clearance for a 20.00" light, a 12.00" version of the Amdor light will be installed.

The lights will be controlled by the same means as the body perimeter lights.

BODY PERIMETER SCENE LIGHTS

There will be two (2) Amdor, Model AY-LB-12HW020, 350 lumens, 20.00" long, white LED's, 12 volt DC lights provided at the rear step area of the body, one (1) each side shining to the rear.

The perimeter scene lights will be activated when the parking brake is applied.

STEP LIGHTS

Four (4) white LED step lights will be provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard.

In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light.

These step lights will be actuated with the pump panel light switch.

All other steps on the apparatus will be illuminated per the current edition of NFPA 1901.

12 VOLT LIGHTING

There will be two (2) HiViz FIRETECH, Model FT-B-46-*, 46.00" 12 volt DC LED light(s) with a combination of flood and spot optics and adjustable mounting brackets mounted One on each side of upper body rear most location.

The color of the light housing(s) and brackets will be painted parts of the light housing and brackets to be white.

The light(s) selected above will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.

These light(s) may be load managed when the parking brake is applied.

12 VOLT LIGHTING

There will be two (2) HiViz FIRETECH, Model FT-B-46-*, 46.00" 12 volt DC LED light(s) with a combination of flood and spot optics and adjustable mounting brackets mounted One on each side of crew cab.

The color of the light housing(s) and brackets will be painted parts of the light housing and brackets to be white.

The light(s) selected above will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.

These light(s) may be load managed when the parking brake is applied.

12 VOLT LIGHTING

There will be one (1) Rigid Industries, part number 886213, 85,538 raw lumens, 54" long, 12 volt DC white LED light bar provided on the front visor.

The light bar housing will be black and the LED's will be spot.

The light bar will be activated by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel .

These light(s) may be load managed when the parking brake is applied.

DECK LIGHTS

There will be two (2) Whelen, Model PFBP12C, 12 volt DC LED floodlights with swivel mount provided at the rear of the hose bed, one (1) each side.

The lights will be activated by a control from a switch at the rear of the truck.

HOSE BED LIGHTS

There will be white 12 volt DC LED light strips with stainless steel protective cover, provided to light the hose bed area. Hose Bed lights will meet the photometric levels listed in NFPA 1901 for Hose Bed lighting requirements.

- Light strip(s) will be installed along the upper edge of the left side of the hose bed.
- Light strip(s) will be installed along the upper edge of the right side of the hose bed.

The lights will be activated by a switch located near the water tank fill dome and by a cup switch at the rear of the apparatus no more than 72.00" from the ground.

HOSE BED LIGHT

There will be two (2) Amdor Model AY-LB-12HW040, 700 lumens, 40.00" LED light located each side of hose bed near top.

The light(s) will be activated when the battery switch is on, and by a cup switch at the rear of the apparatus no more than 72.00" from the ground.

REAR SCENE LIGHT(S)

There will be two (2) Whelen®, Model M9LZC, LED scene light(s) with chrome trim bezel(s) installed at the rear of the apparatus, one (1) high on the driver's side rear body bulkhead and one (1) high on the passenger's side rear body bulkhead.

The light(s) will be controlled by a switch at the driver's side switch panel and by a cup switch at the driver's side rear bulkhead.

The light(s) may be load managed when the parking brake is applied.

WALKING SURFACE LIGHT

There will be Model FRP, 4" round black 12 volt DC LED floodlight(s) with bolt mount provided to illuminate the entire designated walking surface on top of the body.

The light(s) will be activated when the body step lights are on.

WATER TANK

Booster tank will have a capacity of 750 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated.

The tank will be designed to achieve a low hosebed. Tank design will be a stepped design with the forward section of the tank higher than the section of the tank that is below the hose bed.

Tank joints and seams will be nitrogen welded inside and out.

Tank will be baffled in accordance with NFPA Bulletin 1901 requirements.

Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments.

Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding.

Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover.

All partitions will interlock and will be welded to the tank bottom and sides.

Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions.

Tank top will be sufficiently supported to keep it rigid during fast filling conditions.

Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.

A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank.

Sump will include a drain plug and the tank outlet.

Tank will be installed in a fabricated cradle assembly constructed of structural steel.

Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing.

Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on.

Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle.

Mounting system will be approved by the tank manufacturer.

Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long.

Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover.

An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.

SLEEVE, PLUMBING, THROUGH TANK

One (1) sleeve will be provided in the water tank for a 3.00" pipe to the rear.

WATER TANK RESTRAINT

A heavy-duty water tank restraint will be provided.

HOSE BED

The hose bed will be fabricated of .125"-5052 aluminum with a nominal 38,000 psi tensile strength.

The hose bed will be as low as practical.

Upper and rear edges of side panels will have a double break for rigidity.

The upper inside area of the beavertails will be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.

Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.

A cross divider will be provided at the front of the hose bed before the tank transitions from the lower section to the upper section. The divider will run from the top of the side sheet down below the hose bed grating.

The inside of the hose bed will be painted . The inside of the cargo area above the pump will be painted .

Hose bed will accommodate 1000 ft of 5" rubber hose, 400 ft of 1.75 hose poly, and 600 ft 3" poly hose.

HOSE BED DIVIDER

Three (3) adjustable hosebed dividers will be furnished for separating hose.

Each divider will be constructed of a .25" brushed aluminum sheet. Flat surfaces will be sanded for uniform appearance, or constructed of brushed aluminum.

Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed.

Divider will be held in place by tightening bolts, at each end.

Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.

HOSE BED HOSE RESTRAINT

The hose in the hose bed will be restrained by a black nylon Velcro® strap at the top of the hosebed. At the rear of the hose bed, 2.00" black nylon webbing with a 1.50" x 4.00" box pattern will attach at the top rear outside corners with seat belt buckle fasteners. The webbing will have straps connected with seat belt buckle fasteners located at the rear body sheet below the hose bed.

A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheet.

RUNNING BOARDS

Running boards will be fabricated of .125" bright aluminum treadplate.

Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure.

Running boards will be 12.75" deep and spaced .50" away from the pump panel.

A splash guard will be provided above the running board treadplate.

TAILBOARD

The tailboard will also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly.

The tailboard area will be 16.00" deep.

The exterior side will be flanged down and in for increased rigidity of tailboard structure.

REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL

The rear facing surfaces of the center rear wall will be smooth aluminum.

The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body.

Any inboard facing surfaces below the height of the hosebed will be aluminum diamondplate.

TOW BAR

A tow bar will be installed under the tailboard at center of truck.

Tow bar will be fabricated of 1.00" CRS bar rolled into a 3.00" radius.

Tow bar assembly will be constructed of .38" structural angle. When force is applied to the bar, it will be transmitted to the frame rail.

Tow bar assembly will be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle.

Tow bar design will have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.

RUNNING BOARD HOSE RESTRAINT

A pair of 2.00" wide black nylon straps with Velcro fasteners will be provided for each hose tray to secure the hose during travel. There will be One (1) hose tray located in the left side running board.

HOSE TRAY

One (1) hose tray will be recessed in the left hand side running board.

Capacity of the tray will be 25.00' of 5.00" soft suction hose.

Rubber matting will be installed on the floor of the tray to provide proper ventilation.

COMPARTMENTATION

Body and compartments will be fabricated of .125", 5052-H32 aluminum.

Side compartments will be an integral assembly with the rear fenders.

Circular fender liners will be provided for prevention of rust pockets and ease of maintenance.

Side compartment flooring will be of the sweep out design with the floor higher than the compartment door lip.

The side compartment door opening will be framed by flanging the edges in 1.75" and bending out again .75" to form an angle.

Drip protection will be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate or polished stainless steel.

The top of the compartment will be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers will have the corners welded.

Side compartment covers will be separate from the compartment tops.

Front facing compartment walls will be covered with bright aluminum treadplate.

All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury.

UNDERBODY SUPPORT SYSTEM

Due to the severe loading requirements of this pumper a method of body and compartment support suitable for the intended load will be provided.

The backbone of the support system will be the chassis frame rails which is the strongest component of the chassis and is designed for sustaining maximum loads.

The support system will include .375" thick steel vertical angle supports bolted to the chassis frame rails with .625" diameter bolts.

Attached to the bottom of the steel vertical angles will be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.

A steel frame will be mounted on the top of these supports to create a floating substructure which will result in a 500 lb equipment support rating per lower compartment.

The floating substructure will be separated from the horizontal members with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body.

Isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.

The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.

AGGRESSIVE WALKING SURFACE

All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards.

LOUVERS

Louvers will be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they will be formed into the metal and not added to the compartment as a separate plate.

TESTING OF BODY DESIGN

Body structural analysis has been fully tested. Proven engineering and test techniques such as finite element analysis, stress coating and strain gauging have been performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure.

Body will be tested while loaded to its greatest in-service weight.

The criteria used during the testing procedure will include:

- Raising opposite corners of the vehicle tires 9.00" to simulate the twisting a truck may experience when driving over a curb.
- Making a 90 degree turn, while driving at 20 mph to simulate aggressive driving conditions.
- Driving the vehicle at 35 mph on a washboard road.
- Driving the vehicle at 55 mph on a smooth road.
- Accelerating the vehicle fully, until reaching the approximate speed of 45 mph on rough pavement.

Evidence of actual testing techniques will be made available upon request.

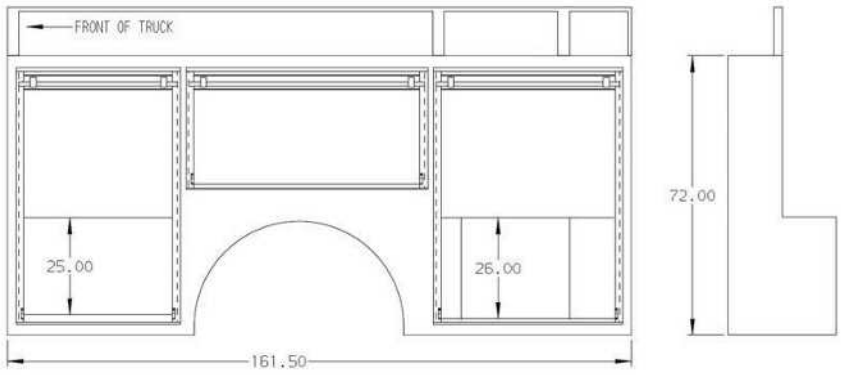
LEFT SIDE COMPARTMENTATION

The left side compartmentation will consist of three (3) rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 44.00" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 38.25" wide x 56.88" high.

A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high.

A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.



	CLEAR DOOR OPENINGS					
	AMDOR		GORTITE		ROM	
COMPARTMENT	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
Ahead of axle	39.00	56.88	38.25	58.00	38.44	58.25
Over axle	59.00	23.13	58.25	24.25	58.44	24.50
Behind axle	45.50	57.88	44.75	59.00	44.94	59.25

The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one (1) hand.

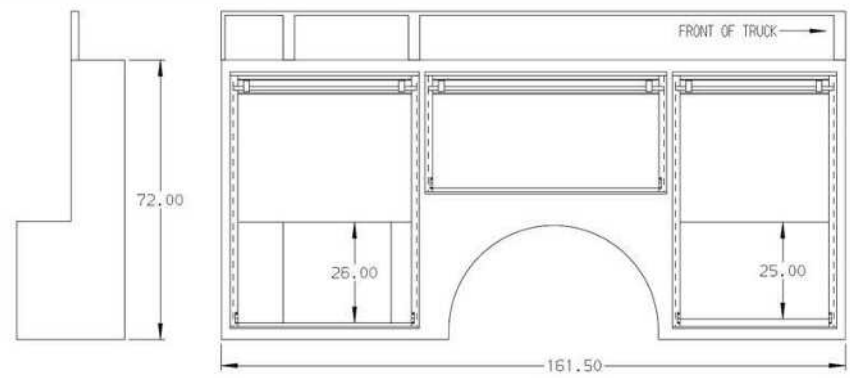
RIGHT SIDE COMPARTMENTATION

The right side compartmentation will consist of three (3) rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 44.00" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 38.25" wide x 56.88" high.

A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high.

A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.



	CLEAR DOOR OPENINGS					
	AMDOR		GORTITE		ROM	
COMPARTMENT	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL
Ahead of axle	39.00	56.88	38.25	58.00	38.44	58.25
Over axle	59.00	23.13	58.25	24.25	58.44	24.50
Behind axle	45.50	57.88	44.75	59.00	44.94	59.25

The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one (1) hand.

SIDE COMPARTMENT ROLLUP DOOR(S)

There will be six (6) compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors.

Door(s) will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be

connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement.

Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingression.

The doors will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.

Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.

A polished stainless steel lift bar to be provided for each roll-up door. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.

All injection molded rollup door wear components will be constructed of Type 6 nylon.

Each rollup door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.

The header for the rollup door assembly will not exceed 4.00".

A heavy-duty magnetic switch will be used for control of open compartment door warning lights.

REAR COMPARTMENTATION

A roll-up door compartment above the rear tailboard will be provided**.**

The interior dimensions of this compartment will be 40.00" wide x 33.63" high x 25.88" deep. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartment will be calculated with the compartment door closed.

A louvered, removable access panel will be furnished on the back wall of the compartment.

The rear compartment will be open into the rear side compartments.

The clear door opening of this compartment will be a minimum of 33.25" wide x 23.88" high.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

ROLLUP REAR COMPARTMENT DOOR

The rear compartment will have a rollup door.

The door will be double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand rollup doors.

The door will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement.

Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingression.

The door will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.

Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.

A polished stainless steel lift bar to be provided for each roll-up door. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.

All injection molded rollup door wear components will be constructed of Type 6 Nylon.

The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.

The header for the rollup door assembly will not exceed 4.00".

A heavy-duty magnetic switch will be used for control of open compartment door warning lights.

DOOR GUARD

There will be seven (7) compartment doors that will include a guard/drip pan designed to protect the rollup door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed left side rearward compartment, left side over the wheel compartment, left side forward compartment, right side rearward compartment, right side over the wheel compartment, right side forward compartment and rear compartment.

COMPARTMENT LIGHTING

There will be seven (7) compartments with Amdor, Model AY-9220, white 12 volt DC LED compartment light strips. The lights will be mounted with mechanical fasteners.

There will be two (2) strip lights installed vertically in each compartment opening per the latest NFPA requirements.

The lights will be activated when the battery switch is on and the respective compartment door is opened.

MOUNTING TRACKS

There will be seven (7) sets of tracks for mounting shelf(s) in LS1, LS2, LS3, RS1, RS2, RS3 and B1. These tracks will be installed vertically to support the adjustable shelf(s), and will be full height of the compartment. The tracks will be painted to match the compartment interior.

ADJUSTABLE SHELVES

There will be seven (7) shelves with a capacity of 500 lb provided.

The shelf construction will consist of .188" aluminum painted spatter gray with 2.00" sides.

Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track.

The shelves will be held in place by .12" thick stamped plated brackets and bolts.

The location(s) will be determined at a later date.

SLIDE-OUT FLOOR MOUNTED TRAY

There will be two (2) floor mounted slide-out tray(s) provided.

Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position.

Each tray will be constructed of aluminum painted spatter gray

There will be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides will have a safety factor rating of 2.

To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.

To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request.

Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.

The location(s) will be B1.

COMPARTMENT FLOOR SCUFFPLATE

Aluminum treadplate will be provided on the floor of two (2) compartments. The locations will be, to be determined.

The edges of the treadplate will be completely caulked before installation to prevent corrosion.

RUB RAIL
Bottom edge of the side and rear of the body compartments will be trimmed with a bright aluminum extruded rub rail.

Trim will be 2.12" high with 1.38" flanges turned outward for rigidity.

The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.

BODY FENDER CROWNS
Polished stainless steel fender crowns will be provided around the rear wheel openings with a dielectric barrier will be provided between the fender crown and the fender sheet metal to prevent corrosion.

The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting will be provided between the body and crown.

BODY FENDER LINER
A painted fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.

HARD SUCTION HOSE
Hard suction hose will not be required.

HANDRAILS
The handrails will be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface.

Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces.

Drain holes will be provided in the bottom of all vertically mounted handrails.

Handrails will be provided to meet NFPA 1901 section 15.8 requirements. The handrails will be installed as noted on the sales drawing.

HANDRAILS
One (1) vertical handrail will be located on each rear beavertail.

One (1) horizontal black rubber-covered handrail will be provided above the hose bed at the rear of the apparatus. The hose bed dividers shall be tied to the upper handrail or cross bar in order to provide sufficient reinforcement.

ADDITIONAL HANDRAIL
Four (4) handrails will be mounted to be determined.

AIR BOTTLE STORAGE (DOUBLE)
A quantity of three (3) air bottle compartments, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the left side forward of the rear wheels, on the left side rearward of the rear wheels, on the right side

forward of the rear wheels and on the right side rearward of the rear wheels . A polished stainless steel door with a Southco raised trigger C2 chrome lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal.

Inside the compartment, black rubber matting and "W" shaped insert formed of composite materials will be provided.

EXTENSION LADDER

There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.

ROOF LADDER

There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.

LADDER STORAGE

The ladders will be stored between the water tank and the right side compartments.

The ladders will extend into the pump compartment just to the rear of the water pump discharges.

The ladder storage area will be enclosed as practical by means of sheet metal to protect the ladders from road dirt. The ladders that extend into the pump house will also be enclosed. A black rubber boot will be provided to enclose the ladders in the gap between the pump house and the body.

Each ladder will be stored vertically in a separate stainless steel storage trough. Each stainless steel trough will be lined with Dura-Surf nylon slides.

An aluminum enclosure will be provided at the rear of the body to properly contain the ladders. This enclosure will extend to the rear of the side body compartments.

The enclosure will also include a vertically hinged smooth aluminum door with a D-handle latch to access the ladders. The door will be hinged on the right side.

FOLDING LADDER

One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed in a U-shaped trough inside the ladder storage compartment .

PIKE POLE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 8 ft or longer pike pole mounted in a bracket fastened to the apparatus.

The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike pole.

The pike pole(s) will be a Duo-Safety 10' pike pole.

6' PIKE POLE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 6' pike pole or plaster hook mounted in a bracket fastened to the apparatus.

The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike pole.

The pike pole(s) will be a Duo-Safety 6' pike pole.

PIKE POLE STORAGE

Aluminum tubing will be used for the storage of two (2) pike poles and will be located in ladder storage compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate will be provided.

REAR FOLDING STEPS

Chrome Eberhard folding steps will be provided at the rear. All steps will provide adequate surface for stepping.

Four (4) additional folding steps, Eberhard, will be located To be determined at drawing approval..

PUMP

Pump will be a Waterous CSU, 1500 gpm single (1) stage midship mounted centrifugal type.

Pump will be the class "A" type.

Pump will deliver the percentage of rated discharge at pressures indicated below:

- 100% of rated capacity at 150 psi net pump pressure.

-70% of rated capacity at 200 psi net pump pressure.

-50% of rated capacity at 250 psi net pump pressure.

Pump body will be close-grained gray iron, bronze fitted, and horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly (including wear rings).

Pump will be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping.

Pump case halves will be bolted together on a single horizontal face to minimize chance of leakage and facilitate ease of reassembly. No end flanges will be used.

Discharge manifold of the pump will be cast as an integral part of the pump body assembly and will provide a minimum of three (3) 3.50" openings for flexibility in providing various discharge outlets for maximum efficiency.

The three (3) 3.50" openings will be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold.

Impeller shaft will be stainless steel, accurately ground to size. It will be supported at each end by sealed, anti-friction ball bearings for rigid precise support. Impeller will have flame plated hubs assuring maximum pump life and efficiency despite any presence of abrasive matter in the water supply.

Bearings will be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings will be used.

PUMP PACKING

Stuffing boxes will be of the conventional two (2) piece, split-gland type, to permit adjustment or replacement of Grafoil packing without disturbing the pump. Water will be fed into stuffing box lantern rings for proper lubrication and cooling when the pump is operating.

Lantern rings will be located at the inner ends of the stuffing boxes, to avoid having to remove them when replacing pump packing.

Wear rings will be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.

PUMP TRANSMISSION

The pump transmission will be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump will be through a high strength Morse HY-VO silent drive chain. By the use of a chain rather than gears, 50% of the sprocket will be accepting or transmitting torque, compared to two (2) or three (3) teeth doing all the work.

Drive shafts will be 2.35" diameter hardened and ground alloy steel and supported by ball bearings. The case will be designed to eliminate the need for water cooling.

PUMPING MODE

An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.

AIR PUMP SHIFT

Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control will also be located on the left side pump panel.

Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump".

The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements.

The pump shift control in the cab will be illuminated to meet NFPA requirements.

TRANSMISSION LOCK-UP

The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.

AUXILIARY COOLING SYSTEM

A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be cylindrical type and will be a separate unit. The heat exchanger will be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger will be plumbed to the master drain valve.

INTAKE RELIEF VALVE - PUMP

There will be One (1) Elkhart Style 40 relief valve(s) installed on the suction side of the pump preset at 125 psig.

The relief valve(s) will have a working range of 75 psi to 250 psi.

The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag.

The relief valve pressure control will be located behind behind the right side pump panel with a stainless steel access door .

PRESSURE CONTROLLER

A Pierce Pump Boss Model PBA300 pressure governor will be provided.

A pressure transducer will be installed in the water discharge manifold on the pump.

The display panel will be located at the pump operator's panel.

PRIMING PUMP

The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901.

All wetted metallic parts of the priming system are to be of brass and stainless steel construction.

One (1) priming control will open the priming valve and start the pump primer.

PUMP MANUALS

There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.

PLUMBING, STAINLESS STEEL AND HOSE

All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness.

Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings.

Plumbing manifold bodies will be ductile cast iron or stainless steel.

All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame.

All water carrying gauge lines will be of flexible polypropylene tubing.

All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.

MAIN PUMP INLETS

A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.

MAIN PUMP INLET CAP



The main pump inlets will have National Standard Threads with a long handle chrome cap.

The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.

SHORT SUCTION TUBE(S)

The suction tube(s) on the water pump will have short suction tube(s) installed to allow for installation of adapters, elbows or intake valves without excessive overhang.

VALVES

All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve.

Valves will have a **ten (10) year** warranty.

LEFT SIDE INLET

There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter.

The auxiliary inlet will be provided with a strainer, chrome swivel and plug.

The location of the valve for the one (1) inlet will be recessed behind the pump panel.

INLET CONTROL

The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.

INLET BLEEDER VALVE

A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an

ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.

TANK TO PUMP

The booster tank will be connected to the intake side of the pump with stainless steel piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing.

A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.

TANK REFILL

A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.

LEFT SIDE DISCHARGE OUTLETS

There will be One (1) discharge outlet with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

RIGHT SIDE DISCHARGE OUTLETS

There will be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.

LARGE DIAMETER DISCHARGE OUTLET

There will be a 4.00" discharge outlet with a 3.50" Waterous valve installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet will be actuated with a handwheel control at the pump operator's control panel.

An indicator will be provided to show when the valve is in the closed position.

FRONT DISCHARGE OUTLET

There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located on the top of the right side of the front bumper.

Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel.

There will be automatic drains provided at all low points of the piping.

REAR DISCHARGE OUTLET

There will be Two (2) discharge outlets piped to the rear of the hose bed, one (1) each side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.

DISCHARGE CAPS/ INLET PLUGS

Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets.

Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size.

The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

OUTLET BLEEDER VALVE

A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application.

The valves will be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders will be routed below the chassis frame rails.

LEFT SIDE OUTLET ELBOWS

The One (1) discharge outlet, located on the left side pump panel, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) Paducah, chrome plated, 45 degree elbow.

The elbow will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

RIGHT SIDE OUTLET ELBOWS

The One (1) discharge outlet, located on the right side pump panel, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) Paducah, chrome plated, 45 degree elbow.

The elbow will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

REAR OUTLET ELBOWS

The 2.50" discharge outlets, located at the rear of the apparatus, will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) Paducah, chrome plated, 45 degree elbow.

The elbow will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.

Elbows will be provided for One (1) discharge outlet.

LARGE DIAMETER OUTLET ELBOWS

The 4.00" outlet(s) will be furnished with one (1) 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.

ADAPTER
There will be two (2) adapters with 2.50" Female NST x 2.50" Male Paducah Thread installed 2.5" Crosslay & 2.5" Intake .

DISCHARGE OUTLET CONTROLS
The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve.

If a handwheel control valve is used, the control will be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.

Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.

DELUGE RISER
A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be rigidly braced and installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel.

Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.

TELESCOPIC PIPING
The deluge riser piping will include an 18.00" Task Force Model XG18 Extend-A-Gun extension.

This extension will be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation.

A position sensor will be provided on the telescopic piping that will activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.

MONITOR
A Task Force Tips Crossfire #XFT-NJ monitor will be properly installed on the deluge riser. This monitor will be painted as provided by monitor manufacturer .

NOZZLE
A Task Force Tips Master Stream Series M-R nozzle will be provided.

Included will be a Task Force Tips XF-SS5 stream straightener and MST-4NJ quad stacked tips.

Tip sizes will be 1.38", 1.50", 1.75" and 2.0".

The deluge riser Extend-a-Gun will have provisions for direct mounting a Task Force Tips CrossFire monitor.

CROSSLAY HOSE BEDS
Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed hose and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.

Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.

The crosslay controls will be at the pump operator's panel.

The center crosslay dividers will be fabricated of 0.25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish.

Vertical scuffplates constructed of stainless steel will be provided at the front and rear ends of the bed on each side of vehicle.

Crosslay bed flooring will consist of removable perforated brushed aluminum.

2.50" CROSSLAY HOSE BED

One (1) crosslay with 2.50" outlets will be provided. This bed to be capable of carrying 200' of 2.50" double jacketed hose and will be plumbed with 2.50" i.d. pipe and gated with a 2.50" quarter turn ball valve.

Outlet to be equipped with a 2.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.

The crosslay control will be at the pump operator's panel.

The center crosslay dividers will be fabricated of 0.25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. The remainder of the crosslay bed will be painted job color.

Stainless steel vertical scuffplates will be provided at hose bed ends (each side of vehicle). Bottom of hose bed ends (each side) will also be equipped with a stainless steel scuffplate.

Crosslay bed flooring will consist of removable perforated brushed aluminum.

CROSSLAY HOSE RESTRAINT

A 2.00" black nylon webbing design restraint will be provided at each of the ends of three (3) crosslay(s) to secure the hose during travel. The webbing assembly is to be attached at the bottom of the crosslays, with footman loops and a permanent attachment, and is to attach at the top outside corners with seat belt buckles. The female end of the seat buckle will be permanently attached at the top corner of the opening. A nylon strap will be attached to the seat belt buckle for releasing the buckle on the webbing.

CROSSLAY 8.00" LOWER THAN STANDARD

The crosslays will be lowered 8.00" from standard.

FOAM SYSTEM

A foam system will not be required on this apparatus.

PUMP COMPARTMENT

The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. The pump compartment will be constructed of the same material as the body compartmentation.

The pump compartment substructure will be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.

The pump compartment will be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist.

Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly.

PUMP MOUNTING

Pump will be mounted to a substructure which will be mounted to the chassis frame rail using rubber isolators. The mounting will allow chassis frame rails to flex independently without damage to the fire pump.

LEFT SIDE PUMP CONTROL PANEL

All pump controls and gauges will be located at the left (driver's) side of the apparatus and properly identified.

Layout of the pump control panel will be ergonomically efficient and systematically organized.

The pump operator's control panel will be removable in two (2) main sections for ease of maintenance:

The upper section will contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels will be removable from the face of the pump panel for ease of maintenance. Below the sub panels will be located all valve controls and line pressure gauges.

The lower section of the panel will contain all inlets, outlets, and drains.

All push/pull valve controls will have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods will be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls will be capable of locking in any position. The control rods will pull straight out of the panel and will be equipped with universal joints to eliminate binding.

IDENTIFICATION TAGS

The identification tag for each valve control will be recessed in the face of the tee handle.

All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge.

All line pressure gauges will be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification.

The gauge and rod guide casting will be removable from the face of the pump panel for ease of maintenance. The casting will be color coded to correspond with the discharge identification tag.

All remaining identification tags will be mounted on the pump panel in chrome plated bezels.

The pump panel on the right (passenger's) side will be removable with lift and turn type fasteners.

Trim rings will be installed around all inlets and outlets.

PUMP PANEL CONFIGURATION

The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.

PUMP AND GAUGE PANEL

The pump and gauge panels will be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding will be provided around each panel.

The right side pump panel will be removable and fastened with swell type fasteners.

PUMP COMPARTMENT LIGHT

There will be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the pump compartment.

There will be a switch accessible through a door on the pump panel included with this installation.

Engine monitoring graduated LED indicators will be incorporated with the pressure controller.

Also provided at the pump panel will be the following:

- Master Pump Drain Control

THROTTLE READY GREEN INDICATOR LIGHT

There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.

OK TO PUMP INDICATOR LIGHT

There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.

VACUUM AND PRESSURE GAUGES

The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©.

The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel.

Test port connections will be provided at the pump operator's panel. One will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They will be marked with a label.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

PRESSURE GAUGES

The individual "line" pressure gauges for the discharges will be Class 1© interlube filled.

They will be a minimum of 2.00" in diameter and have white faces with black lettering.

Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut.

Gauges will have a pressure range of 30"-0-400#.

The individual pressure gauge will be installed as close to the outlet control as practical.

This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

WATER LEVEL GAUGE

There will be an electronic water level gauge provided on the operator's panel that registers water level by means of five (5) colored LED lights. The lights will be durable, ultra-bright five (5) LED design viewable through 180 degrees. The water level indicators will be as follows:

- 100 percent = Green
- 75 percent = Yellow
- 50 percent = Yellow
- 25 percent = Yellow
- Refill = Red

The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the water tank is empty.

The level measurement will be based on the sensing of head pressure of the fluid in the tank.

The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from water and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level.

LIGHT SHIELD

There will be a polished, 16 gauge stainless steel light shield will be installed over the pump operators panel.

- There will be three (3) On Scene Solutions Night Axe, Model 70005, 18.00" LED lights installed under the stainless steel light shield to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house.
- One (1) pump panel light will come on when the pump is in ok to pump mode.

There will be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel.

AIR HORN SYSTEM

There will be two (2) Grover air horns recessed in the front bumper. The horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed in-line to prevent loss of air in the air brake system.

Air Horn Location

The air horns will be located on each side of the bumper, towards the outside.

Air Horn Control

The air horns will be actuated by a chrome push button located on the officer's side of the engine tunnel and by the horn button in the steering wheel. The driver will have the option to control the air horns or the chassis horns from the horn button by means of a selector switch located on the instrument panel.

ELECTRONIC SIREN

A Whelen®, Model 295SLSA1, electronic siren with noise canceling microphone will be provided.

This siren to be active when the battery switch is on and that emergency master switch is on.

Electronic siren head will be recessed in the driver side center switch panel.

The electronic siren will be controlled on the siren head only. No horn button or foot switches will be provided.

SPEAKER

There will be one (1) Whelen®, Model SA315P, black nylon composite, 100-watt, speaker with through bumper mounting brackets and polished stainless steel grille provided. The speaker will be connected to the siren amplifier.

The speaker(s) will be recessed in the center of the front bumper.

AUXILIARY MECHANICAL SIREN

A Federal Q2B® siren will be furnished.

The control solenoid will be powered up after the emergency master switch is activated.

The mechanical siren will be mounted on the bumper deck plate. It will be mounted on the left side. A reinforcement plate will be furnished to support the siren.

The mechanical siren will be actuated by a chrome push button located on the officer side of the engine tunnel and by the horn button in the steering wheel.

The driver will have the option to control the siren or the chassis horn from the horn button by means of a selector switch located on the instrument panel.

A momentary chrome push button switch will be included in the right side dash panel to activate the siren brake.

FRONT ZONE UPPER WARNING LIGHTS

There will be one (1) 81.00" Whelen Freedom IV LED lightbar mounted on the cab roof.

The lightbar will include the following:

- One (1) red flashing LED module in the driver's side rear corner position.
- Open in the driver's side end position.
- One (1) red flashing LED module in the driver's side front corner position.
- Open in the driver's side first front position.
- One (1) red flashing LED module in the driver's side second front position.
- Open in the driver's side third front position.
- Open in the driver's side fourth front position.
- One (1) red flashing LED module in the driver's side fifth front position.
- Open in the driver's side sixth front position.
- Open in the driver's side seventh position.
- Open in the passenger's side seventh position.
- Open in the passenger's side sixth front position.
- One (1) red flashing LED module in the passenger's side fifth front position.
- Open in the passenger's side fourth front position.
- Open in the passenger's side third front position.
- One (1) red flashing LED module in the passenger's side second front position.
- Open in the passenger's side first front position.
- One (1) red flashing LED module in the passenger's side front corner position.
- Open in the passenger's side end position.
- One (1) red flashing LED module in the passenger's side rear corner position.

There will be clear lenses included on the lightbar.

There will be a switch installed in the cab on the switch panel to control the lightbar.

The four (4) red flashing LED modules in the front positions may be load managed when the parking brake is applied.

LIGHTS, FRONT ZONE LOWER

Two (2) Whelen model M6*C LED flashing warning lights will be installed on the cab face above the headlights, in a common bezel with the directional lights.

The driver's side front warning light to be red.

The passenger's side front warning light to be red.

Both lights will include a clear lens.

There will be a switch located in the cab on the switch panel to control the lights.

FRONT WARNING LIGHT

There will be two (2) Whelen, Model M6*, LED flashing light(s) with chrome trim provided TBD.

The color of the light(s) will be red.

The color of the lens will be clear.

The light(s) will be activated with the emergency master.

These light may be load managed if colored or disabled if white when the parking brake is applied.

Any white light will be disabled and any amber light activated when the parking brake is applied.

HEADLIGHT FLASHER

The high beam headlights will flash alternately between the left and right side.

There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on.

The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.

SIDE ZONE LOWER LIGHTING

There will be six (6) Whelen®, Model M6*C, flashing LED warning lights with chrome trim installed per the following:

- Two (2) lights, one (1) each side on the bumper extension. The side front lights to be red.
- Two (2) lights, one (1) each side of cab rearward of crew cab doors. The side middle lights to be red.
- Two (2) lights, one (1) each side located between the tandems. The side rear lights to be red.
- The lights will include clear lenses.

There will be a switch in the cab on the switch panel to control the lights.

REAR ZONE LOWER LIGHTING

There will be two (2) Whelen®, Model M6*C, LED flashing warning lights located at the rear of the apparatus.

- The driver's side rear light to be red
- The passenger's side rear light to be red

Both lights will include a lens that is clear.

There will be a switch located in the cab on the switch panel to control the lights.

REAR/SIDE ZONE UPPER WARNING LIGHTS

There will be two (2) Whelen®, Model L31H*FN, LED warning beacons provided at the rear of the truck, located one (1) each side. There will be a switch located in the cab on the switch panel to control the beacons.

The color of the lights will be red LEDs with both domes clear.

The rear warning lights will be mounted on top of the compartmentation with all wiring totally enclosed. The rear deck lights will be mounted on the beavertails as high as possible.

TRAFFIC DIRECTING LIGHT

There will be one (1) Whelen®, Model TAL65, 36.00" long x 2.87" high x 2.25" deep, amber LED traffic directing light installed at the rear of the apparatus.

The Whelen, Model TACTL5, control head will be included with this installation.

The controller will be energized when the battery switch is on.

The auxiliary flash not activated.

This traffic directing light will be recessed with a stainless steel trim plate at the rear of the apparatus as high as practical.

The traffic directing light control head will be located in the driver side overhead switch panel in the right panel position.

LOOSE EQUIPMENT

The following equipment will be furnished with the completed unit:

- One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.

NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT

The following loose equipment as outlined in NFPA 1901, 2016 edition, section 5.9.3 and 5.9.4 will be provided by the fire department.

- 800 ft (60 m) of 2.50" (65 mm) or larger fire hose.
- 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose.
- One (1) handline nozzle, 200 gpm (750 L/min) minimum.
- Two (2) handline nozzles, 95 gpm (360 L/min) minimum.
- One (1) smoothbore of combination nozzle with 2.50" shutoff that flows a minimum of 250 gpm.

- One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer.
- One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s).
- One (1) first aid kit.
- Four (4) combination spanner wrenches.
- Two (2) hydrant wrenches.
- One (1) double female 2.50" (65 mm) adapter with National Hose threads.
- One (1) double male 2.50" (65 mm) adapter with National Hose threads.
- One (1) rubber mallet, for use on suction hose connections.
- Two (2) salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m).
- One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, *Standard for High Visibility Public Safety Vests*, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front.
- Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band.
- Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities.
- One (1) automatic external defibrillator (AED).
- Four (4) ladder belts meeting the requirements of NFPA 1983, *Standard on Fire Service Life Safety Rope and System Components* (if equipped with an aerial device).
- If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, will be carried mounted in brackets fastened to the apparatus.
- If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side will be carried. Any intake connection larger than 3.00" (75 mm) will include a pressure relief device that meets the requirements of 16.6.6.
- If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake will be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake.
- If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters will be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.

SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 5.8.2.1 requires a minimum of 20' of suction hose or 15' of supply hose will be carried.

Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.

DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 5.9.4 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus.

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, section 5.9.4 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus.

The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.

FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) flathead axe mounted in a bracket fastened to the apparatus.

The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT

NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus.

The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

PAINT PROCESS

The exterior custom cab and/or body painting procedure will consist of a seven (7) step finishing process. A commercial chassis paint process will follow similar processes as determined by the chassis manufacturer. The following procedure will be used by Pierce:

1. Manual Surface Preparation - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.
2. Chemical Cleaning and Pretreatment - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse will be applied to all metal surfaces.
3. Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective base coat. A minimum thickness of 2 mils of Surfacer

Primer is applied to surfaces that require a critical aesthetic finish. The surfacer primer will be a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.

4. Finish Sanding - The surfacer primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.
5. Sealer Primer - The sealer primer is applied prior to the base coat in all areas that have not been previously primed with the surfacer primer. The sealer primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when top coated.
6. Base coat Paint - Two coats of a high performance, two component high solids polyurethane base coat will be applied. The Base coat will be applied to a thickness that will achieve the proper color match. The Base coat will be used in conjunction with a urethane clear coat to provide protection from the environment.
7. Clear Coat - Two (2) coats of clear coat will be applied over the base coat color. The clear coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style doors will be clear coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacturer.

Our specifications are written to define cyclic corrosion testing, physical strengths, durability and minimum appearance requirements must be met in order for an exterior paint finish to be considered acceptable as a quality finish.

Each batch of base coat color will be checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications are used to determine the color match. A Delta E reading will be used to determine a good color match within each family color.

All removable items such as brackets, compartment doors, door hinges, and trim will be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly.

Environmental Impact

Contractor will meet or exceed all current State regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions:

- Topcoats and primers will be chrome and lead free.
- Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals.
- Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor.
- Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98 percent. Water wash systems will be 99.97 percent efficient.

- Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean.
- Paint wastes will be disposed of in an environmentally safe manner.
- Empty metal paint containers will be recycled to recover the metal.
- Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse.

Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Pierce will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with the state EPA rules and regulations.

PAINT

The cab will be two-tone, with the upper section painted #10 white and the lower section of the cab and body painted Pierce #90 candy apple red.

PAINT CHASSIS FRAME ASSEMBLY

The chassis frame assembly will be finished with a single system black top coat before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.

Components that are included with the chassis frame assembly that will be painted are:

- Frame rails
- Frame liners
- Cross members
- Axles
- Suspensions
- Steering gear
- Battery boxes
- Bumper extension weldment
- Frame extensions
- Body mounting angles
- Rear Body support substructure (front and rear)
- Pump house substructure
- Air tanks
- Steel fuel tank
- Castings
- Individual piece parts used in chassis and body assembly



FILM TECHNICAL PROPERTIES

PROPERTY	TEST METHOD	PERFORMANCE
Color	–	Black
Film Thickness	–	0.5 - 1.5 Mils
Gloss - 60 Degree	ASTM D523	65 - 85
Pencil Hardness	ASTM D3363	2H Minimum
Direct Impact	ASTM D2794	100 in. - lbs. Minimum
Reverse Impact	ASTM D2794	60 in. - lbs. Minimum
Crosshatch Adhesion	ASTM D3359	4B - 5B
Humidity	ASTM D1735	1000 Hours Minimum
Water Immersion	ASTM D870	250 Hours Minimum
Gravelometer	GM9508P	6 Minimum
Throwpower	GM9535P	12 - 15 in.

Cold rolled steel lab panels, Zinc Phosphate pretreatment, 0.6 mils average film thickness, cured 20 minutes @ 350°F.

PROPERTY	SUBSTRATE PRETREATMENT	SALT SPRAY* 1000 HOURS
Corrosion Resistance	CRS / Zinc Phos / Non-Chrome	1 - 2 mm

*Salt Spray - ASTM B117, cold rolled steel lab panels cured 20 minutes @ 350°F. (Average Total Scribe Creep)

Components treated with epoxy E-coat protection prior to paint:

- Two (2) C-channel frame rails
- Two (2) frame liners

The E-coat process will meet the technical properties shown.

AXLE HUB PAINT
All axle hubs will be painted to match lower job color.

COMPARTMENT INTERIOR PAINT
The interior of all compartments will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.

REFLECTIVE STRIPES
Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" white stripe at the top with a 1.00" gap then a 6.00" white stripe with a 1.00" gap and a 1.00" white stripe on the bottom.

The reflective band provided on the cab face will be at the headlight level.

REAR CHEVRON STRIPING
There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered.

The colors will be red and fluorescent yellow green diamond grade.

Each stripe will be 6.00" in width.

This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.

CHEVRON STRIPING ON CAB AND CREW CAB DOOR EDGE
There will be alternating chevron striping located on the inside of each cab and crew cab door edge. The design will be either DOT pattern or standard chevron design. Width will be determined by available space. The striping will consist of the following colors:

The first color will Ibe red diamond grade

The second color will be fluorescent yellow green diamond grade

BROKEN RIBBON IN STRIPE
A pair of reflective stripe splits will be placed one (1) at each side of the vehicle. This will appear as a broken ribbon type split. Room will be left within the split for an emblem and/or lettering.

REFLECTIVE STRIPE OUTLINE
A black outline will be applied on the top and the bottom of the reflective band. There will be seven (7) set of outline stripes required.

STRIPE ON REAR ACCESS DOORS
There will be alternating striping located on the rear access doors.

The colors will be red and fluorescent yellow green diamond grade.

The stripes will be 6.00" in width and will match the chevron pattern on the rear body.

"Z" RIBBON IN REFLECTIVE STRIPE

"Z" type ribbon(s) will be added to the reflective stripe. Areas adjacent to the "Z" portion of the stripe will be shaded and highlighted with an air brush to give it a ribbon affect. There will be seven (7) pair on the vehicle.

CAB DOOR REFLECTIVE STRIPE

A 6.00" x 16.00" white reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel.

This stripe will meet the NFPA 1901 requirement.

LETTERING

One (1) to twenty (20) non-reflective vinyl lettering, 4.00" high, outlining and shading will be provided.

LETTERING

There will be reflective lettering, 12.00" high, with no outline or shade provided. There will be four (4) letters provided.

LETTERING

There will be genuine gold leaf lettering, 12.00" high, with outline and shade provided. There will be 14 letters provided.

LETTERING

There will be reflective lettering, 16.00" high, with no outline or shade provided. There will be 14 letters provided.

LETTERING, REFLECTIVE, "DIAL 911"

There will be one (1)8.00" high white reflective decal, "Dial 911", will be installed at To be determined.

MALTESE CROSS INSTALLATION

There will be three (3) maltese crosses, comprised of printed effect gold leaf material, provided and installed To be determined at drawing/graphic approval..

FIRE APPARATUS PARTS MANUAL

There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided.

The manual(s) will contain the following:

- Job number
- Part numbers with full descriptions
- Table of contents
- Parts section sorted in functional groups reflecting a major system, component, or assembly
- Parts section sorted in alphabetical order
- Instructions on how to locate parts

Each manual will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.

Service Parts Internet Site
The service parts information included in these manuals are also available on the Pierce website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.

CHASSIS SERVICE MANUALS
There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit.

The manual will contain the following sections:

- Job number
- Table of contents
- Troubleshooting
- Front Axle/Suspension
- Brakes
- Engine
- Tires
- Wheels
- Cab
- Electrical, DC
- Air Systems
- Plumbing
- Appendix

The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.

CHASSIS OPERATION MANUAL
The chassis operation manual will be provided on one (1) USB flash drive.

ONE (1) YEAR MATERIAL AND WORKMANSHIP
A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.

ENGINE WARRANTY
A Cummins **five (5) year** limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.

STEERING GEAR WARRANTY
A TRW **one (1) year** limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.

FIFTY (50) YEAR STRUCTURAL INTEGRITY
The Pierce custom chassis frame limited warranty certificate, WA0013, is included with this proposal.

FRONT AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY

A Meritor™ Axle 5 year limited warranty will be provided.

SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY

A Meritor™ Axle 5 year limited warranty will be provided.

ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY

A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.

TEN (10) YEAR STRUCTURAL INTEGRITY

The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.

TEN (10) YEAR PRO-RATED PAINT AND CORROSION

A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.

CAMERA SYSTEM WARRANTY

A Pierce fifty four (54) month warranty will be provided for the camera system**.**

COMPARTMENT LIGHT WARRANTY

The compartment lights will not offer an extended warranty.

TRANSMISSION WARRANTY

The transmission will have a **five (5) year/unlimited mileage** warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission.

Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.

TRANSMISSION COOLER WARRANTY

The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed $10,000 per occurrence. A copy of the warranty certificate will be submitted with the bid package.

WATER TANK WARRANTY

A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.

TEN (10) YEAR STRUCTURAL INTEGRITY

The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.

ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY

An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of **ten (10) years**. A **five (5) year** limited warranty will be provided on painted roll up doors.

The limited warranty certificate, WA0185, is included with this proposal.

PUMP WARRANTY

The Waterous pump will be provided with a Seven (7) year material and workmanship limited warranty.

A copy of the warranty certificate will be submitted with the bid package (no exception).

TEN (10) YEAR PUMP PLUMBING WARRANTY

The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.

TEN (10) YEAR PRO-RATED PAINT AND CORROSION

A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.

ONE (1) YEAR MATERIAL AND WORKMANSHIP

The Pierce graphics fading and deterioration limited warranty limited warranty certificate, WA0168, is included with this proposal.

VEHICLE STABILITY CERTIFICATION

The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification will be provided at the time of bid.

ENGINE INSTALLATION CERTIFICATION

The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of delivery.

POWER STEERING CERTIFICATION

The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification will be provided at the time of bid.

CAB INTEGRITY CERTIFICATION

The fire apparatus manufacturer will provide a cab crash test certification with this proposal. The certification will state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below:

- European Occupant Protection Standard ECE Regulation No.29.
- SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks.
- SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.

Roof Crush

The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons.

Side Impact
The same cab will be subjected to dynamic preload where a 13,275-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident.

Frontal Impact
The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420.

Additional Frontal Impact
The same cab will withstand a frontal impact of 65,200 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420)

The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.

CAB DOOR DURABILITY CERTIFICATION
Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.

WINDSHIELD WIPER DURABILITY CERTIFICATION
Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 *Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles.* The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.

ELECTRIC WINDOW DURABILITY CERTIFICATION
Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.

SEAT BELT ANCHOR STRENGTH
Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.

SEAT MOUNTING STRENGTH
Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.

PERFORMANCE CERTIFICATIONS

Cab Air Conditioning

Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria.

Cab Defroster

Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.

Cab Auxiliary Heater

Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.

AMP DRAW REPORT

The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

The manufacturer of the apparatus will provide the following:

- Documentation of the electrical system performance tests.
- A written load analysis, which will include the following:
    - The nameplate rating of the alternator.
    - The alternator rating under the conditions specified per:
        - Applicable NFPA 1901 or 1906 (Current Edition).
    - The minimum continuous load of each component that is specified per:
        - Applicable NFPA 1901 or 1906 (Current Edition).
    - Additional loads that, when added to the minimum continuous load, determine the total connected load.
    - Each individual intermittent load.

All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).

FINLEY
FIRE EQUIPMENT
5255 N State Route 60 NW * McConnelsville, Ohio 43756
800-545-3280 * 740-962-4328 * Fax 740-962-5422
www.finleyfire.com

12/2/2020
Paducah Fire Department
To: Chief Steve Kyle
RE: Pierce Prepayment Option

Dear Chief Kyle,

If the City of Paducah wishes to make a total prepayment when the apparatus order is awarded, they may deduct the sum of ($18,800.00) from our bid price of $534,160.00.

Should you have any questions or concerns please reach out to your sales representative John Baker.

Sincerely,



Bailey Buchanan
Pierce & Marketing Sales Manager
Finley Fire Equipment Co., Inc.

Deborah Collins

From: Randy Crouch
Sent: Wednesday, December 2, 2020 9:47 AM
To: Deborah Collins
Subject: FW: Pierce Saber Proposal of 12-2-2020

FYI

-----Original Message-----
From: Steve Kyle
Sent: Wednesday, December 2, 2020 9:28 AM
To: Randy Crouch <rcrouch@paducahky.gov>
Cc: Matt Tinsley <mtinsley@paducahky.gov>
Subject: FW: Pierce Saber Proposal of 12-2-2020

Stephen Kyle
Fire Chief
Paducah Fire Department
301 Washington Street
Paducah, KY 42003
270-444-8521—Office
270-444-8580—Fax
270-519-8919—cell
www.paducahky.gov | map-gis.org
Tell Us How We're Doing

-----Original Message-----
From: John Baker <john@bluegrassfire.com>
Sent: Wednesday, December 2, 2020 8:39 AM
To: Steve Kyle <skyle@paducahky.gov>
Subject: Pierce Saber Proposal of 12-2-2020

REMARKS AND CLARIFICATIONS

All items contained in Pierce proposal are subject to a final engineering review.
Any configuration changes that have to be made will be agreed upon by Paducah Fire Department and Pierce Manufacturing.

Prepayment Option - if Paducah City agrees to prepay when the purchase order is executed they may deduct ($18,800.00) from the bid price of $534,160.00.

Delivery will be made in 10-11 months from our Bradenton, Florida, facility.

A full in-service apparatus training is included.

A total of three factory trips for two Paducah Fire personnel is included.
This will include all transportation, lodging, and meal expenses.

The Public Works training classes at the Pierce facility are NOT included and will NOT be provided.

Sent from my iPad

ADVERTISEMENT FOR BIDS

The City of Paducah, Public Works Department will receive sealed bids for the purchase of One (1) Pumper Truck to be used by the City of Paducah's Fire Department, at 2:00 P.M.CST, Thursday, October 22, 2020. All bids received will be publicly opened and read aloud in the Commission Chambers, Second Floor, City Hall, 300 South 5th Street, Paducah, Kentucky. Copies of the specifications may be obtained at the office of the Public Works Fleet Department located at 1120 North 10th Street, Paducah, Kentucky. More information regarding this purchase may be found at the City of Paducah's website: www.paducahky.gov under Request for Bids.

CITY OF PADUCAH, KENTUCKY

PUBLIC WORKS DEPARTMENT

One (1) Pumper Truck - Fire Department

LOWEST EVALUATED BID

BID OPENING: 2:00 p.m. CST on Thursday, October 22, 2020

OFFICIAL BIDDER OF RECORD Contact: Mailing Address:	**Finley Fire** John Baker 780 Enterprise Drive Lexington Ky 40510	**Finley Fire** John Baker 780 Enterprise Drive Lexington Ky 40510
One (1) Pumper Truck	**$593,461.00**	**Negotiated pricing** **$534,160.00** **prepayment deduction $18,800.00** **final total $515,360.00**

Delivery Time	11 Months	11 Months
Manufacturer:	Pierce	Pierce

DOCUMENTS REQUIRED FOR COMPLIANCE SUBMITTED:

1. Bid Bond 5% of Bid	Yes	Yes
2. Compliance with Tech Specs form	Yes	Yes
3. Deviations with Information	Yes	Yes
4. Quality Managenent System ISO Certification		
5. Single Source Manufacturer Documentation		
6. Industry Standard Certification Documentation		
7. Manufacturer Specifications / Warranty Info	Yes	Yes
8. Bidder's Required Certification	Yes	Yes
Kentucky State Bidder	Yes	Yes

Responsive & Responsible Bidder:	Yes	Yes
Evaluation Score:	1000.00	1000.00
BID RECOMMENDED FOR ACCEPTANCE	No (Over Budget Amount)	Yes - negotiated pricing

Agenda Action Form
Paducah City Commission

Meeting Date: December 15, 2020

Short Title: Application for and Acceptance of the Second Round of CARES Act Funding for COVID-19 Relief through the Department of Local Government in the amount of $559,821 - **T WILSON**

Category: Municipal Order

Staff Work By: Ty Wilson, Melanie Townsend
Presentation By: Ty Wilson

Background Information: The Coronavirus Aid, Relief, and Economic Security Act ("CARES" Act) established the Coronavirus Relief Fund and appropriated $150 billion to the fund. Under the CARES Act, the fund is to be used to make payments for specified uses to State and certain local governments. Governor Beshear is apportioning $300 million of the state's Coronavirus Relief Fund allocation for local government reimbursements. In round one, the City of Paducah was awarded $1,786,875. Governor Beshear is now releasing the remaining $50 million dollars of CARES Act funding. The maximum amount that the City of Paducah can receive is $559,821.

Cities can seek compensation of COVID-related costs such as the purchase of personal protective equipment (PPE) and other medical and protective supplies, costs of COVID-19 testing, emergency medical response expenses, amounts spent on communication and enforcement of public health orders, costs of disinfecting public areas, and payroll expenses for public safety and health employees who have been dedicated to responding to the pandemic.

The City desires to apply for reimbursements for the salaries of public safety officers beginning June 4 for the entire allotment. This a reimbursement which is for assumed COVID related expenses associated with the duties carried out by police and fire. These funds will be directed back to the General Fund (G/F). These funds are not for a future project.

Does this Agenda Action Item align with a Strategic Plan Action Step? No
If yes, please list the Action Step Item Codes(s):

Funds Available: Account Name:
Account Number:

Staff Recommendation: Authorize and direct Mayor to execute all required grant application and acceptance documents.

Attachments:
1. MO - app & award – Round 2 - CARES Act Coronavirus Grant Funding – PD & Fire Salaries
2. Paducah MOA draft_Round 2

MUNICIPAL ORDER NO. _____

A MUNICIPAL ORDER AUTHORIZING THE CITY OF PADUCAH TO APPLY FOR A CORONAVIRUS AID, RELIEF, AND ECONOMIC SECURITY ACT ("CARES" ACT) GRANT THROUGH THE DEPARTMENT OF LOCAL GOVERNMENT IN THE AMOUNT OF $559,821 FOR REIMBURSEMENTS FOR THE SALARIES OF PADUCAH POLIE OFFICERS AND FIREFIGHTERS BEGINNING JUNE 4, 2021, FOR THE ENTIRE ALLOTMENT, ACCEPTING ANY GRANT FUNDS AWARDED BY THE DEPARTMENT OF LOCAL GOVERNMENT, AND AUTHORIZING THE MAYOR TO EXECUTE ALL DOCUMENTS RELATED TO SAME

BE IT ORDERED BY THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. That the City of Paducah hereby authorizes the application for a Coronavirus Aid, Relief, And Economic Security Act ("CARES" act) grant through the Department of Local Government, in the amount of $559,821, for reimbursements for the salaries of Paducah Police Officers and Firefighters beginning June 4, 2021, for the entire allotment and authorizes the Mayor to execute all documents related to same. No local match is required.

SECTION 2. That the City of Paducah hereby authorizes the acceptance of any and all grant funds awarded through the Department of Local Government, and authorizes the Mayor to execute the Grant Agreement and all related documents.

SECTION 3. This Order shall be in full force and effect from and after the date of its adoption.

_____
Brandi Harless, Mayor

ATTEST:

_____
Lindsay Parish, City Clerk

Adopted by the Board of Commissioners, December 15, 2020
Recorded by Lindsay Parish, City Clerk, December 15, 2020
\mo\grants\app & award – Round 2 - CARES Act Coronavirus Grant Funding – PD & Fire Salaries

Commonwealth of Kentucky
CONTRACT

DOC ID NUMBER:
PON2 112 2100001264 **Version:** 1 **Record Date:**

Document Description: COVID 19 Relief Fund C2-085 City of Paducah

Cited Authority: FAP111-44-00
Memorandum of Agreement

Reason for Modification:

Issuer Contact:

Name: Billie Johnson
Phone: (502) 573-2382
E-mail: BILLIER.JOHNSON@KY.GOV

Vendor Name:
CITY OF PADUCAH

PO BOX 2267

PADUCAH KY 42002-2267

Vendor No. KY0033652
Vendor Contact
Name: CORIE COLE
Phone: 270-444-8512
Email: CCOLE@PADUCAHKY.GOV

Effective From: 2020-12-17 **Effective To:** 2021-03-30

Line Item	Delivery Date	Quantity	Unit	Description	Unit Price	Contract Amount	Total Price
1		0.00000		C2-085 City of Paducah CRF Reimbursement	$0.000000	$559,821.00	$559,821.00

Extended Description:
Reimbursements for expenses incurred during the COVID 19 pandemic

Shipping Information:	Billing Information:
Department for Local Government - Office of Grants 100 Airport Rd, 3rd Fl Frankfort KY 40601	Department for Local Government - Office of Grants 100 Airport Rd, 3rd Fl Frankfort KY 40601

TOTAL CONTRACT AMOUNT:	$559,821.00

GRANT INFORMATION AND IDENTIFICATION

Project Number: C2-085

Local Government: City of Paducah

Project Name: City of Paducah CRF Reimbursement

Federal Agency: U.S. Department of the Treasury

CFDA Title: Coronavirus Relief Fund for States

CFDA Number: 21:019

Award Year: 2020

Memorandum of Agreement Terms and Conditions

This Memorandum of Agreement (MOA) is entered into, by and between the Commonwealth of Kentucky, Office of the Governor, Department for Local Government, Office of Federal Grants ("the Commonwealth") and City of Paducah ("the Contractor") to establish an agreement for the City of Paducah CRF Reimbursement Project. The initial MOA is effective from December 17, 2020 through March 30, 2021.

Scope of Services: Reimbursements for expenses incurred during the COVID 19 pandemic.

WHEREAS, the United States Congress enacted the Coronavirus Aid, Relief, and Economic Security Act (CARES Act; P.L. 116-136), which provides assistance to state and local governments; and

WHEREAS, Section 5001(d) of the CARES Act provides the eligible purposes for which Coronavirus Relief Fund (CRF) payments may be used; specifically, allowing state and local governments to make payments for programs that 1) are necessary expenditures incurred due to the public health emergency with respect to Coronavirus Disease 2019 (COVID-19); 2) were not accounted for in the budget most recently approved as of the date of enactment [March 27, 2020] of this section for the Commonwealth or local government; and 3) were incurred during the period that begins on March 1, 2020, and ends on December 30, 2020.

WHEREAS, the Commonwealth has been duly designated to administer the grant funds for the Project; and

WHEREAS, the Contractor has submitted an application for CRF grant funds, and

WHEREAS, the Contractor will be the administrator and beneficiary of the grant money from the Commonwealth for the Project as provided the CARES Act under the terms and

conditions enumerated herein and has further agreed to effectuate the completion of the Project in accordance with those terms and conditions.

NOW, THEREFORE, in consideration of the mutual covenants, commitments, and conditions contained herein, the Commonwealth and the Contractor agree as follows:

1. Obligations of the Commonwealth

The Commonwealth agrees, conditioned upon the timely performance by the Contractor of its obligations herein, to undertake the following obligations:

A. The Commonwealth may, but is not required to, make periodic inspections of the Project and may send inspection reports to the Contractor. Deficiencies identified in an inspection report shall be corrected by the Contractor and their correction reported in writing to the Commonwealth within two weeks of receipt of the inspection report.

B. The Commonwealth will cooperate fully with the Contractor in order to facilitate the obligations set out in this memorandum.

C. The Commonwealth shall close out the Project upon satisfactory completion of the Project by the Contractor in accordance with the terms and conditions of this MOA and submission of an acceptable project completion report in the form prescribed by the Commonwealth.

2. Obligations of the Contractor

The Contractor agrees to undertake the following obligations:

A. The Contractor shall perform or cause to be performed all necessary acts to plan, design and complete the Project in accordance with the attached Scope of Work, which is hereby incorporated herein and made a part of this MOA.

B. The Contractor shall obtain all necessary permits, licenses, and approvals required for completion of the Project from the appropriate governmental entities.

C. The Contractor shall comply with all applicable federal and state statutes, executive orders, regulatory requirements, and policies.

D. The Contractor shall use its own procurement procedures that are compliant with all applicable state and local laws for all purchases of goods or services related to the Project.

E. The Contractor shall submit all Requests for Disbursement on the prescribed forms of the Commonwealth, including copies of paid invoices, cancelled checks and/or bank statements documenting the proper expenditure of funds for reimbursement.

F. Beginning upon the effective date of this MOA and regardless of whether any funds have been drawn, the Contractor shall submit quarterly progress reports and a project completion report when the project is final to the Commonwealth in the form prescribed by the Commonwealth until the Project is deemed closed by the Commonwealth. Failure to submit or fully complete any required report will place the Contractor in noncompliance status, at which time the Commonwealth will suspend the release of additional funds until the appropriate documentation has been submitted.

G. The Contractor shall retain all records relating to the Project until the records are audited by the Commonwealth, or for no less than five (5) years after the Project has been closed by the Commonwealth, whichever occurs first.

H. A copy of the resolution by the Contractor's governing body authorizing the execution of this MOA is attached, which is incorporated into this MOA as though set forth fully herein.

I. The Contractor shall cooperate fully with the Commonwealth and provide any documentation requested by the Commonwealth in order to facilitate the obligations set out in this MOA.

J. The Contractor shall be responsible for the expenditure of funds in accordance with the CARES Act and all other applicable laws. Any unauthorized or improper expenditure of funds, or expenditure of funds other than in accordance with the terms of this MOA shall be deemed a default of this MOA by the Contractor. The Contractor shall repay the Commonwealth all funds that are not spent in accordance with this MOA and applicable laws.

K. All Contractors, with the exception of Cities with a population of less than one thousand (1,000) people, or which receives and expends less than seventy-five thousand dollars ($75,000) per fiscal year and has no long term debt, covered by KRS 91A.040(2) and (3), respectively, and Districts covered by KRS 65.065(2) or KRS 65A.010 to 65A.090, are subject to an independent annual audit conducted in accordance with generally accepted auditing standards, Government Auditing Standards, issued by the Comptroller General of the United States, the provisions of Office of Management and Budget Circular A-133, "Audits of State and Local Governments," if applicable, and the Audit Guide for Fiscal Court Audits issued by the Kentucky Auditor of Public Accounts. The audit report shall include a certification that the funds were expended for the purpose intended. A copy of the audit and certification of compliance shall be forwarded to the Commonwealth, Office

of Federal Grants, no later than 18 months after the end of each fiscal year in which funds were received by a Contractor.

Those Cities and Districts referenced above shall be required to submit a copy of their financial statement, when applicable, to the Commonwealth, Office of Federal Grants, no later than 18 months after the end of each fiscal year in which funds were received by a Contractor. Where a financial statement is not applicable, pursuant to the relevant statute, an audit shall be required.

3. Mutuality of Obligations

A. The parties agree that the obligations imposed upon them are for the benefit of the parties and the timely fulfillment of each and every obligation in accordance with this MOA is necessary. The failure of the Contractor to fulfill its obligations under this MOA or the failure of any event to occur by a date established by this MOA shall constitute a breach of the MOA unless the obligation is waived or modified by written MOA of the parties.

B. In the event of default by the Contractor, including the failure to meet any time deadlines set out in this memorandum, the Commonwealth may declare this MOA void from its date of execution without further obligation to the Contractor and may commence appropriate legal or equitable action to enforce its rights under this MOA including action for recovery of funds expended hereunder.

C. Except as may otherwise be provided herein, the parties to this MOA shall be solely responsible for any costs incurred in fulfilling their obligations under this MOA. If any legal action or other proceeding is successfully brought by the Commonwealth to enforcement this MOA, then the Commonwealth shall be entitled to recover from the Contractor, reasonable attorneys' fees, court costs and all expenses incurred in that action or proceeding, in addition to any other relief to which the Commonwealth may be entitled.

4. Miscellaneous Provisions

A. This MOA may be signed by each party upon a separate copy, and in such case one counterpart of this MOA shall consist of a sufficient number of such copies to reflect the signature of each party hereto. This MOA may be executed in two or more counterparts each of which shall be deemed an original, and it shall not be necessary in making proof of this MOA or the terms and conditions hereof to produce or account for more than one of such counterparts.

B. The headings set forth in this MOA are for convenience or reference only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this MOA.

C. The terms and conditions of this MOA shall be binding upon and shall inure to the benefit of the successors and assigns, respectively, of the parties. This provision shall not be construed to permit assignment by any party of any of its rights and duties under this MOA which assignment shall be prohibited except with the prior written consent of all parties hereto.

D. This MOA sets forth the entire understanding of the parties with respect to the subject matter hereof, supersedes all existing MOAs among them concerning the subject matter hereof, and may be modified only by a written instrument duly executed by each of the parties hereto.

E. Performance of each of the terms and conditions of this MOA shall be carried out in a timely manner.

F. The parties agree that any suit, action, or proceeding with respect to this MOA may only be brought in or entered by, as the case may be, the courts of the Commonwealth of Kentucky situated in Frankfort, Franklin County, Kentucky or the United States District Court for the Eastern District of Kentucky, Frankfort Division.

All notices, requests, demands, waivers, and other communications given as provided in this MOA shall be in writing, and shall be addressed as follows:

If to the Commonwealth:
Department for Local Government
Office of Federal Grants
100 Airport Road, 3rd Floor
Frankfort, KY 40601

If to the Contractor:
The Honorable Brandi Harless
Mayor, City of Paducah
300 South 5th St.
Paducah, Kentucky 42002-2267

G. The Commonwealth may audit or review all documentation and records of the Contractor relating to this project pursuant to the provisions of KRS 45A.150.

H. The parties agree that this MOA is not entered into under the provisions of KRS 56.8161 et seq.

Pricing:

The Commonwealth shall, subject to the availability of appropriate funds, pay the Contractor a sum not to exceed $559,821 in accordance with the submission of a Request for Disbursement form, as prescribed by the Commonwealth.

Memorandum of Agreement Standard Terms and Conditions

Revised December 2019

1.00 Effective Date:

All Memorandum of Agreements are not effective until the Secretary of the Finance and Administration Cabinet or his authorized designee has approved the agreement and until the agreement has been submitted to the government contract review committee. However, in accordance with KRS 45A.700, memoranda of agreement in aggregate amounts of $50,000 or less are exempt from review by the committee and need only be filed with the committee within 30 days of their effective date for informational purposes.

KRS 45A.695(7) provides that payments on personal service contracts and memoranda of agreement shall not be authorized for services rendered after government contract review committee disapproval, unless the decision of the committee is overridden by the Secretary of the Finance and Administration Cabinet or agency head, if the agency has been granted delegation authority by the Secretary.

2.00 EEO Requirements

The Equal Employment Opportunity Act of 1978 applies to All State government projects with an estimated value exceeding $500,000. The contractor shall comply with all terms and conditions of the Act.

3.00 Cancellation clause:

Both parties shall have the right to terminate and cancel this contract at any time not to exceed thirty (30) days' written notice served on the other party by registered or certified mail.

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4.00 Funding Out Provision:

The state agency may terminate this agreement if funds are not appropriated to the contracting agency or are not otherwise available for the purpose of making payments without incurring any obligation for payment after the date of termination, regardless of the terms of the agreement. The state agency shall provide the Contractor thirty (30) calendar day’s written notice of termination of the agreement due to lack of available funding.

5.00 Reduction in Contract Worker Hours:

The Kentucky General Assembly may allow for a reduction in contract worker hours in conjunction with a budget balancing measure for some professional and non-professional

service contracts. If under such authority the agency is required by Executive Order or otherwise to reduce contract hours, the agreement will be reduced by the amount specified in that document. If the contract funding is reduced, then the scope of work related to the contract may also be reduced commensurate with the reduction in funding. This reduction of the scope shall be agreeable to both parties and shall not be considered a breach of contract.

6.00 Access to Records:
The state agency certifies that it is in compliance with the provisions of KRS 45A.695, "Access to contractor's books, documents, papers, records, or other evidence directly pertinent to the contract." The Contractor, as defined in KRS 45A.030, agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this agreement for the purpose of financial audit or program review. The Contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the agreement and shall be exempt from disclosure as provided in KRS 61.878(1)(c).

7.00 Violation of tax and employment laws:
KRS 45A.485 requires the Contractor and all subcontractors performing work under the agreement to reveal to the Commonwealth, prior to the award of a contract, any final determination of a violation by the Contractor within the previous five (5) year period of the provisions of KRS chapters 136, 139, 141, 337, 338, 341, and 342. These statutes relate to corporate and utility tax, sales and use tax, income tax, wages and hours laws, occupational safety and health laws, unemployment insurance laws, and workers compensation insurance laws, respectively.

To comply with the provisions of KRS 45A.485, the Contractor and all subcontractors performing work under the agreement shall report any such final determination(s) of violation(s) to the Commonwealth by providing the following information regarding the final determination(s): the KRS violated, the date of the final determination, and the state agency which issued the final determination.

KRS 45A.485 also provides that, for the duration of any contract, the Contractor and all subcontractors performing work under the agreement shall be in continuous compliance

with the provisions of those statutes, which apply to their operations, and that their failure to reveal a final determination as described above, or failure to comply with the above statutes for the duration of the agreement shall be grounds for the Commonwealth's cancellation of the agreement and their disqualification from eligibility for future state contracts for a period of two (2) years.

[Check box section below need only be included for Contractors that are quasi-governmental entities or 501(c)3 non-profit entities.]

Contractor must check one:
_____ The Contractor has not violated any of the provisions of the above statutes within the previous five (5) year period.

_____ The Contractor has violated the provisions of one or more of the above statutes within the previous five (5) year period and has revealed such final determination(s) of violation(s). Attached is a list of such determination(s), which includes the KRS violated, the date of the final determination, and the state agency which issued the final determination.

8.00 Discrimination:
This section applies only to agreements disbursing federal funds, in whole or part, when the terms for receiving those funds mandate its inclusion. Discrimination (because of race, religion, color, national origin, sex, sexual orientation, gender identity, age, or disability) is prohibited. During the performance of this agreement, the Contractor agrees as follows:

The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, national origin, sex, sexual orientation, gender identity or age. The Contractor further agrees to comply with the provisions of the Americans with Disabilities Act (ADA), Public Law 101-336, and applicable federal regulations relating thereto prohibiting discrimination against otherwise qualified disabled individuals under any program or activity. The Contractor agrees to provide, upon request, needed reasonable accommodations. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, national origin, sex, sexual orientation, gender identity, age or disability. Such action shall include, but not be limited to the following; employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensations; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places,

available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

In all solicitations or advertisements for employees placed by or on behalf of the Contractor, the Contractor will, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, sex, sexual orientation, gender identity, age or disability.

The Contractor will send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representative of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965 as amended, and of the rules, regulations and relevant orders of the Secretary of Labor.

The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

In the event of the Contractor's noncompliance with the nondiscrimination clauses of this agreement or with any of the said rules, regulations or orders, this agreement may be cancelled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further government contracts or federally-assisted construction contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, as amended, and such other sanctions may be imposed and remedies invoked as provided in or as otherwise provided by law.

The Contractor will include the provisions of paragraphs (1) through (7) of section 202 of Executive Order 11246 in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor, issued pursuant to section 204 of Executive Order No. 11246 of September 24, 1965, as amended, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action

with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Approvals

This contract is subject to the terms and conditions stated herein. By affixing signatures below, the parties verify that they are authorized to enter into this contract and that they accept and consent to be bound by the terms and conditions stated herein. In addition, the parties agree that (i) electronic approvals may serve as electronic signatures, and (ii) this contract may be executed in any number of counterparts, each of which when executed and delivered shall constitute a duplicate original, but all counterparts together shall constitute a single contract.

Commonwealth of Kentucky:

	Commissioner Department For Local Government
Signature	Title
Dennis Keene	
Printed Name	Date

City of Paducah:

	Mayor, City of Paducah
Signature	Title
Printed Name	Date

Approved as to form and legality:

	City of Paducah Counsel
Signature	Title
Printed Name	Date
	General Counsel Department For Local Government
Signature	Title
Matthew Stephens	
Printed Name	Date

Agenda Action Form
Paducah City Commission

Meeting Date: December 15, 2020

Short Title: Approve the Updated Proposal for a Change in the Group Life Insurance with to Mutual of Omaha effective January 1, 2021 - **S SUAZO**

Category: Municipal Order

Staff Work By: Stefanie Suazo
Presentation By: Peel & Holland

Background Information: Updated agreement: There was not enough participation in the voluntary short-term disability and long-term disability coverage to be able to offer, so those sections have been removed. All other items remain the same as before. The city received a proposal from Mutual of Omaha to provide employees with group life insurance effective January 1, 2021. Changing providers will result in a savings of over $4k per year, while keeping all benefit levels the same, and offering voluntary products to employees with much lower premiums for benefits related to short-term disability, long-term disability, and voluntary additional life insurance.

Does this Agenda Action Item align with a Strategic Plan Action Step? Yes

If yes, please list the Action Step Item Codes(s): O-1: Implement Measures to Recruit & Retain Quality City Employees - offering a competitive benefit package.

Funds Available: Account Name:
Account Number:

Staff Recommendation: Sign agreement to provide life insurance to employees with Mutual of Omaha.

Attachments:

1. MO Group Life Insurance Mutual of Omaha 2021 AMENDED
2. Guide_City of Paducah Final

MUNICIPAL ORDER NO. _____

A MUNICIPAL ORDER AMENDING MUNICIPAL ORDER NO. 2398 ENTITLED, "A MUNICIPAL ORDER APPROVING AND ADOPTING THE GROUP LIFE INSURANCE BENEFITS PROPOSAL WITH MUTUAL OF OMAHA IN A TOTAL ANNUAL GROUP PREMIUM AMOUNT OF $44,453.40 FOR EMPLOYEES OF THE CITY OF PADUCAH, AND AUTHORIZING THE MAYOR TO EXECUTE ALL DOCUMENTS RELATED TO SAME," TO REMOVE THE PREFERRED CHOICE VOLUNTARY SHORT-TERM DISABILITY AND VOLUNTARY LONG-TERM DISABILITY

BE IT ORDERED BY THE BOARD OF COMMISSIONERS OF THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. That the City of Paducah approves and adopts the following group life insurance premiums for employees of the City of Paducah:

COST SUMMARY	Number of Lives	Total Monthly Volume	Monthly Rate	Total Monthly Premium	Total Annual Premium
Employee Term Life	438	$4,622,500	$0.78/$1,000	$3,605.55	$43,266.60
Employee AD&D	136	$4,945,000	$0.02/$1,000	$98.90	$1,186.80
Total	--	--	--	**$3,704.45**	**$44,453.40**

SECTION 2. That the City of Paducah hereby accepts and approves the Group Insurance Proposal with Mutual of Omaha Insurance Company dated September 16, 2020, for Basic Term Life and AD&D and Voluntary Term Life and AD&D, [~~Preferred Choice Voluntary Short-Term Disability and Voluntary Long-Term Disability~~] for the employees of the City of Paducah and authorizes the Mayor to execute all documents related to same.

SECTION 3. That the premiums for the Group Life Insurance Plan, for employees of the City of Paducah, adopted in Section 1 & 2 above, shall become effective January 1, 2021.

SECTION 4. This expenditure will be charged to various accounts.

SECTION 5. This order shall be in full force and effect from and after the date of its adoption.

_____
Brandi Harless, Mayor

ATTEST:

_____
Lindsay Parish, City Clerk

Adopted by the Board of Commissioners, December 15, 2020
Recorded by Lindsay Parish, City Clerk, December 15, 2020
\mo\Group Life Insurance Mutual of Omaha 2021 – AMENDED

New Customer Verification Guide

Presented To:

City of Paducah

GETTING STARTED

Thank you for choosing Mutual of Omaha for your Group Insurance needs. The New Customer Verification Guide ("Guide") is key to administering your plan effectively and efficiently. To ensure a smooth implementation, complete and sign the applicable section within the Guide.

STEP 1: Review the Group Insurance proposal and complete the sections within the Guide.

Guide	Description	Completed
Group Insurance Proposal	Applicant and Producer verify sold plan design and rates.	☐
Acceptance of Terms and Conditions	**Applicant signature** is required.	☐
Group Insurance Application	**Applicant signature** is required. • Must be signed prior to the proposed effective date	☐
Policy Administration		☐
Contact Information	Premium/Billing, Claims, Administration, and Renewal	
Billing Information	Billing type, format and location	
Eligibility Information	Class description and employee waiting periods	
Earnings Definition	Earnings definition, premium contributions, and ERISA	
Witholding and Tax Reporting	Required for Disability, Accident and Critical Illness coverage	

STEP 2: Return the completed and signed Guide to the Mutual of Omaha representative listed below at least 15 days prior to the requested effective date.

Additional Items Required		Included
Employee Census and Enrollment	• Census in Excel format (preferred method) • Employee enrollment forms, electronic or hard copy • Evidence of Insurability or Application forms • Applicant retains copy of enrollment material	☐
Replacing Prior Insurance Plan	☐ Yes ☐ No	
Prior Carrier Billing statement	Required if transferring coverage from another carrier	☐
Prior Carrier certificate booklet	Required if transferring coverage from another carrier	☐
Sample premium calculation spreadsheet	Required only for Self-administered groups	☐
Producer / Agent Use Only		
Producer Checklist	Producer identification and details	☐
Third Party Administrator Checklist	Required only if TPA is providing services	☐

If you have any questions, please contact your Mutual of Omaha representative.

Sales Representative	Connor Benshoff	
Sales Assistant	Abbey Whitehurst	
Email		
Phone & Fax	(866) 478-6431	(615) 370-8910

Group Office	Nashville		
Group Office Address	5409 Maryland Way		
Address 2	Suite 240		
City, State, Zip	Brentwood	TN	37027

BASIC TERM LIFE AND AD&D INSURANCE

Proposal for: City of Paducah
Alternate: 1.03

The following Basic Term Life and AD&D plan is being proposed on a fully-insured basis effective **01/01/21**. This proposal assumes this coverage is underwritten by United of Omaha Life Insurance Company. For additional information about Mutual of Omaha's products and services, visit *mutualofomaha.com*.

ELIGIBILITY

CLASS DEFINITION(S)

Class 1: All Eligible City Managers
Class 2: All Other Eligible Employees
Class 3: All Eligible Retirees
Class 4: All Eligible AFSCME Employees
Class 5: All Eligible Police Employees
Class 6: All Eligible Fire Employees

ELIGIBILITY REQUIREMENT

This proposal provides coverage for all actively at work employees on the policy effective date working the minimum number of hours shown below in the United States, unless otherwise approved by Mutual of Omaha. Certain requirements apply.

MINIMUM WORK HOURS

Class 1: 30 or more hours each week
Class 2: 30 or more hours each week
Class 3: 30 or more hours each week
Class 4: 30 or more hours each week
Class 5: 30 or more hours each week
Class 6: 30 or more hours each week

BENEFIT SUMMARY

EMPLOYEE TERM LIFE BENEFIT AMOUNTS

	Benefit	Maximum Benefit	Guarantee Issue Amount	Minimum Benefit
Class 1	$50,000	$50,000	$50,000	$50,000
Class 2, 5	$12,500	$12,500	$50,000	$12,500
Class 3	$4,000	$4,000	$50,000	$4,000
Class 4, 6	$15,000	$15,000	$50,000	$15,000

EMPLOYEE AD&D BENEFIT AMOUNT

The AD&D Principal Sum amount is equal to $37,500.

PARTICIPATION AND COST SUMMARY

PARTICIPATION ASSUMPTIONS

	Minimum Participation	Number of Eligible Employees	Contribution Structure
Class 1	100%	1	Non-Contributory
Class 2	100%	103	Non-Contributory
Class 3	100%	140	Non-Contributory
Class 4	100%	58	Non-Contributory
Class 5	100%	74	Non-Contributory
Class 6	100%	62	Non-Contributory

PARTICIPATION AND COST SUMMARY (CONT'D)

COST SUMMARY

	Number of Lives	Total Monthly Volume	Monthly Rate	Total Monthly Premium	Total Annual Premium
Employee Term Life	438	$4,622,500	$0.78/$1,000	$3,605.55	$43,266.60
Employee AD&D	136	$4,945,000	$0.02/$1,000	$98.90	$1,186.80
Total	--	--	--	**$3,704.45**	**$44,453.40**

PACKAGE PRICING The rates and benefits for this coverage assume package pricing. The rates and/or benefits are subject to change if one or more coverages included in Option 1 are not selected by the employer.

RATE GUARANTEE 2 Years

RATE GUARANTEE DATE 01/01/2023

ADDITIONAL BENEFITS - CLASS 1

WAIVER OF PREMIUM - DISABILITY

- **Definition of Disability** - Any Occupation
- **Elimination Period** - 6 months
- **Termination** - Age 65

LIVING CARE BENEFIT 75% to $37,500

LAYOFF/LEAVE

- **Temporary Layoff** - 12 weeks
- **Personal Leave** - 12 weeks

CONTINUATION FOR FEDERAL AND STATE LAWS **Included** – The federal Family and Medical Leave Act (FMLA) and Uniformed Services Employment and Reemployment Rights Act (USERRA) and any amendments thereto, as well as other applicable federal or state laws, may allow continuation of insurance in certain instances for leaves of absence, layoff or termination. Insurance may be continued for the time period allowed by the applicable law, for the employee/member. This provision applies to employer and union groups only, subject to certain conditions.

TRAVEL ASSISTANCE Included

EMPLOYEE ASSISTANCE PROGRAM (EAP) Basic; 6 face to face visits

CONVERSION Included

ADDITIONAL BENEFITS - CLASS 2

WAIVER OF PREMIUM - DISABILITY

- **Definition of Disability** - Any Occupation
- **Elimination Period** - 6 months
- **Termination** - Age 65

LIVING CARE BENEFIT 75% to $9,375

LAYOFF/LEAVE

- **Temporary Layoff** - 12 weeks
- **Personal Leave** - 12 weeks

CONTINUATION FOR FEDERAL AND STATE LAWS **Included** – The federal Family and Medical Leave Act (FMLA) and Uniformed Services Employment and Reemployment Rights Act (USERRA) and any amendments thereto, as well as other applicable federal or state laws, may allow continuation of insurance in certain instances for leaves of absence, layoff or termination. Insurance may be continued for the time period allowed by the applicable law, for the employee/member. This provision applies to employer and union groups only, subject to certain conditions.

Travel Assistance	Included
Employee Assistance Program (EAP)	Basic; 6 face to face visits
Conversion	Included

ADDITIONAL BENEFITS - CLASS 3

Living Care Benefit	75% to $3,000
Layoff/Leave	▪ **Temporary Layoff** - 12 weeks ▪ **Personal Leave** - 12 weeks
Continuation for Federal and State Laws	**Included** – The federal Family and Medical Leave Act (FMLA) and Uniformed Services Employment and Reemployment Rights Act (USERRA) and any amendments thereto, as well as other applicable federal or state laws, may allow continuation of insurance in certain instances for leaves of absence, layoff or termination. Insurance may be continued for the time period allowed by the applicable law, for the employee/member. This provision applies to employer and union groups only, subject to certain conditions.
Travel Assistance	Included
Employee Assistance Program (EAP)	Basic; 6 face to face visits
Conversion	Included

ADDITIONAL BENEFITS - CLASS 4

Waiver of Premium - Disability	▪ **Definition of Disability** - Any Occupation ▪ **Elimination Period** - 6 months ▪ **Termination** - Age 65
Living Care Benefit	75% to $11,250
Layoff/Leave	▪ **Temporary Layoff** - 12 weeks ▪ **Personal Leave** - 12 weeks
Continuation for Federal and State Laws	**Included** – The federal Family and Medical Leave Act (FMLA) and Uniformed Services Employment and Reemployment Rights Act (USERRA) and any amendments thereto, as well as other applicable federal or state laws, may allow continuation of insurance in certain instances for leaves of absence, layoff or termination. Insurance may be continued for the time period allowed by the applicable law, for the employee/member. This provision applies to employer and union groups only, subject to certain conditions.
Travel Assistance	Included
Employee Assistance Program (EAP)	Basic; 6 face to face visits
Conversion	Included

ADDITIONAL BENEFITS - CLASS 5

Waiver of Premium - Disability	▪ **Definition of Disability** - Any Occupation ▪ **Elimination Period** - 6 months ▪ **Termination** - Age 65
Living Care Benefit	75% to $9,375
Layoff/Leave	▪ **Temporary Layoff** - 12 weeks ▪ **Personal Leave** - 12 weeks
Continuation for Federal and State Laws	**Included** – The federal Family and Medical Leave Act (FMLA) and Uniformed Services Employment and Reemployment Rights Act (USERRA) and any amendments thereto, as well as other applicable federal or state laws, may allow continuation of insurance in certain instances for leaves of absence, layoff or termination. Insurance may be continued for the time period allowed by the applicable law, for the employee/member. This provision applies to employer and union groups only, subject to certain conditions.
Travel Assistance	Included
Employee Assistance Program (EAP)	Basic; 6 face to face visits
AD&D	24 hour coverage for employees
AD&D Benefits	- Seat Belt - Common Carrier - Airbag - Coma
Conversion	Included

ADDITIONAL BENEFITS - CLASS 6

Waiver of Premium - Disability	▪ **Definition of Disability** - Any Occupation ▪ **Elimination Period** - 6 months ▪ **Termination** - Age 65
Living Care Benefit	75% to $11,250
Layoff/Leave	▪ **Temporary Layoff** - 12 weeks ▪ **Personal Leave** - 12 weeks
Continuation for Federal and State Laws	**Included** – The federal Family and Medical Leave Act (FMLA) and Uniformed Services Employment and Reemployment Rights Act (USERRA) and any amendments thereto, as well as other applicable federal or state laws, may allow continuation of insurance in certain instances for leaves of absence, layoff or termination. Insurance may be continued for the time period allowed by the applicable law, for the employee/member. This provision applies to employer and union groups only, subject to certain conditions.
Employee Assistance Program (EAP)	Basic; 6 face to face visits
AD&D	24 hour coverage for employees
AD&D Benefits	- Seat Belt - Common Carrier - Airbag - Coma - Repatriation
Conversion	Included

VOLUNTARY TERM LIFE AND AD&D INSURANCE

Proposal for: City of Paducah
Alternate: 1.04

The following Voluntary Term Life and AD&D plan is being proposed on a fully-insured basis effective **01/01/21**. This proposal assumes this coverage is underwritten by United of Omaha Life Insurance Company. For additional information about Mutual of Omaha's products and services, visit *mutualofomaha.com*.

ELIGIBILITY

CLASS DEFINITION(S)

Class 1: All Eligible Employees

ELIGIBILITY REQUIREMENT

This proposal provides coverage for all actively at work employees on the policy effective date working the minimum number of hours shown below in the United States, unless otherwise approved by Mutual of Omaha. Certain requirements apply.

MINIMUM WORK HOURS

Class 1: 30 or more hours each week

BENEFIT SUMMARY

EMPLOYEE BENEFIT AMOUNTS

Minimum Benefit	Maximum Benefit	Increments	Guarantee Issue Amount*
$10,000	5X Annual Salary, up to $500,000	$10,000	5X Annual Salary, up to $150,000

*Guarantee Issue Amounts assume a participation rate of at least 25% of eligible employees.

BENEFIT REDUCTION SCHEDULE**

At Age	Benefits Reduce :
70	65%
75	45%
80	30%
85	20%
90+	15%

** All benefit reductions are a percentage of the original benefit amount. Coverage terminates at retirement. The Guarantee Issue Amount is reduced according to the reduction schedule.

DEPENDENT SPOUSE BENEFIT AMOUNTS***

Minimum Benefit	Maximum Benefit	Increments	Guarantee Issue Amount
$5,000	100% of Employee's Benefit, up to $250,000	$5,000	100% of Employee's Benefit, up to $30,000

*** Dependent Spouse and/or Child coverage is only available if the Employee has coverage under this plan. Spouse coverage terminates at age 70.

DEPENDENT CHILD BENEFIT AMOUNTS

Minimum Benefit	Maximum Benefit	Increments	Guarantee Issue Amount
$10,000	$10,000	$10,000	$10,000

AD&D BENEFIT AMOUNT

The AD&D Principal Sum amount is equal to the amount of voluntary term life insurance for employees and eligible dependents.

PARTICIPATION AND COST SUMMARY

PARTICIPATION ASSUMPTIONS

Minimum Participation	Number of Eligible Employees	Contribution Structure
25%	291	100% employee paid

COST SUMMARY*

Voluntary Term Life

Age Band	Employee & Spouse Rate per $1,000	All Children Rate per $1,000
<25	$0.09	$0.14
25 - 29	$0.09	--
30 - 34	$0.10	--
35 - 39	$0.12	--
40 - 44	$0.19	--
45 - 49	$0.32	--
50 - 54	$0.53	--
55 - 59	$0.82	--
60 - 64	$1.29	--
65 - 69	$2.31	--
70 - 74	$4.13	--
75 - 79	$6.81	--
80 - 84	$13.80	--
85 - 89	$13.80	--
90 - 100	$13.80	--

* This plan is rated using the same rates for the employee and spouse. Employee and spouse rates are calculated based on the employee's current age as of the effective date of the plan. Employee and spouse rates are adjusted once each year on the plan anniversary date for employees advancing to the next age band. Spouse coverage terminates when the employee attains age 70 (regardless of the spouse's actual age).

Voluntary AD&D

Employee Rate per $1,000	Spouse Rate per $1,000	All Children Rate per $1,000
$0.05	$0.05	

PACKAGE PRICING The rates and benefits for this coverage assume package pricing. The rates and/or benefits are subject to change if one or more coverages included in Option 1 are not selected by the employer.

RATE GUARANTEE 2 Years

RATE GUARANTEE DATE 01/01/2023

ADDITIONAL BENEFITS

OPEN ENROLLMENT A one-time open enrollment is available for a period of up to 90 days prior to the effective date of the policy, subject to the enrollment strategy requirements. During this time, the employee/member may elect insurance for the first time or request increased insurance up to the Guarantee Issue amount for the employee/member and any dependents (if applicable) without providing health information.

WAIVER OF PREMIUM - DISABILITY

- **Definition of Disability** - Any Occupation
- **Elimination Period** - 6 months
- **Termination** - Age 65

ANNUAL INCREASE OPTION Once annually, the employee/member may increase their insurance amount by up to $20,000 without providing health information.

LIVING CARE BENEFIT	For employee and spouse, 75% to $375,000
PORTABILITY	Included
LAYOFF/LEAVE	▪ **Temporary Layoff** - 12 weeks ▪ **Personal Leave** - 12 weeks
CONTINUATION FOR FEDERAL AND STATE LAWS	**Included** – The federal Family and Medical Leave Act (FMLA) and Uniformed Services Employment and Reemployment Rights Act (USERRA) and any amendments thereto, as well as other applicable federal or state laws, may allow continuation of insurance in certain instances for leaves of absence, layoff or termination. Insurance may be continued for the time period allowed by the applicable law, for the employee/member and any dependent(s). This provision applies to employer and union groups only, subject to certain conditions.
AD&D	24 hour coverage for employees and eligible dependents
AD&D BENEFITS	- Seat Belt - Common Carrier - Airbag - Repatriation
CONVERSION	Included

REQUIREMENTS AND ASSUMPTIONS

SIC CODE

9111

SITUS STATE

KY

ACCEPTANCE

This proposal is contingent upon Mutual of Omaha Home Office review and acceptance of the completed application for coverage. It is recommended that current coverage is not cancelled or dropped until notification of acceptance from Mutual of Omaha is received.

PACKAGE PRICING

The rates and benefits in this proposal assume package pricing. The rates and/or benefits are subject to change if one or more coverages are not selected by the employer.

LIMITATIONS & STANDARD CONTRACT NOTICE

This proposal is subject to Mutual of Omaha's standard product terms, limitations, and exclusions. Additionally, this proposal requires use of standard system-compatible benefits and contract provisions. Applicable federal and state mandates are added at issuance.

This proposal also assumes that all employees/members reside in the situs state of the group. If any employees/members reside outside of the situs state of the group, we must be notified of the number of employees/members by state during the implementation process so that all applicable state mandates can be accommodated.

Please refer to a sample standard contract, certificate booklet and/or subscription agreement documents for additional information and detail, available upon request.

ERISA

Each plan presented in this proposal is considered to be an employer-sponsored ERISA benefit plan. If it is determined that any plan presented in this proposal is not an ERISA benefit plan, Mutual of Omaha reserves the right to re-rate or otherwise adjust the proposed plan(s).

PROPOSAL CONDITIONS

Mutual of Omaha reserves the right to re-rate or withdraw this proposal *prior* to the effective date if any of the following changes:

- SIC code
- Employer contributions
- Information regarding disabled or COBRA participants
- For groups that are experience rated - risk increases based on review of the current carriers claims experience, including open or pended claims
- Demographics (age, gender, occupation, earnings, location and size)
- Plan participation - increase or decrease of 10% or more lives
- Laws, regulations, judicial and/or administrative orders and decisions affecting benefits, cost of administration, or cost of health care services
- Proposed effective date
- Benefits or eligibility
- Premium tax

On or after the effective date, Mutual of Omaha reserves the right to change rates or fees if there is a change in any factor listed above. In addition, Mutual of Omaha may change rates or fees any time after the most recent Rate Guarantee Date, provided at least 30 days advance notice of the rate or fee increase has been given to the group.

DEPENDENT NON-CONFINEMENT REQUIREMENT

Coverage for dependents is subject to our non-confinement requirement and their ability to perform all the usual duties of a person who is of the same age and gender who is in good health.

PROPOSAL EXPIRATION

This proposal is good for 90 days after 12/02/20, or the assumed effective date of the plan, whichever comes first.

Group Insurance Application

United of Omaha Life Insurance Company
3300 Mutual of Omaha Plaza • Omaha, NE 68175

APPLICANT INFORMATION

Applicant (Full Legal Name) City of Paducah

Address 300 S. 5th Street, PO Box 2267

City Paducah State KY ZIP 2003

REQUESTED EFFECTIVE DATE

Insert Date on this Line 01-01-2021

If this application is approved, insurance will become effective on the requested effective date, unless United of Omaha Life Insurance Company sends written notice of a different effective date.

Coverage(s) being applied for	GROUP (Contributory / Non-Contributory)	GROUP VOLUNTARY (100% Employee Paid)
Life	☐	☐
Life / AD&D	☒	☒
Short Term Disability	☐	☐
Long Term Disability	☐	☐
Dental	☐	☐
Vision	☐	☐
Critical Illness	☐	☐
Accident	☐	☐

REQUIRED FRAUD WARNING

Any person who knowingly and with intent to defraud any insurance company or other person files an application for insurance containing any materially false information or conceals, for the purpose of misleading, information concerning any fact material thereto commits a fraudulent insurance act, which is a crime.

ACKNOWLEDGEMENT AND SIGNATURE

All statements in this application and any claims experience data provided to United of Omaha Life Insurance Company are true and complete and will be relied upon by United of Omaha Life Insurance Company to determine whether to issue a policy. Such statements and claims experience data, along with the group insurance proposal from United of Omaha Life Insurance Company, are the basis for any policy issued by United of Omaha Life Insurance Company. All statements shall be deemed representations and not warranties. Any misrepresentations, omissions or incorrect statements or data deemed to be fraudulent or material to the risk assumed by United of Omaha Life Insurance Company may void this application and any issued policy as of the effective date.

If an authorized representative at United of Omaha Life Insurance Company's Home Office does not approve this application, no insurance is in effect at any time and any advance payment received will be returned.

Applicant Signature

Name | Location/State

Title | Date

Broker Signature | Name DJ Story | License # 826029

POLICY ADMINISTRATION

CONTACT INFORMATION

Applicant Information

Legal Name of Company	City of Paducah		
Doing Business As (DBA)			
Employer Identification Number *(Tax ID Number)*	61-6001891		
Legal Address of Company	300 S. 5th Street		
Address 2			
City, State, Zip	Paducah	Y	42003
Company Phone & Fax	270-444-1354		

Primary Contact

Contact For:
☑ Premium/Billing
☑ Claims
☑ Administration
☑ Renewal Census
(Self-administered only)
☑ EOI

Contact Name	Stefanie Suazo		
Address (if different than above)			
Address 2			
City, State, Zip			
Contact Phone & Fax	270-444-1354		
Contact Email	ssuazo paducahky.gov		
If above Contact Email is not specific to you please provide a unique email for accessing our employer website here:			
Should this contact have access to: Online Billing and Reporting ☑ Yes ☐ No Online Eligibility Maintenance (*List Billed customers only*) ☐ Yes ☐ No			

Additional Contact

Contact For:
☑ Premium/Billing
☑ Claims
☑ Administration
☑ Renewal Census
(Self-administered only)
☑ EOI

Contact Name	emekka Stray		
Address (if different than above)			
City, State, Zip			
Contact Phone & Fax	270-444-8540		
Contact Email	jstray paducahky.gov		
If above Contact Email is not specific to you please provide a unique email for accessing our employer website here:			
Should this contact have access to: Online Billing and Reporting ☑ Yes ☑ No Online Eligibility Maintenance (*List Billed customers only*) ☐ Yes ☐ No			

POLICY ADMINISTRATION

BILLING INFORMATION

1. **Billing Assumptions:** All bills will be sent to the primary contact indicated in the Contact Information section above. Unless otherwise agreed to, or stated in the Group Insurance Proposal, billing statements will be issued on a monthly basis. Premium is due on the first day of the month. The group policy will include a premium grace period provision.

2. **Billing Type:** Select the type of bill you prefer:
   - ☐ List Bill *(mandatory for Dental, Vision and Groups under 50 covered employees)*
     Are confirmation statements of Voluntary Term Life coverage necessary for each employee? ☐ Yes ☐ No
   - ☑ Self – Administration Bill *(mandatory for Stand Alone AD&D, Stand Alone VAD&D, Business Travel)*



We recommend that all groups under 200 covered employees be set up with the List Bill option that provides you with a monthly-itemized bill. This option provides you online access to the following:
- Enrollment Data Administration- Adds, Terminations and Changes
- Management Reports: Standard and On Demand formats
- Real-Time reporting access to Evidence of Insurability member status
- Administrative Invoice Verification Tool

3. **Enrollment Method** *(required for List Billing only)*: Indicate what method your billing should be based on:
   ☑ Excel census ☐ Enrollment forms ☐ Both
   Specify which method takes precedence in the event of conflicting information
   ☑ Excel census ☐ Enrollment forms

4. **Payroll Deduction Frequency**: Indicate payroll deduction frequency for any voluntary and/or contributory coverages: Select one option.

Monthly *(Standard)*	Weekly *(52/yr)*	Bi-Weekly *(26/yr)*	Semi-Monthly *(24/yr)*	9thly	10thly	13thly
☐	☐	☐	☑	☐	☐	☐

   Specify first payroll date following the effective date (mm/dd/yyyy): 1/8/2021

5. **Billing Format**: If you have multiple locations, we can include a location name and number on your billing statement or send a separate bill to each location. Select the billing format you prefer:

   ☑ One bill for all locations/divisions sent to Primary Contact (Standard)
   ☐ One bill itemized by location/division codes sent to Primary Contact *(available for List Billed customers only)*
   ☐ One bill for each location/division sent to the applicable location contacts:

Additional Billing Location

Location Name & Number			
Contact Name			
Billing Address			
City, State, Zip			
Contact Phone & Fax			
Contact Email			
Should this contact have access to: Online Billing and Reporting ☐ Yes ☐ No Online Eligibility Maintenance (*List Billed customers only*) ☐ Yes ☐ No			

For additional locations, provide information on a separate sheet of paper.

POLICY ADMINISTRATION

ELIGIBILITY INFORMATION

Eligibility Rules:

include all variations

- *Class Description- How the employees class should be described in the policy*
- *Minimum Hours- Minimum number of hours an employee must work to be eligible for coverage*
- *Waiting Period – Days, months, years an employee must be employed full-time before becoming eligible for coverage*
- *Effective Date – Day on which coverage begins after employees satisfy the waiting period*
- *Termination Date – Day on which coverage terminates once an employee is no longer eligible*

MINIMUM HOURS	COVERAGE WAITING PERIOD	COVERAGE EFFECTIVE DATE	COVERAGE TERMINATION DATE	APPLIES TO WHICH PRODUCTS
Class Description:				
_____ ☑ ☐ ☐ ☐	_____ _____ _____	☐ ☑ ☐	☐ *(Required for disability)* ☑ *(Required for critical illness)* *(Required for accident)*	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Class Description:				
_____ ☑ ☐ ☐ ☐	_____ _____ _____	☐ ☑ ☐	☐ *(Required for disability)* ☑ *(Required for critical illness)* *(Required for accident)*	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Class Description:				
_____ ☐ ☐ ☐ ☐	_____ _____ _____	☑ ☐ ☐	☐ *(Required for disability)* ☑ *(Required for critical illness)* *(Required for accident)*	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Note: All of the following examples assume a standard enrollment period of 31 days.

[1] **"on the day"**

-
-

[2] **"first day of month coinciding with policy"**

first day of the month coinciding with or following the day the enrollment form is signed

POLICY ADMINISTRATION

ELIGIBILITY INFORMATION

Eligibility Rules:

include all variations

- *Class Description- How the employees class should be described in the policy*
- *Minimum Hours- Minimum number of hours an employee must work to be eligible for coverage*
- *Waiting Period – Days, months, years an employee must be employed full-time before becoming eligible for coverage*
- *Effective Date – Day on which coverage begins after employees satisfy the waiting period*
- *Termination Date – Day on which coverage terminates once an employee is no longer eligible*

MINIMUM HOURS	COVERAGE WAITING PERIOD	COVERAGE EFFECTIVE DATE	COVERAGE TERMINATION DATE	APPLIES TO WHICH PRODUCTS
Class Description:				
_____ ☑ ☐ ☐ ☐	_____ _____ _____	☐ ☑ ☐	☐ *(Required for disability)* ☑ *(Required for critical illness)* *(Required for accident)*	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Class Description:				
_____ ☑ ☐ ☐ ☐	_____ _____ _____	☐ ☑ ☐	☐ *(Required for disability)* ☑ *(Required for critical illness)* *(Required for accident)*	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Class Description:				
_____ ☑ ☐ ☐ ☐	_____ _____ _____	☐ ☑ ☐	☐ *(Required for disability)* ☑ *(Required for critical illness)* *(Required for accident)*	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Note: All of the following examples assume a standard enrollment period of 31 days.

[1] **"on the day"**

-
-

[2] **"first day of month coinciding with policy"**

first day of the month coinciding with or following the day the enrollment form is signed

-
-

[3] **"first day of month following"**
first day of the month following the day the enrollment form is signed

-
-

Eligibility Assumptions

a. Rehire/Reinstatement

-
-
  - **not available**
  - **not available**

b. Continuation of Coverage

-
-
-
-
- **not available**

NOTE: Changes from standard may affect premium rates. Contact your Implementation Manager for Information.

Domestic Partner: ☐ ☑

Annual Open Enrollment: Voluntary Short Term Disability

Open Enrollment: Voluntary Long Term Disability, Voluntary Term Life with AD&D, Voluntary Short Term Disability

Enrollment: Life and AD&D

POLICY ADMINISTRATION

EARNINGS DEFINITION

Insurable earnings:

☑

	☑	☐	☐
	☐	☐	☐
	☑	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
	☐	☐	☐
	☐	☐	☐

[1]Earnings will be determined on the last day worked. Salary shall not exceed payroll records or premium paid.
[2]Additional approval may be necessary
[3]Bonuses, Commissions and Overtime are included

If the Earnings Definition you select here is different from what is shown on the Sold Proposal or if you do not see the Earnings Definition you want, please contact your Implementation Manager.

PREMIUM CONTRIBUTIONS

Key

Non-Contributory ER
Contributory ER EE
Voluntary EE ER
Gross-Up EE ER
Tax Choice (IRS Revenue Ruling 2004-55) ER EE

Core / Buy-Up ER EE
Section 125 EE ER

ER EE

	ER %	EE %	Pre-Tax Post-Tax	Section 125 Plan
Life (EE)				☐
Life (DEP)				☐
LTD				☐
STD				☐
Dental (EE)				☐
Dental (DEP)				☐
CI (EE/CH)				☐
CI (SP)				☐
Accident				☐
Standalone AD&D				☐
Vision (EE)				☐
Vision (DEP)				☐
MA PFL*				
MA PML*				

Type (See Above Key)	Contribution	STD	LTD
		☐	☐
		☐	☐
		☑	☑
		☐	☐
		☐	☐
		☐	☐
		☐	☐

POLICY INFORMATION

Active at work requirement:

☐

☑

For Life, Dental, Vision, Accident, and Critical Illness coverage

Continuity of Coverage Information:

all

-
-
-
-
- **is not totally disabled** **Life**

PLEASE NOTE:

-
- **Life**
- **Life, Accident and Critical Illness**

For Disability coverage,

Extraterritorial States

☐ ☐ ☐ ☐
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ERISA

_____

but governmental employers and churches are not

☐ ☑

If yes, you must complete numbers 2-4 on this page.

☐ ☐

Note: The employer is ultimately responsible under ERISA for the benefits it agrees to provide its employees.

ACCEPTANCE OF TERMS AND CONDITIONS

☑ ☐ ☑

RESOLUTION

A RESOLUTION OF THE BOARD OF COMMISIONERS OF THE CITY OF PADUCAH, ENCOURAGING THE INCOMING BOARD OF COMMISSIONERS TO CONSIDER RELIEF OPTIONS RELATED TO ALCOHOL LICENSING RENEWAL FEES

WHEREAS, due to the COVID-19 pandemic, and subsequent Executive Orders from the Kentucky Office of the Governor, many businesses have been required to close and/or operate at diminished capacity in 2020; and

WHEREAS, the City Commission understands that these measures, while necessary for public health, have caused a substantial financial impact on restaurants, bars and other businesses in the City of Paducah and across the Commonwealth; and

WHEREAS, the City Commission recognizes that this financial impact constitutes a substantial burden on local restaurants, bars and other businesses; and

WHEREAS, the Kentucky Department of Alcoholic Beverage Control has allowed for a twelve (12) month fee waiver for certain Kentucky State alcoholic beverage license types; and

WHEREAS, it is the desire of the City Commission to assist local businesses, where possible, to manage the financial burden caused by the pandemic.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF PADUCAH, KENTUCKY, AS FOLLOWS:

SECTION 1. That the Board of Commissioners hereby authorizes the City Manager, City Clerk and Finance Director of the City of Paducah to research the options available to the City to provide relief to local businesses related to alcoholic beverage licensing renewal fees.

SECTION 2. That the current City Commission encourages the incoming City Commission of 2021 to consider relief options related to alcoholic beverage renewal licensing fees for 2021.

SECTION 3. This resolution shall be in full force and effect from and after this adoption.

_____
Brandi Harless, Mayor

ATTEST:

_____
Lindsay Parish, City Clerk

Adopted by the Board of Commissioners, December 15, 2020
Recorded by Lindsay Parish, December 15, 2020
\resoln\Alcohol Renewal Fee Resolution

Agenda Action Form
Paducah City Commission

Meeting Date: December 15, 2020

Short Title: Approve Sprocket $900,000 Forgivable Loan - **J ARNDT**

Category: Ordinance

Staff Work By: James Arndt
Presentation By: James Arndt

Background Information: The City of Paducah desires to continue our economic development partnership with Sprocket in their efforts to create high tech jobs and startup companies in Paducah. The City will be loaning $900,000 to Sprocket for them to build out 8,000 square feet of maker space in the Coca-Cola building currently owned by the Musselmans. The term of the loan, 20 years, will match the term of the lease between Sprocket and the facility owner. Sprocket in a partnership with Codefy will create start-up companies and high tech jobs in the Paducah facility as required within the forgivable loan agreement. If the requirements in the agreement are fully met, 75% of the 900,000 loan will be forgiven. The terms of the loan require Sprocket to pay 25% of the $900,000 over the last 15 years of the 20 year term. The payments will be annualized over that 15 year period. There will be a 1% interest rate applied to the loan amount.

In conjunction with the approval of the $900,000 Forgivable Loan to Sprocket, the City needs to amend the Budget by utilizing unbudgeted cash reserves in the amount of $900,000 (a portion of the sales proceeds garnered by the sale of the Genova Property). This ordinance authorizes the transfer $900,000 from Debt Service Undesignated Fund Balance (3000) to the General Fund - Note Receivable Account 1000-101055.

Does this Agenda Action Item align with a Strategic Plan Action Step? No
If yes, please list the Action Step Item Codes(s):

Funds Available: Account Name:
Account Number:

Staff Recommendation:

Attachments:
1. ORD Sprocket Forgivable Loan 12-2020 Final
2. Forgivable Loan Agreement - Final
3. Second Revised Appendices

ORDINANCE NO. 2020-_____-_____

AN ORDINANCE AMENDING ORDINANCE NO. 2020-6-8641; AUTHORIZING CITY OF PADUCAH TO EXECUTE A FORGIVABLE LOAN AGREEMENT WITH SPROCKET, INC., IN AN AMOUNT UP TO $900,000 TO PARTIALLY FUND THE CONSTRUCTION COST OF A RENOVATED FACILITY THAT WILL BE USED FOR THE CREATION OF NEW START-UP BUSINESSES AND JOB OPPORTUNITIES WITHIN THE CITY OF PADUCAH, AND TO EXECUTE THE OTHER AGREEMENTS AND DOCUMENTS THAT ARE A PART THEREOF.

WHEREAS, Sprocket, Inc., (hereafter the "Borrower") is a non-profit corporation that was duly organized under KRS Chapter 273, and duly qualified as an exempt organization under Section 501(c)(3) of the Internal Revenue Code; and

WHEREAS, the Borrower's primary purpose is to advance the cause of science, technology, and entrepreneur education through a network that enables new start-up businesses and entrepreneurs to avail themselves of resources and educational programming that are beneficial to the establishment and growth of their business enterprises; and

WHEREAS, the Borrower has leased from Musselman Properties, LLC, approximately 8,800 square feet of warehouse feet in the Coke Plant facility that will be used for the Borrower's place of operation, a portion of which will be sublet to start-up businesses and entrepreneurs who utilize the Borrower's network in the establishment and growth of their business enterprises; and

WHEREAS, the Borrower must construct various facilities, systems and improvements within the lease space to accommodate its intended use of that space, and the needs and requirements of the sublessees who will be located within the lease space; and

WHEREAS, the Borrower has requested a line of credit loan from the City to fund the construction cost of the facilities, systems and improvements to be constructed within the lease space, and in relation thereto, has warranted to the City that its proposed use of that space will generate the creation of new start-up businesses within the City, and provide new employment opportunities for its residents; and

WHEREAS, the City has a substantial interest in promoting economic growth within the City, which includes the creation of new start-up businesses and job opportunities; and

WHEREAS, the City Commission has determined that the Borrower's proposed development within the Coke Plant facility, and Borrower's proposed use of that facility, constitutes a valid public purpose, and by reason thereof, the City has agreed to extend to Borrower a line of credit loan up to and including the amount of $900,000.00 to fund seventy five percent (75%) of the construction costs of Borrower's proposed renovation to the lease space, subject to the terms and conditions that are contained in this Agreement.

NOW, THEREFORE, BE IT ORDAINED, by the City of Paducah, Kentucky as follows:

SECTION 1. Budget Amendment. That the annual budget for the fiscal year beginning July 1, 2020, and ending June 30, 2021, as adopted by Ordinance No. 2020-6-8641, be amended by the following re-appropriations: Transfer $900,000 from Debt Service Undesignated Fund Balance (3000) to the General Fund Note Receivable Account 1000-101055.

SECTION 2. Forgivable Loan Agreement. That the Mayor of the City of Paducah, Kentucky is hereby authorized and directed to execute a Forgivable Loan Agreement with Sprocket, Inc., (the "Borrower") in an amount up to $900,000.00, in substantially the form attached hereto and made part hereof (Exhibit A), which terms are not inconsistent with this Ordinance and not substantially adverse to the City, together with such other agreements, instruments or certifications which may be necessary to accomplish said Forgivable Loan.

SECTION 3. Loan Guaranty Agreement. That the Mayor of the City of Paducah, Kentucky is hereby authorized and directed to execute a Loan Guaranty Agreement with the Guarantor, upon such terms as may be approved by the Mayor which are not inconsistent with this Ordinance and not substantially adverse to the City, together with such other agreements, instruments or certifications which may be necessary to accomplish the City's guarantee of the loan.

SECTION 4. Severability. That if any one or more of the provisions of this Ordinance should be determined by a court of competent jurisdiction to be contrary to law, then such provisions shall be deemed to be severable from all remaining provisions and shall not affect the validity of such other provisions.

SECTION 5. Inconsistent Actions. All prior ordinances, resolutions, orders or parts thereof inconsistent herewith are hereby repealed.

SECTION 6. Effective Date. This Ordinance shall be read on two separate days and will become effective upon summary publication pursuant to KRS Chapter 424.

_____
MAYOR

ATTEST:

_____
Lindsay Parish, City Clerk

Introduced by the Board of Commissioners _____
Adopted by the Board of Commissioners, _____
Recorded by Lindsay Parish, City Clerk, _____
Published by *The Paducah Sun*, _____

\ORD\Sprocket Forgivable Loan 12-2020

EXHIBIT A

249941

FORGIVABLE LOAN AGREEMENT

THIS FORGIVABLE LOAN AGREEMENT is made and executed on this ___ day of _____, 2020, between the **CITY OF PADUCAH**, a Kentucky municipality, hereafter the "City", and **SPROCKET, INC.**, a Kentucky non-profit corporation, hereafter the "Borrower".

RECITALS

WHEREAS, the Borrower is a non-profit corporation that was duly organized under KRS Chapter 273, and duly qualified as an exempt organization under Section 501(c)(3) of the Internal Revenue Code; and

WHEREAS, the Borrower's primary purpose is to advance the cause of science, technology, and entrepreneur education through a network that enables new start-up businesses and entrepreneurs to avail themselves of resources and educational programming that are beneficial to the establishment and growth of their business enterprises; and

WHEREAS, the Borrower has leased from Musselman Properties, LLC, approximately 8,800 square feet of warehouse feet in the Coke Plant facility that will be used for the Borrower's place of operation, a portion of which will be sublet to start-up businesses and entrepreneurs who utilize the Borrower's network in the establishment and growth of their business enterprises; and

WHEREAS, the Borrower must construct various facilities, systems and improvements within the lease space to accommodate its intended use of that space, and the needs and requirements of the sublessees who will be located within the lease space; and

WHEREAS, the Borrower has requested a line of credit loan from the City to fund the construction cost of the facilities, systems and improvements to be constructed within the lease space, and in relation thereto, has warranted to the City that its proposed use of that space will generate the creation of new start-up businesses within the City, and provide new employment opportunities for its residents; and

WHEREAS, the City has a substantial interest in promoting economic growth within the City, which includes the creation of new start-up businesses and job opportunities; and

WHEREAS, the City Commission has determined that the Borrower's proposed development within the Coke Plant facility, and Borrower's proposed use of that facility, constitutes a valid public purpose, and by reason thereof, the City has agreed to extend to Borrower a line of credit loan up to and including the amount of $900,000.00 to fund seventy five percent (75%) of the construction costs of Borrower's proposed renovation to the lease space, subject to the terms and conditions that are contained in this Agreement.

NOW THEREFORE, in consideration of the mutual covenants and conditions contained herein, and for other good and valuable consideration, the receipt, mutuality and sufficiency of all

of which is hereby acknowledged by the parties hereto, the City and the Borrower hereby agree as follows:

SECTION 1
Definitions

Each of the following terms as used in this Agreement shall have the meaning that is ascribed to that term under this Section 1:

1.1 "Agreement" shall mean this Forgivable Loan Agreement, and any amendments and renewals that are made thereto.

1.2 "Approved Plans and Specifications" shall mean the plans and specifications, duly approved by Musselman and the City, for the construction of the Renovated Facility.

1.3 "Effective Date" shall mean the date on which this Agreement is executed by the parties, which is stipulated to be _____, 2020.

1.4 "Estimated Construction Cost" shall mean the estimated cost of constructing the Renovated Facility, which is stipulated to be $1,200,000.00. The term **"Funded Estimated Construction Cost"** shall mean the Estimated Cost of Construction that will be funded from the Loan. A general itemization of the Estimated Construction Cost of the Renovated Facility is provided in *Appendix "A"* to this Agreement.

1.5 "Facility Employee" shall mean either: (i) a new Full-Time Employee hired by a Start-up Business that subleases space at the Renovated Facility, or (ii) a retained Full-Time Employee that was hired by a Start-up Business while it was a sublessee at the Renovated Facility, and remains employed by the Start-up Business after it relocated out of the Renovated Facility. The term "Facility Employee" shall not include any employee that was hired by a Start-up Business after it relocated from the Renovated Facility, or any employee whose place of work is located outside of the City.

1.6 "Full-Time Employee" shall mean a person that is employed by a Start-up Business to work an average work week of thirty-five (35) hours per week; provided that the employee's place of employment is located within the City.

1.7 "Lease Agreement" shall mean the lease agreement that was entered into between Musselman Properties, LLC, and Borrower on the ___ day of _____, 2020, and any amendments and renewals that are made thereto.

1.8 "Loan" shall mean the line of credit loan not to exceed $900,000.00 that will be used to fund 75% of the construction cost of the Renovated Facility, which loan which shall be evidenced by and repaid in accordance with the Note.

1.9 "Musselman" shall mean Musselman Properties, LLC, who is the landlord under the Lease Agreement.

1.10 "New Business Enterprise" shall mean a proprietorship or legal entity that was formed after the Effective Date of this Agreement for the purpose of engaging in a business enterprise for profit.

1.11 "Note" shall mean the promissory note that is issued by Borrower in relation to the Loan, and any renewals, replacements and extensions that are made thereto, a copy of which is provided in *Appendix "B"* to this Agreement.

1.12 "Renovated Facility" shall mean the facility that is depicted and constructed in accordance with the Approved Plans and Specifications.

1.13 "Start-up Business" shall mean a New Business Enterprise that sublets a portion of the Renovated Facility for its business operations, and participates in the educational programming that is offered at the Renovated Facility.

SECTION 2
Loan Amount – Disbursement of Loan Proceeds

2.1 Loan Amount. Subject to Borrower's compliance with the terms and conditions that are contained under this Section 2, the City shall extend to Borrower a Loan of up to $900,000.00 to fund 75% of the total cost of the Renovated Facility, which loan shall accrue interest at the rate of one percent (1%). The Loan shall be disbursed in accordance with the disbursement provisions that are contained in this Section 2.

2.2 Award of Construction Work. Borrower shall adopt and implement a competitive bid procedure for the award of the construction work on the Renovated Facility. The competitive bid procedure shall generally comport with the competitive bid procedure that is defined in the City's procurement ordinances codified under Section 2-641, *et seq.*, of the Paducah Code of Ordinances.

2.3 Permitted Draws on Loan. The Borrower shall have the right to obtain periodic draws against the Loan to cover the costs that Borrower actually incurred in the construction of the Renovated Facility. To obtain a draw against the Loan, the Borrower must satisfy each and all of the following conditions precedent:

(a) The Borrower must submit a written request for a draw. The written request must be made in a format acceptable to the City, and must be signed and certified by the Borrower and its general contractor. Each written draw request shall contain the following information:

1. An itemization of the construction costs that will be paid from the draw, and copies of the invoices, bills and purchase orders that evidence those construction costs;

2. A statement of the draw amount that is being requested, which shall not exceed seventy five percent (75%) of the construction costs itemized in the request;

3. A statement of the total cost of construction that the Borrower has incurred through the date of the request, and the amount that is being retained from payment;

4. A statement of the total cost of construction that the Borrower has paid through the date of the request;

5. A certification by Borrower that the requested draw will be applied to the costs that are itemized in the request;

6. A certification by Borrower which certifies its full and timely compliance with all of the warranties, covenants, obligations and undertakings that Borrower assumed under this Agreement, specifically including the construction requirements that are contained in Section 2.3; and

7. Such other information as the City may request.

(b) The Borrower must provide the City with interim mechanics or materialmen lien waivers duly executed by each contractor, subcontractor and material provider which contains (i) a statement of the total amount that was paid to each party, and (ii) a release of that party's lien interest against Borrower's leasehold and the Renovated Facility to the extent of the amount paid. The Borrower must also provide the City with any other document or certification that may be requested by the City.

(c) The Borrower must be in full compliance with all of its covenants, warranties, obligations and undertakings under this Agreement.

(d) The Borrower must have fully complied with all of the construction requirements contained in Section 2.3.

(e) The amount of the draw request and the other draws previously granted shall not exceed the Completion of Construction Ratio. The term "Completion of Construction Ratio" shall be defined as the Funded Estimated Construction Cost multiplied by the percentage of completion of construction as determined by the City. In the event the requested draw amount and the other draws previously granted exceed the Completion of Construction Ratio, Borrower shall only be entitled to withdraw an amount that does not exceed the ratio.

(f) The amount of the draw request and the other draws previously granted do not exceed 75% of the accrued costs of construction or the loan amount of

$900,000.00. In the event the requested draw amount and the other draws exceed either of these amounts, the Borrower shall only be entitled to withdraw an amount that does not exceed those amounts.

2.4 Construction Requirements. In prosecuting the construction work on the Renovated Facility, the Borrower shall faithfully and timely comply with each and all of the following construction requirements:

(a) Borrower shall construct the Renovated Facility in accordance with the Approved Plans and Specifications. Borrower shall ensure that all construction work is performed in a good and workmanlike manner, and in compliance with all applicable building codes and requirements.

(b) Borrower shall require the general contractor to procure and maintain contractor liability coverage which indemnifies Borrower and the City from any liability that may arise from the construction work performed on the Renovated Facility. The contractor's liability policy shall contain such terms and amounts of indemnity as approved by the City. Borrower shall also procure and maintain an approved builder's risk policy on the Renovated Facility until such time that the Renovated Facility is fully constructed. Borrower shall provide the City with written documentation which certifies the procurement of the coverages that are to be provided under this Section.

(c) Borrower shall assume and timely pay all of the construction costs of the Renovated Facility, including but not limited to labor and material costs, permit and inspection fees, equipment rentals, and costs attributable to the services provided by the general contractor; provided, however, Borrower may withhold a five percent (5%) retainage on all construction costs until completion of the Renovated Facility, subject to any reductions that are required under Kentucky's Fair Construction Act. Upon completion of the construction, Borrower shall obtain final lien waivers from the general contractor, and its subcontractors and material providers, which effectively release their lien interests against Borrower's leasehold, and the Renovated Facility constructed thereon.

2.5 Verification of Draw Request. The City shall have the right to review and evaluate the information contained in each draw request. In performing that evaluation, the City shall have the right and authority to verify the construction costs and information provided in the request, to consult with the general contractor's superintendent, and its employees, subcontractors and suppliers, to inspect the construction work that has been performed on the Renovated Facility, and to take any other action that the City deems necessary to carry out its evaluation.

2.6 Rejection of Draw Request. The City shall have the right to reject a draw request (or any part thereof) for nonconformance, incompleteness, inaccuracy, nonperformance of work, nonconforming work, failure to perform, and other valid grounds. In the event the City rejects a draw request (or any part thereof), the City shall issue a written directive which sets

forth (i) the portion of the request that has been rejected, (ii) the grounds for the rejection, and (iii) the portion of the request that has been approved for processing. The City shall consult with the Borrower and the general contractor on any rejection made by the City, and shall advise them of the measures to be taken to resolve the rejection. No rejected application (or part thereof) shall be processed and paid until such time that the Borrower has provided the required cure and remedy, and obtained the City's approval on the cure and remedy provided.

2.7 Use of Draw Proceeds. Upon receipt of a permitted draw, the Borrower shall ensure that the proceeds are applied to the construction costs that were itemized in the draw request. Borrower shall also ensure that any remaining construction costs are timely paid from its own funds. The City shall have the right to require the Borrower to provide written receipts of the payments that were made, and the right to pay any part of a loan disbursement directly to the creditors who are entitled to receive a payment under the request.

2.8 Material Change Orders. Borrower shall not issue any material change order to the Approved Plans and Specifications without the City's prior written consent. In the event Borrower is desirous of implementing a material change order, Borrower shall provide the City with a written statement which describes the proposed changes to be made to the Approved Plans and Specifications, and the additional construction costs that will be incurred therewith. The City shall have the right to reject a material change order if (i) the proposed change order constitutes a substantial deviation to the Approved Plans and Specifications as determined by the City, (ii) Borrower does not have sufficient funds to cover the additional construction costs attributable to the proposed change order, or (iii) Borrower has failed to fully and timely comply with any of its covenants, warranties, obligations, and undertakings under this Agreement, or the construction requirements contained in Section 2.3.

2.9 Completion of Construction. Borrower shall complete the construction of the Renovated Facility, and obtain a Certificate of Occupancy for the Facility, on or before December 31, 2021. Borrower shall obtain all certificates, licenses, and approvals that are required for the operation of the Renovated Facility, and commence its operations in that Facility, within thirty (30) days following date of completion.

2.10 Additional Costs. Borrower understands and agrees that Borrower shall be solely responsible for paying twenty five (25%) of the construction costs on the Renovated Facility, and that the City shall have no obligation to fund those costs, or provide any loan advance in excess of the $900,000.00 loan amount provided hereunder. The Borrower shall assume and pay all construction costs that are not funded from the Loan from its own funds, and provide to the City documentation that evidences the source of those funds. An itemization of Borrower's funding sources, and the amount of funding provided by each source, is provided in *Appendix "C"* to this Agreement.

2.11 Borrower's Assumption of Risks. Borrower shall be solely responsible for and shall assume all risks of loss with respect to the construction of the Renovated Facility. Any assistance which the City may provide to Borrower under this Agreement, or in the construction of the Renovated Facility, shall not be construed as the City's assumption of any liability for the Renovated Facility, all of which liability is expressly disclaimed by the City.

2.12 Release of City. The City's sole obligation and duty under this Agreement is limited to that of a lender. The City shall have no obligation or liability to Borrower with respect to any aspect of the construction process, including but not limited to the supervision, management, and inspection of the construction work, the approval or rejection of work or materials provided to the Renovated Facility, and the payment of monies owed to the general contractor, and its subcontractors and material providers. The Borrower hereby releases and discharges any claims that it may have against the City with respect to such matters.

SECTION 3
Loan Repayment – Forgiveness of Loan

3.1 Loan Repayment. Unless a portion of the Loan is forgiven as provided in Section 3.2 of this Agreement, the Borrower shall repay the Loan amount that was extended by the City, which shall be the principal of the Loan, plus the interest accrual of one percent (1%), in fifteen (15) annual installment payments. The first annual installment payment shall be due and payable on or before the 1st day of January, 2027. The remaining annual installment payments shall be due on or before the 1st day of January in each successive year. The City shall issue to Borrower a written notice of the amount due under each annual installment payment at least thirty (30) days prior to the due date. In the event the Borrower fails to pay any annual installment payment within ten (10) days following the due date, the Borrower shall pay to the City a late charge equal to five percent (5%) of that payment.

3.2 Forgiveness Adjustment to Loan Payments. Provided that Borrower has fully and timely complied with all of its warranties, covenants, obligations, and undertakings under this Agreement, the Borrower shall be entitled to the forgiveness adjustment that is provided in this Section 3.2. The forgiveness adjustment shall be dependent on Borrower's compliance with the following requirements:

(a) Start-up Business Requirement. The Borrower shall procure and maintain subleases with Start-up Businesses that equal or exceed the minimum Start-up Business requirements that are designated in the following table on or before the scheduled compliance dates.

Compliance Date	Start-up Businesses
December 31, 2022	3
December 31, 2023	6
December 31, 2024	12
December 31, 2025	18

(b) Jobs Requirement. The Start-up Businesses shall maintain employment with Facility Employees that equal or exceed the minimum number of job positions that are designated in the following table on or before the scheduled compliance dates.

Compliance Date	Facility Employees
December 31, 2022	5
December 31, 2023	15
December 31, 2024	37
December 31, 2025	59

(c) Verification of Jobs and Start-up Requirements. The Borrower shall submit to the City an annual Program Verification Certificate within fifteen (15) days of each Compliance Date certifying the extent of Borrower's compliance with the Start-up Business and Jobs requirements. The Certificates shall comport with the Certificate forms that are provided in *Appendix "D"* to this Agreement. The City shall have the right to verify the information that is provided in the Certificates, and to perform any investigation or inquiry that is required to complete its verification.

(d) Forgiveness Adjustment. the event the City determines that Borrower has fully and timely satisfied all of the Job and Start-up Business requirements for any compliance period that is defined in Section 3.2, the Borrower shall be entitled to receive a fifteen percent (15%) reduction to the principal of the Loan for each of those compliance periods. In the event the City determines that Borrower has satisfied all of the Job and Start-up Business requirements for all of the compliance periods defined in Section 3.2, the Borrower shall be entitled to receive a cumulative seventy-five percent (75%) reduction to the principal of the Loan. The Borrower shall repay the reduced principal amount, plus the interest accrual, in accordance with the installment payment terms that are defined in Section 3.1.

3.3 Prepayment. The Borrower shall have the right at any time without penalty to prepay the Note in whole or in part. Prepayment in full shall operate to discharge the Borrower's obligations on the date the prepayment is received.

SECTION 4
Collateral

4.1 Security for Loan. Borrower hereby assigns to the City a security interest in all of its assets, now owned or hereafter acquired, to secure the full and timely payment of the Note, and Borrower's full and timely performance of the obligations, duties, undertakings and liabilities that Borrower has assumed under this Agreement and the Note. The assets pledged hereunder shall specifically include but not be limited to all of the following property, whether now owned or hereafter acquired, whether now existing or hereafter arising, and wherever located (hereafter the "Collateral"):

(a) All inventory, accounts, contracts, documents, instruments, chattel paper, general intangibles, equipment, fixtures, and all other personal property owned or to be owned by the Borrower; and

(b) All attachments, accessions, accessories, replacements of and substitutions for any of that property, and all accounts, contract rights, general intangibles, instruments, rents, monies, payments, and all other proceeds arising out of the sale, lease, destruction or other disposition of the property.

Borrower authorizes the City to file any financing statement that is required to protect or preserve the security interest that is assigned hereunder. Borrower shall pay to the City, upon the City's written demand, any filing fee or charge that the City incurred in perfecting its assigned security interest.

4.2 Assignment of Leases and Rentals. Borrower shall also assign to the City the Lease Agreement, and any sublease agreement that Borrower maintains with Start-up Businesses at the Renovated Facility, and all of its rights and interests thereunder. The assignment of the Lease Agreement and subleases shall comport with the Assignment of Leases and Rentals that is provided in *Appendix "E"* to this Agreement.

4.3 Guaranty of Loan. Borrower shall also provide to City a duly executed written guaranty wherein Musselman (hereafter the "Guarantor") has guaranteed payment of the principal and accrued interest under the Note. The written guaranty shall comport with the guaranty that is provided in *Appendix "F"* to this Agreement.

SECTION 5
Borrower's Warranties and Covenants

5.1 Warranties. The City's commitment to provide the Loan hereunder is predicated on the representations and warranties that are made by Borrower under this Section 5.1, all of which representations and warranties shall remain in full force and effect following the consummation of the Loan. Borrower expressly acknowledges that the City is relying upon these representations and warranties in executing this Agreement, and in consummating the Loan under this Agreement. The representations and warranties made by Borrower under this Section 5.1 are as follows:

(a) Borrower is a non-profit corporation duly organized and existing in good standing under the laws of the Commonwealth of Kentucky, and has all requisite power and authority, corporate and otherwise, to conduct its business, to own its properties, and to execute, deliver and perform all of its obligations under this Agreement and the Note.

(b) The execution, delivery and performance of this Agreement and the Note have been duly authorized by all necessary or proper action, including the consent and approval of its members. Upon execution, this Agreement and the Note shall constitute legal, valid and binding obligations of the Borrower.

(c) All financial information provided to the City, including the financial statements of Borrower, are true and correct, and fairly present the financial condition of the Borrower. Since the date of submission, the Borrower has not incurred any

obligation or liability that would materially and adversely affect its business operations or financial condition.

(d) The Lease Agreement was duly executed by Borrower and Musselman, and duly approved by their respective members and owners. Borrower hereby certifies that (i) the Lease Agreement is a valid and enforceable lease with respect to use and operation of the premises that is defined therein, (ii) no default has occurred under the Lease Agreement, and no event has occurred or is occurring which could constitute an event of default thereunder, (iii) Borrower holds merchantable title and ownership to the Leasehold defined in the Lease Agreement, free of all liens and adverse interests, and (iv) Borrower has the right and authority to construct the Renovated Facility in accordance with the Approved Plans and Specifications.

(e) The Borrower has the ability to generate the creation of Start-up Businesses and new job opportunities which equal or exceed the Start-up Business and Job requirements that are defined in Section 3.2.

(f) The Borrower has secured the necessary funds to construct the Renovation Project in accordance with the Approved Plans and Specifications, specifically including the twenty five percent (25%) of the construction costs that is to be assumed and paid by Borrower. Borrower shall notify the City of any event that could impair its ability to fund those costs.

5.2 Affirmative Covenants. During the term of this Agreement, and for so long as Borrower shall have any obligations to the City under the Note and this Agreement, Borrower shall faithfully comply with the following affirmative covenants:

(a) Borrower shall preserve and maintain its legal existence as a non-profit corporation in good standing, and its exempt status under Section 501(c)(3) of the Internal Revenue Code.

(b) Borrower shall, within thirty (30) days following the execution of this Agreement, appoint a City representative designated by the City to serve as a member of Borrower's Board of Directors, which position shall remain in effect during the term of this Agreement. The Borrower shall take any formal action that is required for that appointment, including the adoption of amendments to its Articles of Incorporation and Bylaws, and the adoption of a resolution which effectuates the appointment to be made hereunder.

(c) Borrower shall operate the Renovated Facility in a prudent and reasonable manner, and in full compliance with all applicable federal, state and local law. Borrower shall keep accurate and complete records and accountings of its business operations that are consistent with sound business practices, and shall maintain those records and accountings until the Loan is fully paid.

(d) Borrower shall timely pay all of the costs and expenses that are incurred in the operation of its business, including the rentals that are owed to Musselman under the Lease Agreement, and perform all the obligations and undertakings that it has assumed under that Agreement. Borrower shall utilize its best efforts to procure and maintain subleases on the rental spaces within the Renovated Facility, and comply with the obligations and undertakings that Borrower has assumed thereunder.

(e) Borrower shall maintain the Renovated Facility, and the equipment, fixtures, and other property that are a part thereof, in a state of good condition and repair, and shall pay and discharge the cost of repairs and maintenance of same. Borrower shall not sell, encumber or otherwise dispose of any of its assets except in the ordinary course of business.

(f) Borrower shall procure and maintain (i) comprehensive general liability insurance on its operations at the Renovated Facility as required under the Lease Agreement, and (ii) adequate casualty coverage on its business properties at replacement value. Borrower shall assume and timely pay all of the premium charges that are required for those coverages.

(g) Borrower shall pay all taxes, assessments and charges that are imposed upon its business operations and properties, and all payroll taxes and withholdings on its employees. Borrower shall maintain sufficient deposits to cover the amounts that Borrower is required to pay on employee and other required withholdings.

(h) Borrower shall take all necessary steps to preserve and maintain any licenses and certifications that are required for its business operations, and shall comply with all present and future laws that are applicable to those operations. Borrower warrants that all of its existing licenses, certifications, and governmental approvals are currently valid and in good standing, and that Borrower is in full compliance with all legal requirements thereunder.

(i) Borrower and the Guarantor shall submit to the City a copy of their federal income tax returns and an annual financial statement and balance sheet on their respective businesses, all of which shall be submitted within six (6) months following the close of each calendar year.

SECTION 6
Events of Default – Remedies for Default

6.1 Events of Default. The occurrence of one or more of the following events shall constitute an event of default under this Agreement and the Note:

(a) Borrower has failed to make an annual installment payment under the Note within a period of ten (10) days following the scheduled due date for that payment.

(b) Borrower has failed to perform or comply with any covenant, warranty, obligation or undertaking under this Agreement within ten (10) days following receipt of the City's written notice of default.

(c) Borrower has failed to satisfy the Jobs and Start-up Business requirements defined under Section 3.2 of this Agreement for two (2) successive year periods.

(d) Borrower has failed to use the Renovated Facility for the purposes defined in the recitals to this Agreement, or has discontinued its business operations at the Renovated Facility.

(e) Borrower has assigned this Agreement, or any of its rights or liabilities under this Agreement, without the prior written consent of the City.

(f) An eviction, repossession or other adverse action is taken against the Renovated Facility, or any of the Collateral that Borrower has pledged under this Agreement.

(g) Borrower or the Guarantor has furnished the City with any financial statement, representation, warranty or certificate that is materially false, incorrect, or incomplete when made.

(h) Borrower or the Guarantor files any type of bankruptcy proceeding, including a proceeding for reorganization and readjustment of their debts, or a receiver or trustee is appointed to take control of their business or its assets.

(i) The City determines in its reasonable discretion that Borrower is unable to perform or satisfy any of the covenants, warranties, obligations and undertakings that Borrower assumed under this Agreement, or the Borrower or the Guarantor admit their inability to pay its debts as they mature.

6.2 Remedies upon Default. Upon the occurrence of an event of default, the City shall have the absolute and unconditional right, at its sole option, to exercise any or all of the remedies that are provided under this Section 6.2. All of the rights and remedies of City under this Section 6.2 shall be cumulative to the greatest extent permitted by law, and may be exercised successively or concurrently.

(a) The City shall have the right to accelerate the indebtedness under the Note and this Agreement, and to make a written demand upon the Borrower and the Guarantor for the full payment of same. The City shall also have the absolute and unconditional right to terminate the Borrower's line of credit loan, and to refuse any draw requests that are made thereon.

(b) The City shall have the right to take possession of Borrower's assets, and to sell that property, in whole or in part, through a public or private sale. Any notices required thereon shall be deemed reasonable if mailed to the persons entitled thereto at their last known address at least ten (10) days prior to disposition of the

assets and, in reference to a private sale, need state only that the City intends to negotiate such a sale; provided, however, the City shall have the unconditional right to sell some or all of Borrower's assets to Musselman in accordance with such terms as the City may determine in its discretion, which terms shall be fully binding upon and enforceable against Borrower. Any sale or other disposition of such property shall be deemed commercially reasonable if made to a public offering advertised at least once in a newspaper of general circulation in the community where the collateral is located.

(c) The City shall have the right to take control over the accounts of Borrower, including its accounts with its sublessees, and to collect and retain the proceeds that are payable therefrom. In relation thereto, the City shall have the right to (i) notify the account debtors of its right to collect the accounts, (ii) demand and receive from the account debtors any information that pertains to their account, (iii) forward invoices to the account debtors directing them to make account payments directly to the City, (iv) enforce the accounts against the account debtor in the City's or the Borrower's name, including enforcement through legal action, and (v) exercise any and all rights and remedies of Borrower in connection with the accounts.

(d) The City shall have the right to apply the proceeds received from the liquidation of Borrower's assets against the costs, expenses, and attorney fees that the City incurs in exercising its remedies hereunder, and then to the balance owed under the Note, as the City may determine.

(e) In the event of a default during the construction of the Renovated Facility, the City shall have the unconditional right, at its option, to proceed with the construction of the Renovated Facility through Borrower's general contractor, or through such other contractors as the City may select, and to pay all of the costs and expenses that are incurred in the construction process. All expenditures made and incurred by the City under this subsection shall be added to the principal under the Note, and accrue interest at the rate defined in the Note, all of which shall be fully secured under this Agreement. In exercising its rights hereunder, the City shall have the unconditional right to enter into and upon the renovation site, and take possession and control of the construction materials that are located thereon, and to complete the construction of the Renovated Facility in accordance with the Approved Plans and Specifications, and any changes, alterations, additions or modifications that the City deems necessary or expedient, and to do whatever other act it deems necessary to complete the Renovated Facility.

(f) The City shall have the right to recover from Borrower and the Guarantor any and all of the costs and expenses that the City incurs in enforcing the remedies that are provided hereunder, including its reasonable attorney fees.

(g) The City shall have the right to exercise all other rights and remedies that are available under law, both legal and equitable.

SECTION 7
Miscellaneous Provisions

7.1 Inspection of the Facility. The City, and its appointed agents, shall have the right to come upon the Renovated Facility upon reasonable advance notice and at reasonable times to examine and inspect the Renovated Facility for purposes of insuring Borrower's compliance with the terms and provisions in this Agreement.

7.2 Waiver. Each party shall have the right to enforce the provisions of this Agreement, in strict accordance with the terms hereof, notwithstanding any prior conduct or custom. The failure of a party to enforce its rights under this Agreement shall not be construed as having created a custom which is contrary to specific provisions of this Agreement, or as having in any way or manner modified or waived such provisions. All rights and remedies of the parties shall be cumulative, and the exercise of one right or remedy shall not be deemed a waiver or release of any other right or remedy.

7.3 Entire Agreement. This Agreement and the attached Appendices embody the entire agreement that was made between the parties with respect to the Loan. There are no representations, terms, conditions, covenants or agreements between the parties relating thereto which are not contained herein. This Agreement shall completely and fully supersede all other prior agreements, both written and oral.

7.4 Notices. All notices that are to be made hereunder shall be sent to each of the parties in accordance with the information that is provided in this Section 7.4. A notice shall be deemed effective upon a party's actual receipt, which receipt shall be evidenced by documentation evidencing the receipt:

City:

Attention: James Arndt, City Manager

_____

_____

Borrower:

Attention: _____

_____

_____

7.5 Assignments. The Borrower shall not have the right to assign this Agreement, or any of its rights and interests hereunder, without the prior written approval of the City. Any assignment made without that approval shall constitute an event of default under this Agreement.

7.6 Disputes. This Agreement shall be construed and enforced in accordance with the laws of the state of Kentucky. All actions taken under this Agreement shall be submitted to McCracken Circuit Court, which court shall have exclusive jurisdiction over the matter. Each party irrevocably attorns to the jurisdiction of that court, and waives all rights to protest that jurisdiction. Each party also waives their right to a jury trial.

7.7 Captions. The article and paragraph headings and captions contained hereunder are included for convenience only, and shall not be considered a part hereof or effect in any manner the construction or interpretation of this Agreement.

7.8 Severability. The invalidity or unenforceability of any provision of this Agreement does not affect the validity or enforceability of any other provision hereunder. If a court of competent jurisdiction determines that any provision is invalid, the remaining provisions of this Agreement are to be construed as if the invalid provision had never been included.

7.9 Mutual Construction. By signing this Lease Agreement, each party acknowledges that this Agreement is the product of arms-length negotiations between the parties, and should be construed as such. No party may claim that an ambiguity in this Agreement should be construed against the other party.

7.10 Amendments. No provision of this Agreement may be amended or modified except by a written instrument duly signed by the parties.

7.11 Counterparts. This Agreement may be independently executed in any number of counterparts, each of which when executed and delivered shall constitute an agreement which shall be binding upon all parties notwithstanding that the signatures of all parties and/or their designated representatives do not appear on the same page. Facsimile signatures shall have the same effect as original signatures.

7.12 Binding Agreement. This Agreement shall become enforceable on the Effective Date, and upon that date, each party shall be legally bound to the terms in this Agreement.

IN WITNESS WHEREOF, the City and the Borrower have executed this Agreement as of the day, month and year indicated below, and the Agreement shall be effective on _____, 20_____.

CITY OF PADUCAH

By: _____
Mayor

Date: _____

BORROWER:

SPROCKET, INC.

By: _____

Title: _____

Date: _____

APPENDICES TO FORGIVEABLE LOAN AGREEMENT

Appendix "A"	General Itemization of Estimated Construction Cost
Appendix "B"	Promissory Note
Appendix "C"	Borrower's Funding Sources
Appendix "D"	Program Verification Certificate Form
Appendix "E"	Guaranty
Appendix "F"	Assignment of Lease and Rentals

Appendix "A"

GENERAL ITEMIZATION OF ESTIMATED CONSTRUCTION COST

Ray Black & SON

February 20, 2020

Ms. Suzanne Clinton
Sprocket
3100 Broadway
Paducah, KY 42001

Re: Sprocket Maker Space and Co-working Space Build Out

Dear Ms. Clinton,

Please see below our conceptual estimate detail for the work required for the First-Floor areas designated on drawings dated February 5, 2020.

Architecture/Structural Engineering	38,000.00
Mechanical/Electrical Engineering	19,000.00
Furnishings/Fixtures/Equipment	40,000.00
Permits	2,500.00
Supervision/Project Management	32,000.00
Layout	4,200.00
Periodic Cleanup/Final Cleanup	10,800.00
Demolition/Removal	17,000.00
Structural Steel/Lintels/Handrails	33,000.00
Wood Framing/Structure/Blocking	37,500.00
Insulation/Sealants/Roofing/ Penetrations	39,000.00
Doors/Frames/Hardware	57,000.00
Metal Studs/Drywall/Ceilings/Fire Stop	146,000.00
Glass Partitions	81,500.00
Drywall Finishing	23,000.00
Painting Interior	34,000.00
Specialties/Toilet Partitions	13,000.00
Casework	15,000.00
Fire Protection System	30,000.00
Plumbing	90,000.00
HVAC	260,000.00
Electrical	177,500.00
Total	$1,200,000.00

Ray Black & SON

Please let me know if you have any questions.

Sincerely,

Chris Black



Appendix "B"

PROMISSORY NOTE

$900,000.00

_____, 2020
Paducah, Kentucky

SPROCKET, INC., a Kentucky non-profit corporation (hereafter the Borrower"), with offices at 3121 Broadway, Suite 6, Paducah, Kentucky 42003 promises to pay to the order of the CITY OF PADUCAH (hereafter the "City"), the principal sum of up to NINE HUNDRED THOUSAND AND 00/100 DOLLARS ($900,000.00.), plus interest thereon at the rate of one percent (1%) per annum. The specific principal amount under this Note shall be the sum total loan advances that the City has provided to Borrower under the Forgivable Loan Agreement that was executed by the parties on ____ _____. subject to the loan cap of $900,000.00.

Borrower shall pay the principal amount under this Note in fifteen (15) consecutive annual installment payments in the amount of SIXTY THOUSAND AND 00/100 DOLLARS ($60,000), plus the interest accrual thereon; provided, however, that should the sum total loan advances provided under the Forgivable Loan Agreement be less than $900,000.00, the annual installment payments shall be adjusted proportionately to account for the difference. The first annual installment payment shall be due and payable on or before January 1, 2027. The remaining annual installment payments shall be due and payable on the January 1 in each successive year.

The City shall issue to Borrower a written notice which informs Borrower of the due date of each annual installment payment, and the specific amount that is to be paid thereon, at least thirty (30) days prior to the due date. In the event Borrower fails to pay any installment required under this Note within ten (10) days after the applicable due date, the Borrower shall pay to the City a late charge equal to four percent (4%) of the payment due.

This Note was issued in accordance with the terms of a Forgivable Loan Agreement that was made between the Borrower and the City on _____, _____. The principal under this Note, and the annual installment payments to be made thereon, are subject to the forgiveness adjustments that are contained in Section 3 of the Forgivable Loan Agreement.

The Borrower shall have the right, at any time without penalty, to prepay this Note in whole or in part. All prepayments shall be credited to and applied against the principal owed under this Note. Any prepayment made on this Note shall not relieve Borrower from the scheduled annual installment payments that are to be made hereunder, all of which shall remain in full force and effect.

In the event the Borrower fails to pay any annual installment payment under this Note within ten (10) days following the due date, or the Borrower defaults in the performance of any warranty, covenant, obligation or undertaking that Borrower assumed under the Forgivable Loan Agreement, or under the Assignment of Lease and Rentals that Borrower issued as security for this Note, such failure shall constitute an event of default under this Note, in which event, the City shall have the right to declare the entire unpaid principal and accrued interest under this note to be immediately due and payable, and shall have the further right to make written demand upon the Borrower for the full payment of same. In the event of such default, the City shall have the right to recover from Borrower the costs that it incurs in enforcing this Note, including its reasonable attorney fees.

Failure of the City hereof to exercise any of its rights and remedies hereunder shall not constitute a waiver of the right to exercise the same right at any other time. All rights and remedies of the City hereof shall be cumulative to the fullest extent permitted by law.

This Note shall be construed in accordance with the laws of the Commonwealth of Kentucky. Borrower hereby waives presentment, demand, notice of dishonor, protest, notice of protest and nonpayment, and all exemptions to which it may be entitled under the laws of this or any other state of the United States.

IN WITNESS WHEREOF, the Borrower has executed this Note on the day and year first above written.

BORROWER:

SPROCKET, INC.

By: _____

Title: _____

Appendix "C"

BORROWER'S FUNDING SOURCES

Identify of Funding Source	Amount Provided by Funding Source

Appendix "D"

PROGRAM VERIFICATION CERTIFICATE

To: City Manager

_____

_____

From: Sprocket, Inc.

_____

_____

Date: December 4, 2020

Re: Program Verification Certificate
Forgivable Loan Agreement dated _____

Dear City Manager:

On _____, _____, Sprocket, Inc. (hereafter "Sprocket") and the City entered into a Forgivable Loan Agreement with respect to the construction of Sprocket's Renovated Facility at the Coke Plant in Paducah, Kentucky. According to Section 3 of the Loan Agreement, Sprocket must submit to the City a Program Verification Certificate which certifies Sprocket's compliance with the Start-up and Job Requirements that are contained in Section 3.2 of that Agreement. These requirements are recited in the following tables:

(a) Start-up Business Requirement. The Borrower shall procure and maintain subleases with Start-up Businesses that equal or exceed the minimum Start-up requirements that are designated in the following table on or before the scheduled compliance dates.

Compliance Date	Start-up Companies
December 31, 2022	3
December 31, 2023	6
December 31, 2024	12
December 31, 2025	18

(b) Jobs Requirement. The Start-up Businesses shall maintain employment with Facility Employees that equal or exceed the minimum number of job positions that are designated in the following table on or before the scheduled compliance dates.

Compliance Date	Jobs Requirement
December 31, 2022	5
December 31, 2023	15
December 31, 2024	37
December 31, 2025	59

In keeping with its obligations under the Loan Agreement, Sprocket hereby reports the following Start-up Businesses and Jobs at the Renovated Facility as of December 31, _____.

(c) Start-up Business Report.

Compliance Date	Start-up Companies
December 31, 2022	
December 31, 2023	
December 31, 2024	
December 31, 2025	

(d) Jobs Requirement Report.

Compliance Date	Jobs Requirement
December 31, 2022	
December 31, 2023	
December 31, 2024	
December 31, 2025	

An itemization of the Start-up Businesses and Facility Employees is provided in the attached Appendix "A".

Respectfully submitted,

SPROCKET, INC.

By:_____

CERTIFICATION

The undersigned, who is the acting _____ of Sprocket, Inc., after being duly sworn under oath, hereby certifies that the reported information in this Certificate is true and accurate. The undersigned further certifies that the reported information is based on and substantiated by the information that is contained in Sprocket's records and accountings.

By: _____
Title

STATE OF KENTUCKY)

COUNTY OF MCCRACKEN)

Subscribed and acknowledged before me on this _____ day of _____, 20___, by _____, _____ of Sprocket, Inc., a Kentucky corporation, on behalf of said corporation.

My commission expires _____.

_____
Notary Public, State at Large

ITEMIZATION OF NEW START-UP BUSINESSES

	Name of Start-up Business	Date of Start-up	Description of Rental Unit

ITEMIZATION OF FACILITY EMPLOYEES

	Name of Facility Employee	Date of Hire	Start-up Business Employer

Appendix "E"

GUARANTY AGREEMENT

THIS GUARANTY AGREEMENT is made and executed on this ____ day of _____ 2020, by and between _____, hereafter the "Guarantor", and the City of Paducah, a Kentucky municipality, hereafter the "City".

RECITALS:

WHEREAS, Sprocket, Inc, a Kentucky non-profit corporation (hereafter the "Borrower"), and the City entered into a Forgivable Loan Agreement dated _____ (hereafter the "Loan Agreement") wherein the City agreed to provide to Borrower a line of credit loan of up to $900,000.00 to fund seventy five percent (75%) of the construction costs of Borrower's Renovated Facility located in the Coke Plant in Paducah, Kentucky; and

WHEREAS, to induce the City's acceptance and execution of the Loan Agreement, and to satisfy the conditions therein stated, the Guarantor agreed to guaranty Borrower's full and timely payment of the installment payments that are to be paid by Borrower under the note that Borrower issued under the Loan Agreement, and to secure its guaranty by a duly executed mortgage that assigns to the City a mortgage interest against the Coke Plant property. an executed copy of which is provided in Appendix "A" to this Guaranty (hereafter the "Note).

NOW, THEREFORE, in consideration of the foregoing premises, the legal adequacy and sufficiency of which are hereby acknowledged by the parties, Guarantor agrees and covenants to the City as follows:

Guaranty. Guarantor does hereby unconditionally, absolutely, and irrevocably guarantee to the City the full and prompt payment of the annual installment payments that Borrower is required to pay under the Note, and the payment of the costs, expenses and attorney fees that the City incurs in enforcing its rights and remedies under the Note and the Loan Agreement. A copy of that Note is provided in Appendix "A to this Guaranty.

Security for Guaranty. To secure its guaranty liability hereunder, the Guarantor shall assign to the City a mortgage interest against the Coke Plant property. The mortgage assignment shall be made under the Mortgage that is provided in Appendix "B" to this Guaranty. Guarantor shall execute and deliver the Mortgage to the City at the time of the execution of this Guaranty.

Demand for Payment. In the event of a default as defined under the Note, the City shall have the unconditional right to issue to Guarantor a written demand for payment of all of the unpaid principal and accrued interest under the Note, and any costs the City incurred through the date of the written demand. Upon receipt of the demand, the Guarantor shall be accorded a period of thirty (30) within which to pay the amount under the demand. All payments made by the Guarantor under this Guaranty shall be paid to the City at its offices located at City Hall, or such other place as the City may hereafter designate in writing.

Assignment of Security. Upon Guarantor's full payment of the Note, the Guarantor shall have the right, upon its written demand, to obtain from the City an assignment of the Note, the Loan Agreement and the Assignment of Leases and Rentals that Borrower executed in relation to the

loan. Upon consummation of that assignment, Guarantor shall have the right to exercise all of the rights and remedies that are accorded to the City under the assigned documents, including the right to sell the collateral that was pledged on the Note.

Waiver of Exhaustion of Remedies. Guarantor acknowledges and agrees that this guaranty is a guarantee of payment, not of collection, and that Guarantor shall be liable to City without City having to seek recovery against Borrower, or Borrower's property. Guarantor expressly waives any rights to require the City to institute suit against the Borrower or to otherwise exhaust its rights and remedies against Borrower or any of its property.

Waiver of Available Defenses. Guarantor hereby waives all defenses that are accorded to guarantors under law. Guarantor expressly agrees that the City shall have the right, at its option, at any time and from time to time, without the consent of or notice to the Guarantor, and without impairing or releasing any of the guaranteed obligations hereunder, to do any of the following:

(a) Modify or change any of the payment terms under the Note, or grant any modification or extension on the payment of the annual installment payments due thereunder;

(b) Exercise or refrain from exercising any rights and remedies that the City has against the Borrower under the Note, the Loan Agreement, or any agreement that Borrower executed in relation to the Loan Agreement; and

(c) Amend or otherwise modify, consent to or waive any breach or, or any act, omission or default or Event of Default under the Note, the Loan Agreement or any agreement that Borrower executed in relation to the Loan Agreement.

Absolute Obligation. Until the Note is fully paid, Guarantor's rights to subrogation, reimbursement, or indemnity from Borrower shall be subordinate to the City's rights and interests under the Note and Loan Agreement. Nothing shall discharge or satisfy the liability of Guarantor under this Guaranty except the full and timely performance of all of Borrower's obligations and liabilities under the Note.

Guarantor's Covenants. Until the Note is fully paid, Guarantor covenants and agrees to timely comply with the following disclosure requirements:

(a) Guarantor shall submit to the City its annual financial statements, and its federal and state tax returns together with all supporting schedules, within six (6) months following the close of each calendar year; and

(b) Guarantor shall, within thirty (30) days following the City's request, furnish to the City such other financial information as the City may reasonably request.

Benefit. This Guaranty shall inure to the benefit of the City, its successors and assigns, and Guarantors' heirs, executors, administrators, successors and assigns. The City shall have the right to assign this Guaranty to any subsequent holder of the Note.

Applicable Law. This Guaranty shall be governed by and construed according to the laws of the Commonwealth of Kentucky.

GUARANTOR:

By:_____

Appendix "A" to Guaranty

PROMISSORY NOTE

$900,000.00

_____, 2020
Paducah, Kentucky

SPROCKET, INC., a Kentucky non-profit corporation (hereafter the Borrower"), with offices at 3121 Broadway, Suite 6, Paducah, Kentucky 42003 promises to pay to the order of the CITY OF PADUCAH (hereafter the "City"), the principal sum of up to NINE HUNDRED THOUSAND AND 00/100 DOLLARS ($900,000.00.), plus interest thereon at the rate of one percent (1%) per annum. The specific principal amount under this Note shall be the sum total loan advances that the City has provided to Borrower under the Forgivable Loan Agreement that was executed by the parties on ____ _____, subject to the loan cap of $900,000.00.

Borrower shall pay the principal amount under this Note in fifteen (15) consecutive annual installment payments in the amount of SIXTY THOUSAND AND 00/100 DOLLARS ($60,000), plus the interest accrual thereon; provided, however, that should the sum total loan advances provided under the Forgivable Loan Agreement be less than $900,000.00, the annual installment payments shall be adjusted proportionately to account for the difference. The first annual installment payment shall be due and payable on or before January 1, 2027. The remaining annual installment payments shall be due and payable on the January 1 in each successive year.

The City shall issue to Borrower a written notice which informs Borrower of the due date of each annual installment payment, and the specific amount that is to be paid thereon, at least thirty (30) days prior to the due date. In the event Borrower fails to pay any installment required under this Note within ten (10) days after the applicable due date, the Borrower shall pay to the City a late charge equal to four percent (4%) of the payment due.

This Note was issued in accordance with the terms of a Forgivable Loan Agreement that was made between the Borrower and the City on _____, _____. The principal under this Note, and the annual installment payments to be made thereon, are subject to the forgiveness adjustments that are contained in Section 3 of the Forgivable Loan Agreement.

The Borrower shall have the right, at any time without penalty, to prepay this Note in whole or in part. All prepayments shall be credited to and applied against the principal owed under this Note. Any prepayment made on this Note shall not relieve Borrower from the scheduled annual installment payments that are to be made hereunder, all of which shall remain in full force and effect.

In the event the Borrower fails to pay any annual installment payment under this Note within ten (10) days following the due date, or the Borrower defaults in the performance of any warranty, covenant, obligation or undertaking that Borrower assumed under the Forgivable Loan Agreement, or under the Assignment of Lease and Rentals that Borrower issued as security for this Note, such failure shall constitute an event of default under this Note, in which event, the City shall have the right to declare the entire unpaid principal and accrued interest under this note to be immediately due and payable, and shall have the further right to make written demand upon the Borrower for the full payment of same. In the event of such default, the City shall have the right to recover from Borrower the costs that it incurs in enforcing this Note, including its reasonable attorney fees.

Failure of the City hereof to exercise any of its rights and remedies hereunder shall not constitute a waiver of the right to exercise the same right at any other time. All rights and remedies of the City hereof shall be cumulative to the fullest extent permitted by law.

This Note shall be construed in accordance with the laws of the Commonwealth of Kentucky. Borrower hereby waives presentment, demand, notice of dishonor, protest, notice of protest and nonpayment, and all exemptions to which it may be entitled under the laws of this or any other state of the United States.

IN WITNESS WHEREOF, the Borrower has executed this Note on the day and year first above written.

BORROWER:

SPROCKET, INC.

By: _____

Title: _____

Appendix "B" to Guaranty

MORTGAGE

THIS MORTGAGE made and entered into this the ____ day of _____, by and between **MUSSELMAN PROPERTIES, LLC,** a Kentucky limited liability company, whose address is _____ Paducah, Kentucky, hereinafter referred to as **"Mortgagor"**, and the **CITY OF PADUCAH,** a Kentucky municipality, , whose address _____ , Paducah, Kentucky, hereinafter referred to as **"Mortgagee".**

WITNESSETH:

WHEREAS, Sprocket, Inc, a Kentucky non-profit corporation (hereafter the "Borrower"), and the City entered into a Forgivable Loan Agreement dated _____ (hereafter the "Loan Agreement") wherein the City agreed to provide to Borrower a line of credit loan of up to $900,000.00 to fund seventy five percent (75%) of the construction costs of Borrower's Renovated Facility located in the Coke Plant in Paducah, Kentucky; and

WHEREAS, to induce the City's acceptance and execution of the Loan Agreement, and to satisfy the conditions therein stated, the Mortgagor agreed to execute a Guaranty wherein Mortgagor guaranteed Borrower's full and timely payment of the installment payments that are to be paid by Borrower under the note that Borrower issued under the Loan Agreement (hereafter the Guaranty"), and to assign to the City a mortgage interest against the Coke Plant property as security for that guaranty.

NOW, THEREFORE, in consideration of the foregoing premises, and for other valuable consideration, the receipt of which Mortgagor acknowledges, the Mortgagor does hereby agree to be bound to the following obligations and undertakings.

1. **Grant of Mortgage Interest—Description of Mortgaged Property.** Mortgagor hereby grants to Mortgagee a mortgage interest in and to the Coke Plant property that is described in Appendix "A" to this Mortgage (hereafter the "Mortgaged Property) as security for the full and timely performance of its guaranty liability with respect to the Note that Borrower issued to Mortgagee on _____, in the stated principal amount of $900,000.00, bearing interest at the annual rate of 1%, and any renewals, extensions and substitutions thereon, all of which shall hereafter be referred to as the "Guaranteed Note." The maturity date of the Guaranteed Note and this Mortgage is _____.

2. **Maintenance of Mortgaged Property**. Mortgagor shall maintain the Mortgaged Property, and all of the equipment, systems, facilities, fixtures, utility lines and related property that are a part thereof, in a state of good condition, operability and repair. In the event Mortgagor fails to perform any necessary maintenance or repair, Mortgagee shall have the right, at its option, to come upon the Mortgaged Property, and to provide whatever work and material is necessary to repair and protect the property. Mortgagor does hereby irrevocably grant to Mortgagee, and its designated agents, the right and license to enter upon the Mortgaged Property for the purpose of providing the remedial work and material for and in behalf of the Mortgagor. All costs and expenses incurred by Mortgagee in providing the remedial work and material shall be deemed an authorized expenditure under Section 12 of this Mortgagee.

3. **Insurance**. Mortgagor shall insure the Mortgaged Property against loss from fire, lightening, windstorm, explosion, tornado and such other risks as designated by Mortgagee to the extent of its full insurable value. Unless otherwise agreed, full insurable value shall be the repair and replacement value, without deduction for depreciation and co-insurance. Mortgagor shall also procure and maintain comprehensive general liability insurance on the Mortgaged Property in coverage amounts acceptable to Mortgagee. Mortgagor shall pay all charges relating to those coverages on or before the due date.

All insurance provided under this Section shall be issued by such insurers under such policies and with such coverage terms as are acceptable to Mortgagee. Mortgagor shall ensure that each policy (i) names Mortgagee as a Mortgagee loss payee and named insured, (ii) accords Mortgagee full loss and indemnity protection regardless of any negligent or willful act or omission of the Mortgagor or other person, and (iii) contains an endorsement that requires a ten (10) day cancellation notice. The Mortgagor shall provide Mortgagee with certificates of insurance that certify Mortgagee's insured status under each policy.

Mortgagee shall have the right, at its option, to submit and process its own claims as the named Mortgagee insured. In addition thereto, Mortgagee shall have the right to (i) approve the settlement of all claims, and ensure that all settlement drafts name Mortgagee as a loss payee, (ii) designate whether insurance proceeds shall be applied to the Guaranteed Note or to the repair and restoration of the Mortgaged Property, (iii) administer, supervise, and control the proceeds that are applied to the repair and restoration of the Mortgaged Property, and (iv) take whatever other action or measure Mortgagee deems necessary to protect its rights and interests.

4. **Taxes and Assessments**. Mortgagor shall pay all ad valorem taxes and assessments levied against the Mortgaged Property on or before the due dates, and any penalty and interest that may accrue as a result of any late payment.

5. **Compliance with Law and Regulations.** Mortgagor shall use and occupy the Mortgaged Property in full compliance with all applicable federal, state, and local law, and with all recorded restrictions and limitations that govern the use and occupancy of the Mortgaged Property.

6. **Rents and Income**. Mortgagor shall have the right to lease the Mortgaged Property, and to collect and retain the rentals therefrom, so long as the Guaranteed Note is being paid in accordance with the payment terms under the note, and no event of default has occurred under this Agreement. In the event of any default in payment under the Guaranty, or in the event of a default under this Mortgage, Mortgagor's rights to collect and retain the rentals shall immediately terminate. In such event, Mortgagee shall have the exclusive right to collect and retain the rentals realized from the Mortgaged Property, and apply those rentals to the Guaranteed Note as Mortgagee shall determine.

7. **Condemnation.** In the event any governmental authority files an eminent domain or condemnation proceeding against the Mortgaged Property, Mortgagee shall have the right to participate in the proceeding, and approve all settlement offers made in that proceeding. Mortgagee shall also be entitled to receive all settlement proceeds and condemnation awards that are paid in that proceeding, and apply those proceeds to the Guaranteed Note as Mortgagee shall determine.

8. **Hazardous Materials.** Mortgagor shall not cause or permit any hazardous materials to be located upon, stored, processed or sold at or from the Mortgaged Property, or any part thereof.

Mortgagor shall indemnify Mortgagee and save Mortgagee harmless from and against any and all claims, demands, fines, penalties, losses, liabilities, damages, injuries, costs, expenses (including without limitation reasonable attorney and consultant fees) incurred by Mortgagee as a direct or indirect result of the presence of hazardous materials on the Mortgaged Property, or the actual or threatened release of hazardous materials on the Mortgaged Property.

9. Assignment. Mortgagor shall not sell or transfer any ownership interest in the Mortgaged Property, whether by outright sale, deed, installment sale contract, land contract, contract for deed, or other manner of disposition, without the prior written consent of the Mortgagee. Any sale or transfer without the Mortgagee's approval shall constitute an event of default hereunder

10. Event of Default. An "Event of Default" under this Mortgage shall include the occurrence of any one of the following:

(a) Default in Payment. Mortgagor fails to pay to Mortgagee any amount that is owed by Mortgagor under the Guaranty on or before the prescribed due date;

(b) Default in Performance. Mortgagor fails to timely comply with or perform any of its obligations, undertakings, covenants, and liabilities under this Mortgage;

(c) Adverse Action. An action or proceeding is filed against Mortgagor, or against the Mortgaged Property, that affects or impairs Mortgagor's ownership or title to the Mortgaged Property, or Mortgagee's mortgage interest against the Mortgaged Property, including any type of foreclosure proceeding or other similar proceeding;

11. Mortgagee's Rights and Remedies Upon Default. Upon the occurrence of any Event of Default, Mortgagee shall have the right, at its option, to exercise any one or more of the following rights and remedies, with or without notice to the Mortgagor, all of which rights and remedies shall be cumulative and non-exclusive:

(a) Demand Payment under Guaranty. The Mortgagee shall have the right to accelerate all of the amounts guaranteed under the Guaranty, including the unpaid principal and interest balance owed under the Guaranteed Note, and to declare all of said balance to be immediately due and payable;

(b) Foreclosure. Mortgagee shall have the right to foreclose upon its mortgage interest against the Mortgaged Property, and to have the property sold through a judicial sale; and

(c) Recovery of Costs and Fees. Mortgagee shall have the right to recover from Mortgagor all legal costs and expenses incurred by reason of Mortgagor's default, including reasonable attorney's fees.

12. Mortgagee's Right to Perform - Expenditures. In the event Mortgagor fails to perform any required maintenance or repair to the Mortgaged Property, or fails to pay any taxes or assessments levied against the Mortgaged Property when due, or fails to procure and maintain

casualty and general liability insurance on the Mortgaged Property, or otherwise fails to comply with or perform any other obligation or undertaking assumed by Mortgagor under this Mortgage, or fails to pay any costs or expense with respect to same, the Mortgagee shall have the right, at its option, to perform such obligations and undertakings in behalf of Mortgagor and for Mortgagor's account, and to recover the costs and expenses of same from the Mortgagor upon demand. All expenditures made and incurred by Mortgagee under this Section shall be secured under this Mortgage, and shall accrue interest at the rate the legal rate of 5%.

13. Power of Attorney. In the event Mortgagor fails or is unable to perform any obligation or undertaking under this Agreement, Mortgagor expressly authorizes and instructs Mortgagee to take whatever action Mortgagee deems necessary to protect the Mortgaged Property, and Mortgagee's interest to the property. Mortgagor does hereby authorize and appoint Mortgagee as Mortgagor's true and lawful attorney-in-fact with full power and authority to act for and in behalf of Mortgagor.

14. Right of Inspection. Mortgagor grants Mortgagee the right and license to come upon the Mortgaged Property to determine Mortgagor's compliance with the terms and conditions under this Mortgage, provided Mortgagee gives Mortgagor reasonable notice of same.

15. Waiver. Any forbearance by Mortgagee in enforcing the terms of this Mortgage shall not create any custom or practice that alters or waives Mortgagee's rights and remedies under this Mortgage.

16. Miscellaneous Provisions. The following miscellaneous provisions shall also be deemed a part of this Mortgage:

(a) Notices. All notices provided for herein will be in writing and addressed to Mortgagee and Mortgagor at their addresses noted above. All notices will be personally delivered, telegraphed, telecopied, or sent by United States Mail (return receipt requested).

(b) Applicable Law. The substantive laws of the state of Kentucky shall govern the construction of this Agreement and the rights and remedies of the parties hereto.

(c) Binding Effect, Assignment and Entire Agreement. This Agreement shall insure to the benefit of, and shall be binding upon, the respective successors and permitted assigns of the parties hereto.

PROVIDED, HOWEVER, that if the Secured Note is fully paid, then this conveyance shall become null and void and Mortgagee shall, at the cost of the Mortgagor, release this mortgage in full.

MORTGAGOR:

MUSSELMAN PROPERTIES, INC

By_____

(Title)

STATE OF KENTUCKY)

COUNTY OF McCRACKEN)

The foregoing instrument was acknowledged before me this _____day of _____, 20___, by _____, as _____, for and on behalf of Mortgagor.

My commission expires _____.

_____
Notary Public

This instrument prepared by:

_____
Keuler, Kelly, Hutchins & Blankenship, LLP
100 South 4th St, Ste 400

Paducah, KY 42001

Appendix "A" to Mortgage

Description of Mortgaged Property

Appendix "F"

ASSIGNMENT OF LEASES AND RENTALS

This Agreement is made and executed on this _____ of _____, 20__, by **SPROCKET, INC.**, a Kentucky corporation, whose principal offices are located at 3121 Broadway, Suite 6, Paducah, Kentucky 42003, hereafter the **"Borrower"**, and the **CITY OF PADUCAH**, a Kentucky municipality, whose principal offices are located at _____ in Paducah, Kentucky, hereafter the **"City"**.

WITNESSETH

WHEREAS, Borrower and the City entered into a Forgivable Loan Agreement dated _____ wherein the City agreed to provide to Borrower a line of credit loan of up to $900,000.00 to fund seventy five percent (75%) of the construction costs of Borrower's Renovated Facility located in the Coke Plant in Paducah, Kentucky, which space was leased to Borrower under a written lease agreement with Musselman Properties, LLC dated _____; and

WHEREAS, to obtain that loan, Borrower agreed to assign to the City all of its rights and interests under its written lease agreement with Musselman Properties, LLC, and all of its rights and interests under the subleases that Borrower executes with sublessees who rent space within the Renovated Facility, specifically including its rights and interests to the rentals that are paid under the subleases; and

NOW, THEREFORE, in consideration of the foregoing premises, and the benefits that Borrower will realize from the Loan provided under the Forgivable Loan Agreement, and for other good and valuable consideration, receipt of which Borrower does hereby acknowledge, Borrower and the City hereby agree to be legally bound to the following terms:

1. **Definition of Terms**. Each of the following terms as used in this Agreement shall have the meaning that is ascribed to that term under this Section:

"**Agreement**" shall mean this Assignment of Leases and Rentals, and any subsequent amendments made thereto.

"**Renovated Facility**" shall mean and include the 8,800 square feet of lease space that was leased to Borrower under its Lease Agreement with Musselman, and all of the facilities, equipment and improvements that Borrower constructs and installs within that space. The Renovated Facility is part of the real property that Musselman acquired under a deed dated _____, a copy of which is recorded in Deed Book ___. Page ___, McCracken County Clerk's Office. The legal description of the property acquired under the deed is provided in *Appendix "A"* to this Agreement.

"**Lease Agreement**" shall mean the Lease Agreement that was executed between Borrower and Musselman on _____, 20___, and any subsequent amendments that are made thereto.

"**Loan**" shall mean the $900,000.00 loan that the City provided to Borrower to fund seventy-five percent (75%) of the construction costs of the Renovated Facility.

"**Loan Agreement**" shall mean and include the Forgivable Loan Agreement that was executed between Borrower and the City on _____, and any subsequent amendments that are made thereto.

Musselman" shall mean Musselmann Properties, LLC, who is the landlord under the Lease Agreement.

"**Note**" shall mean the promissory note that was issued by the Borrower to the City on _____, in the principal amount of $900,000.00, and any renewals and extensions that are made thereto.

"**Rentals**" shall mean and include all of the rentals, charges and other amounts that Borrower is entitled to receive from the Sublessees under the Subleases.

"**Subleases**" shall mean and include the subleases that Borrower executes with Sublessees on rental space located in the Renovated Facility

"**Sublessees**" shall mean and include the persons who execute Subleases for rental space located in the Renovated Facility.

1. **Assignment of Lease Agreement and Subleases - Rentals.** Borrower hereby transfers and assigns to the City the following property, all of which shall secure Borrower's obligations under the Note and the Loan Agreement: (i) Borrower's Lease Agreement with Musselman, and all of Borrower's rights and interests thereunder, (ii) Borrower's Subleases with the Sublessees, and all of Borrower's rights and interests thereunder; and (iii) the Rentals that Borrower is entitled to receive under the Subleases. In exchange thereof, the City hereby grants to Borrower a revocable license to have and exercise all of the rights and interests that are assigned to the City hereunder, including the right to receive and use the Rentals that are payable from the Subleases, for so long as Borrower has fully and timely complied with all of its covenants, warranties, obligations and undertakings under the Note and the Loan Agreement.

2. **Purpose of Assignment.** This Agreement shall secure the full and timely performance of Borrower's warranties, covenants, obligations and undertakings under the Note and Loan Agreement. The assignment and transfer made under this Agreement accords to the City, upon Borrower's default, the full right and authority to take possession and control over the Renovated Facility, to exercise all of Borrower's rights under the Lease Agreement and Subleases, and to sell and liquidate the Lease Agreement and Subleases to satisfy Borrower's indebtedness under the Note and Loan Agreement.

3. **Preservation of Lease Agreement and Subleases.** Borrower shall keep and maintain the Lease Agreement and the Subleases in full legal force and effect according to their

respective terms. Specifically, but not by way of limitation, Borrower shall perform and comply with each of the following requirements:

(a) Borrower shall promptly perform and observe all of the covenants, obligations and undertakings that Borrower assumed under the Lease Agreement, and shall utilize its best efforts to ensure that Musselman promptly performs and observes all of the covenants, obligations and undertakings that it assumed under that agreement. Borrower shall not modify any term or provision contained in the Lease Agreement, or modify, waive or discharge any of the parties' rights and remedies thereunder, without the prior written consent and approval of the City. Borrower shall promptly provide the City with written notice of the occurrence of any event of default by Borrower or Musselman under the Lease Agreement, or the occurrence of any event which could jeopardize the enforceability of the Lease Agreement. Borrower shall obtain the City's advice on resolving the reported event, and shall promptly comply with any directive that the City may issue with respect thereto.

(b) Borrower shall promptly perform and observe all of the covenants, obligations and undertakings that Borrower assumed under the Subleases, and shall utilize its best efforts to ensure that Sublessees promptly perform and observe all of the covenants, obligations and undertakings that they assumed under those agreements. In the event of a sublessee's default under a Sublease, the Borrower shall exercise all of the rights and remedies that are accorded to Borrower on the default, specifically including the recovery of all of the Rentals that are owed by the Sublessee under the defaulted Sublease.

4. **City's Right to Cure Borrower's Default under the Lease Agreement.** In the event Borrower should default in the performance of any of its obligations or undertakings under the Lease Agreement, the City shall have the absolute right, at its sole option, to take whatever action that the City deems necessary to cure and remedy the default, at Borrower's sole cost. In acting hereunder, the City shall have the right to rely upon Musselman's stated grounds for the default even though Borrower may contest the validity of those grounds. Should the City incur any costs and expenses (including attorney fees) in providing any cure and remedy on Borrower's default, the amounts thereof shall be secured under this Agreement and the Loan Agreement, and shall be repaid by Borrower upon the City's written demand. Any amount not repaid by Borrower shall be added to Borrower's indebtedness under the Note, and accrue interest at the rate prescribed thereunder.

5. **Borrower's Default – City's Remedies for Default.** In the event Borrower fails to perform and/or comply with any of its warranties, covenants, obligations or undertakings under this Agreement, the Note, or the Loan Agreement, the City shall have the unconditional right, at its sole option, to exercise each and all of the following rights and remedies:

(a) The City shall have the right to terminate and revoke the right and license granted to Borrower under Section 2 of this Agreement, and the right to retake and assume full and complete ownership of and control over the Lease Agreement, the Subleases, and Rentals payable thereunder. Upon exercising such rights, the City shall have the absolute right to instruct the Sublessees to remit all Rentals directly to the City, and to assume and exercise all of the Borrower's rights and remedies under the Subleases.

(b) The City shall have the right, at its sole option, to assume and perform any of Borrower's obligations and undertakings under the Lease Agreement and Subleases for Borrower's benefit; provided however, that the City shall have no liability to Musselman or the Sublessees with respect to (i) any act or omission of Borrower under the Lease Agreement and Subleases, (ii) any damages, losses and/or expenses that Musselman or the Sublessees incurred as a result of Borrower's failure to perform; and/or (iii) any offset or counterclaim that Musselman or the Sublessees are entitled to assert against Borrower.

(c) The City shall have the right to assign and sell the Lease Agreement and Subleases, and all of Borrower's rights and interests thereunder, through a private or public sale as determined by the City, including a public sale that is conducted by a Master Commissioner as a part of any judicial proceeding.

(d) The City shall have the right to exercise all of the rights and remedies that are provided to the City under the Note and Loan Agreement, specifically including but not limited to (i) the right to accelerate the indebtedness under the Note, and make demand upon Borrower for the full payment of same, and (ii) the right to repossess and sell the collateral that was pledged on the Note

(e) The City shall have the right to recover from Borrower all of the unpaid indebtedness that is owed to the City under the Note, this Agreement and the Loan Agreement, and any costs, expenditures and attorney fees that the City incurs in relation thereto, all of which shall be added to Borrower's indebtedness under the Note, and accrue interest at the Note rate, and be fully secured under this Agreement and the Loan Agreement.

(f) The City shall have the right to exercise all other rights and remedies that are provided under law, including the rights and remedies that are accorded to secured creditors under KRS Chapter 355. All rights and remedies accorded to the City shall be cumulative, and the exercise of one right or remedy shall not be deemed a waiver or release of any other right or remedy.

6. **Power of Attorney**. Borrower hereby irrevocably appoints the City as its true and lawful attorney-in-fact to do or perform in its name any and all acts that the City deems necessary or desirable to carry out and enforce its rights and remedies under this Agreement. Specifically, but not by way of limitation, the Borrower authorizes the City, for and on its behalf, to do any and all acts and to execute any and all documents which in the opinion of City may be necessary or desirable to (i) preserve and protect the legal enforceability of the Lease Agreement and Subleases, (iii) to exercise any of Borrower's rights and remedies under those agreements, and (iv) to sell and transfer the agreements as provided under this Agreement.

7. **Limitation of City's Liability - Borrower's Indemnity**. The assignment made under this Agreement shall not obligate the City or its assigns to perform any of Borrower's obligations and undertakings under the Lease Agreement or the Subleases, nor shall such assignment render them liable for Borrower's failure to perform those obligations and undertakings. It is understood and agreed that the City and its assigns shall have no liability with respect to any loss or damage to the Renovated Facility, any mismanagement of the Renovated Facility, any failure to maintain the Renovated Facility in a safe and operable condition, and/or any loss, injury or death that

may be sustained or suffered by any person as a result of any of the foregoing. It is further understood and agree that the City and its assigns shall only be obligated to perform those obligations and undertakings that they expressly agree to assume.

8. **Indemnification**. Borrower shall indemnify and hold the City and it assigns harmless of and from any and all claims, demands, causes of action, liability, loss, damage, cost and expense (including attorney fees) which relate to or arise from Borrower's failure to perform the obligations and undertakings that it assumed under the Lease Agreement and the Subleases, and from any actions that are taken by the City under the agreements, excepting actions that constitute gross negligence or wrongful acts. Should the City incur any losses, damages, costs, expenses (including attorney fees) that are to be indemnified hereunder, the amounts thereof shall be secured under this Agreement and the Loan Agreement, and shall be repaid by Borrower upon the City's written demand. Any amount not repaid by the Borrower shall be added to the indebtedness under the Note, and accrue interest at the rate prescribed thereunder.

9. **Waiver.** No delay or omission of the City to exercise any rights under or with respect to this assignment shall impair such right or be construed to be a waiver of any default hereunder. Any forbearance by the City in enforcing the terms of this Agreement shall not create any custom or practice that alters or waives the City's rights and remedies under this Agreement. In the event the City fails to enforce any term or condition under this Agreement, or waives any event of default relating thereto, such failure or waiver shall not prevent the City from enforcing such term or condition at a future date.

10. **Termination of Assignment.** Upon the full payment of Borrower's indebtedness under the Note, this Agreement, and the Loan Agreement, the City shall reassign and transfer to Borrower the Lease Agreement and Subleases that were assigned to the City hereunder, and all of the rights and interests that are contained thereunder. Such reassignment and transfer shall be without warranty by or any recourse to the City.

11. **Entire Agreement - Amendments.** This Agreement constitutes the entire agreement between the parties with respect to the assignment referenced hereunder, and all prior statements, understandings and agreements are merged herein. This Agreement may only be amended by a writing that is duly executed by the parties hereto.

12. **Construction of Agreement.** This Agreement shall be governed by and interpreted in accordance with the laws of the State of Kentucky. This Agreement, and the terms contained hereunder, shall supplement the Loan Agreement, and the terms that are contained thereunder. In the event any term of this Agreement in inconsistent with any of the terms that are contained in the Loan Agreement, the term most favorable to the City shall prevail. Any notices that are to be provided under this Agreement shall be given in accordance with the notice provisions under the Loan Agreement.

13. **Successors and Assigns.** This Assignment shall inure to the benefit of and shall be enforceable by the City and its assigns, and shall be binding upon Borrower, and its successors and assigns. This Agreement may not be assigned by Borrower without the prior written consent of the City.

14. **Counterparts.** This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall be deemed to be one and the same instrument.

IN WITNESS WHEREOF, Borrower and the city have caused this Assignment to be duly executed and delivered as of the date first above written.

SPROCKET, INC.

By: _____
Title: _____

CITY OF PADUCAH

By: _____
Title: _____

AGREED TO BY:

MUSSELMAN PROPERTIES, LLC

By: _____
(Title)

STATE OF KENTUCKY)

COUNTY OF MCCRACKEN)

Subscribed and acknowledged before me on this _____ day of _____, 20___, by _____, _____ of Sprocket, Inc., a Kentucky corporation, on behalf of said corporation.

My commission expires _____.

_____
Notary Public, State at Large

STATE OF KENTUCKY)

COUNTY OF MCCRACKEN)

Subscribed and acknowledged before me on this _____ day of _____, 20___, by _____, as Mayor of the City of Paducah, a Kentucky municipality, on behalf of said municipality.

My commission expires
_____.

_____
_____
Notary Public, State at Large

Appendix "A"

Legal Description of Musselman's Real Property

Agenda Action Form
Paducah City Commission

Meeting Date: December 15, 2020

Short Title: Greenway Trail Phase V- Change Order #1 to Jim Smith Contracting, LLC contract for $37,585.10 **- R MURPHY**

Category: Ordinance

Staff Work By: Melanie Townsend
Presentation By: Rick Murphy

Background Information: On April 14, 2020, the City approved Ordinance 2020-04-8631, authorizing a construction contract with Jim Smith Contracting, LLC, for $479,350.50 to construct the Greenway Trail Phase V.

As part of the Greenway Trail Phase V project, Change Order #1 is recommended to increase the project by $37, 585.10, adjusting the total construction project from $479,350.50 to $516,935.60.

During construction of the project, large concrete deposits were discovered beneath the entire construction site requiring vertical field adjustments to the project. The entire project was raised 1'0" to 1'6" in the vertical plane to avoid excavating an unknown depth of concrete. This adjustment resulted in importing soil to provide a sufficient depth backfill and soil planting areas for landscaping in the project area. Line item change orders resulted in a credit to the contract for ($65,846.32) followed with $103,431.42 for item adjustments for a net additional change of $37,585.10 to the original contract amount.

Does this Agenda Action Item align with a Strategic Plan Action Step? Yes

If yes, please list the Action Step Item Codes(s): I-1: Continue to expand the Greenway Trail Corridor throughout the City.

Funds Available: Account Name: Greenway Trail Phase V

Account Number: PA0111

Staff Recommendation: Authorize the Mayor to accept and execute Change Order #1 and any associated documents. Authorization increases Jim Smith Contracting, LLC's contract by $37,585.10. The approval of the change order will increase the total contract amount of $479,350.50 to $516,935.60.

Attachments:

1. ORD - CHGORD1-Greenway Trail Phase V

ORDINANCE NO. 2021-01-_____

AN ORDINANCE AUTHORIZING AND DIRECTING THE MAYOR TO EXECUTE CHANGE ORDER NO. 1 WITH JIM SMITH CONTRACTING, LLC, TO INCREASE THE CONTRACT BY $37,585.10 FOR THE GREENWAY TRAIL PHASE V PROJECT

WHEREAS, On April 14, 2020, the City approved Ordinance 2020-04-8631, authorizing a construction contract with Jim Smith Contracting, LLC, for $479,350.50 to construct the Greenway Trail Phase V; and

WHEREAS, during construction of the project, large concrete deposits required field adjustments to the project. The entire project was raised 1'0" to 1'6" in the vertical plane to avoid the concrete. This adjustment resulted in importing soil to provide backfill and planting areas for landscaping in the project area. Line items change orders resulted in ($65,846.32) and $103,431.42 for a net change of $37,585.10; and

WHEREAS, Change Order No. 1 is required for an increase in the amount of $37,585.10 adjusting the total construction project from $479,350.50 to $516,935.60.

BE IT ORDAINED BY THE CITY OF PADUCAH, KENTUCKY:

SECTION 1. The Mayor is hereby authorized to execute Change Order No. 1 for an increase in the amount of $37,585.10 with Jim Smith Contracting, LLC, for a total contract cost of $516,935.60.

SECTION 2. This expenditure shall be charged to the Greenway Trail Phase V Project Account PA0111.

SECTION 3. This ordinance shall be read on two separate days and will become effective upon summary publication pursuant to KRS Chapter 424.

_____
Mayor

ATTEST:

_____
Lindsay Parish, City Clerk

Introduced by the Board of Commissioners December 15, 2020
Adopted by the Board of Commissioners _____
Recorded by Lindsay Parish, City Clerk, _____
Published by The Paducah Sun, _____
\ord\eng\CHGORD1-Greenway Trail Phase V