CITY OF WALHALLA

"MAIN STREET to the MOUNTAINS"

Mr. Danny Edwards, Mayor

Mr. Danny Woodward, Mayor Pro Tem Ms. Sarai Melendez, Councilwoman Mr. Keith Pace, Councilman Mr. Tyler Jordan, Councilman Mr. Grant Keehn, Councilman Mr. David Underwood, Councilman Mr. Michael Kozlarek, City Attorney Mr. Timothy B. Burton, City Administrator

AGENDA WALHALLA FIRE COMMITTEE MEETING August 10, 2023 5:00 PM City Hall | 206 N Church St, Walhalla, SC

I. Call to Order and Welcome

Chairperson Sarai Melendez

Garden of the Go

- II. Discussion Item: Request for new Pumper Truck (KME Custom)
- III. Adjournment



MAIN STREET TO THE MOUNTAINS

Fire Committee

Sarai Melendez, Chair David Underwood Danny Edwards, Mayor, Ex-Officio

206 N. Church Street (PO Box 1099), Walhalla SC 29691 864-638-4343 Phone www.cityofwalhalla.com



Safe Industries

Safe Industries 5031 Highway 153 Easley SC 29642 United States (864) 845-7175

Quote

Date	Quote #
8/3/2023	EST21580

Page 1 of 3

Bill To	Ship To
Brandon Burton Walhalla Fire Department PO Box 1099 Walhalla SC 29691 United States	Walhalla Fire Department 207 E North Broad St Walhalla SC 29691 United States

Expires			Sale	es Rep	Terms		Shipping Me	ethod
9/2/2023			Camer	ron Marler	Net 30			
Quantity	Units	Item		Description		Comment	s Price	Extended
4		A-G1FS MD2C4	5442 LAR	MSA - G1 SCBA SYSTEM_PRESSURE 4 CYLINDER_CONNECTION Quick Connect Remote Con HARNESS 2 Standard - CRADLE_TYPE M Metal B LUMBAR_TYPE D Adj. Swiv REGULATOR_TYPE 2 REGULATOR_TYPE 2 REGULATOR_HOSE_TYPE EMERGENCY_BREATHING Hose & Pouch SPEAKER_MODULE L I PASS A PASS Right Should BATTERY TYPE B Backered	4500 PSIG 4 CGA wth Chest Strap and vel Solid Buckle Solid Cover Left S C Continuous _SUPPORT 4 Left Chest ler		7,885.00	31,540.00
8		1017570)7	MSA - CYL VLV QC G1 RC	4500 PSIG, 30		1,080.00	8,640.00
4	Ea	1016181	10	MSA - Fcpc, G1, FS, MD, MD C-HARN,C-N	NC, 4PT		465.00	1,860.00
1	Ea	1017855	57	MSA - MULTIGAS DETECTO 4XR,CONFIGURED (LEL, O2	OR, ALTAIR 2, H2S & CO)		1,330.00	1,330.00
2	Ea	2P601-1 2	0-A5	Kochek - 6 X 10 FLEXLITE N	H LH,HOSE (PVC)		735.00	1,470.00
4		DJ17X5 5N	60B1	FireQuip - DJ800 Double Jacko x 50°, Blue	et Attack Hose, 1.75"		164.00	656.00
4		DJ17X5 5N	0Y1	FireQuip - DJ800 Double Jacka x 50°, Yellow	et Attack Hose, 1.75"		164.00	656.00
16		DJ25X5 5N	0W2	FireQuip - DJ800 Double Jacke x 50', White-Uncoated	et Attack Hose, 2.5"		225.00	3,600.00



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Safe Industries 5031 Highway 153 Easley SC 29642 United States (864) 845-7175
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 EST21580

Page 2 of 3

Quantity	Units	Item	Description	Comments	Price	Extended
1		48264007	Akron - 2.5" Assault Pistol Grip Nozzle 250G@75P		725.00	725.00
_			FM			
2	Ea	48634008	Akron - Mid-Range Assault Nozzle, 1.5",		585.00	1,170.00
			150G@75P			
1		14464005	Akron - 2.5" Shutoff with 1-1/8"" straight tip w/		515.00	515.00
			pistol grip			
1	Ea	FA-6	Fire Hooks - Flathead Axe, Fiberglass Handle		74.00	74.00
1	Ea	FAP-6	Fire Hooks - Pickhead Axe, Fiberglass Handle		74.00	74.00
1	Ea	PLY-6AH-B	Leatherhead - Pro-Lite Round: American Hook,		94.00	94.00
			OAL 6', HiViz Yellow Pro-Lite Pole, Hollow			
			Fiberglass Handle, w/ Rubber Bumper			
1	Ea	PLY-10AH-	Leatherhead - Pro-Lite Round: American Hook,		140.00	140.00
		В	OAL 10' HiViz Yellow Pro-Lite Pole, w/ Rubber			
			Bumper			
1	Ea	11340	Buckeye Extinguishers/Equip Extinguisher:		85.00	85.00
			ABC, 10 lb.			
1	Ea	50000	Buckeye Extinguishers/Equip Extinguisher:		140.00	140.00
			H2O, 2.5 Gal.		1.0.0.0	• 10 00
2		K48-3-P18-P	Kochek - TRIPLE HOLDER SET -FG-, WRENCH		120.00	240.00
	F	09			70.00	70.00
1	Ea	35R2525-H5	Kochek - 2.5 NH X 2.5 NH DBL SW RL F		/8.00	/8.00
1	F -	2	-FG-,ADAPTEKS		40.00	40.00
1	Ea	30K2525-H5	KOCHEK - 2.5 NH X 2.5 NH DBL KL M		40.00	40.00
1	Ea	2 CM 2	-FU-, ADAPTERS		22.00	22.00
1	Ea	UTV 12V12	Huchy Salvage Cover: 12 x 12 10 oz Vinyl Ped		110.00	22.00
2	Ea	SAC-44-F	Thusky - Salvage Cover. 12 x 12, 10 02., vinyi, Keu Zico - 44° Folding Wheel Choc. Easy Grin Handle		325.00	650.00
1	Fa	1287BRK_L	ProPak - Traffic Vest: Class II J ime Mesh 5-PT		20.00	20.00
1	La	2XI	Full Breakaway Plain 2XI		20.00	20.00
1		LIM12-NF	TET - New Force - $PRO/Pak = 1.1/2$ " angle coupling		1 275 00	1 275 00
1			100 PSI		1,275.00	1,275.00
1		V18-BL-08-	Super Vac - 18" Milwaukee Battery PPVs: 18" PPV.		5.650.00	5.650.00
		AC-SP	2x 8 Ah Bat., 2x AC Chargers, Shore Power		- ,	- ,
1		TFLK55	Team Equipment - FLIR K55 320X240 Thermal		6,595.00	6,595.00
			Camera Kit		,	,
4		ULLH-ES	Zico - Assembled bracket with strap & ejector spri		195.00	780.00
1		34330004	Akron - Apollo Hi-Riser Dual Inlet Portable and		4,425.00	4,425.00
			Deck Monitor with Liftoff, Direct Mount, Ground			
			Base			
1	Ea	24204001	Akron - Triple Stacked Tips		425.00	425.00



Safe Industries

Safe Industries 5031 Highway 153 Easley SC 29642 United States (864) 845-7175
 Date
 Quote #

 8/3/2023
 EST21580

Page 3 of 3

Quantity	Units	Item	Description	Comments	Price	Extended
1		90400	Streamlight - Bank Charger (SC) 120V AC -		345.00	345.00
			Knucklehead/Survivor			
5	Ea	90500	Streamlight - Survivor: Right Angle LED Light, w/		95.00	475.00
			Out Charger, Orange			
1		STC-28-CC-	Viewbrite Safety - Collapsible Cone Kit w/ Storage		155.00	155.00
		5BLK	Bag, Includes five 28" cones			
1	Ea	8000-004000	ZOLL - AED: Semi-Automatic Plus		1,685.00	1,685.00
		-01				
1		ART.109.261	Genesis - 17C-SL3 eForce		11,800.00	11,800.00
		.1				
1	Ea	ART.107.834	Genesis - eForce 2.0 Ram: 22-54 Telescopic Ram		9,000.00	9,000.00
		.2				
1	Ea	ART.105.410	Genesis - 3 Bay Charger, 120V		450.00	450.00
		.9				
3	Ea	50-11-2855	Howell Rescue - Milwaukee Battery, 28V 5AH		250.00	750.00
1		ART.109.685	Genesis - A' LA CARTE TIPS - RIT Tip (EACH)		465.00	465.00
		.9				
1		Freight	Due to continued disruptions in the global supply		900.00	900.00
			chain, fuel surcharges, and fluctuating			
			freight/shipping charges, we will no longer be able			
			to estimate nor include any shipping charges on a			
			quote. Shipping charges will be finalized on the			
			Invoice. As always, we will continue to provide the			
			best product pricing as possible but this volatile			
			market has necessitated a change in our day to day			
			operations. We nope you understand and continue			
			to put your trust in Sale industries.			
		1				
				Total		\$99,214.00

Please note quoted prices are subject to change after expiration date. Quoted prices expire 30 days from issue date.



Panel Layout

5020-001 Panel Layout



Option Description LEGEND LOCATION SW PNL CENTER 12 SW UPR 2010 94" SIREN CONTROL HEAD WHELEN 295HFS2 LWR LH PWR POINT DASH MNT (4) BATT DIR PWR POINT DASH MNT BATT DIR DUAL USB 1.13" HOLE SW PNL SEAT BELT WARN ADDITIONAL WELDON SEAT BELT INDICATOR MODULE 2010 LH LOCKED FC94 SWITCH PANEL LH (8) [6+2] SWITCHES 2010 94" LIGHTBAR SWITCH PANEL -MUX (-010 SW) FRONT SCENE LIGHT ACTIVATION 'FRONT SCENE' LEGEND FRONT SCENE LIGHT ACTIVATION ROCKER SWITCH PANEL FRONT SPOTLIGHT FRONT SCENE LIGHT ACTIVATION ROCKER SWITCH PANEL FRONT FLOOD HDLT & MRKR LT ACTV DIMMER SW HDLT & MRKR LT RKR SW 94/96 AUX ENG BRK CTRL ON/OFF SW PNL SWPN (-010) AUX ENGINE BRAKE CONTROL ON/OFF & HIGH/MED/LOW SWITCH PANEL WARNING SIDE SWITCH FRONT WARN SW MSTR WARN SW PNL 'MASTER' WINDSHIELD WIPER SYSTEM SINGLE MOTOR ENGINE HIGH IDLE CONTROL RKR SWITCH

BODY TYPE: CHALLENGER WB 3/16" ALUMINUM FOAM SYSTEM: 25 GALLON FOAM CELL	VUMP: HALE UMAX-150 1500 GPM SINGLE STAGE PUMP WATER TANK: 1,000 GALLONS POLY	CAB: FC-94 MFD 10" RR ENGINE & TRANS: CUMMINS L9 450 HP/ALLISON 3000 EVS AXLES: 20,000# FRONT/27,000# REAR			$\begin{array}{c} 1 \\ 1 \\ 2 \\ 0 \\ 0 \\ 0 \\ 1 \\ 1 \\ 2 \\ 0 \\ 0 \\ 0 \\ 1 \\ 1 \\ 2 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0$
	CONVIKACI SPECIFICATIONS SHA PREVAIL OVER DRAWING.	THIS DRAVING IS A GENERAL CONFIGURATION AND MAY NOT NECESSARTUX REFLECT ALL CONTRACTUAL REQUIREMENTS.			
DATE:		CUSTOMER APPROVA			
SYM DATE REVISION DESCRIPTION SALES ENGINEER : Jared Eickhoff	REV C 8/3/2023 UPDATED TO APPROVED PRECON LETTER		- 24"		
GS(JAE	DIMENSIONS ARE APPROI	405" [33'-9"]		





Phone: 877.525.1776 Fax: 888.777.7875 Cell: 724.331.4982 215 S. Seth Child Road Manhattan, KS 66502 www.clpusa.net

August 1, 2023

Customer Name: City of

e: City of Walhalla, SC (Fire Department)

Equipment: One (1) KME Custom Pumper Truck Sales Representative: SAFE Industries, Cameron Marler

Community Leasing Partners, a Division of *Community First National Bank*, is pleased to present the following financing options for your review and consideration.

Total Cost:	\$	750,000.00	Payment F	requency: Annual	
Down Payment:		- First Payment: August 1, 2024		1, 2024	
Amount Financed:	\$	750,000.00			
Term in Years:		<u>3</u>	<u>5</u>	<u>7</u>	<u>10</u>
Payment:	\$	275,721.92	\$172,822.99	\$129,160.67	\$96,781.44
Interest Rate:		5.06%	5.04%	4.99%	4.99%
on 2					
on 2 Total Cost:	\$	750,000.00	Payment F	requency: Annual	
on 2 Total Cost: Down Payment:	\$	750,000.00	Payment F First	requency: Annual Payment: August 1	1, 2025
on 2 Total Cost: Down Payment: Amount Financed:	\$ \$	750,000.00 - 750,000.00	Payment F First	requency: Annual Payment: August 1	1, 2025
on 2 Total Cost: Down Payment: Amount Financed: Term in Years:	\$ \$ \$	750,000.00 - 750,000.00 (3-payments)	Payment F First <u>6 (5-payments)</u>	requency: Annual Payment: August 1 <u>8 (7-payments)</u>	1, 2025 <u>11 (10-payments)</u>
on 2 Total Cost: Down Payment: Amount Financed: Term in Years: Payment:	\$ \$ \$	750,000.00 - 750,000.00 (3-payments) (291,042.98	Payment F First <u>6 (5-payments)</u> \$182,577.88	requency: Annual Payment: August 1 <u>8 (7-payments)</u> \$136,171.02	1, 2025 <u>11 (10-payments)</u> \$102,312.08

ESCROW STRUCT	URE Escrow Fun	iding Date: August 2	26, 2023	
	Date Available	Total Available	Disbu	rsement
	March 1, 2024	\$750,000.00	Est. Fin:	al Delivery
	Total:	\$750,000.00		

• Interest Earnings in the escrow account have been estimated and used to reduce borrowing cost incurred by the Lessee.

• Premature disbursements or delay in funding to the escrow may result in shortage of funds needed to fulfill vendor payments.

• THERE ARE NO DOCUMENTATION OR CLOSING FEES ASSOCIATED WITH THIS PROPOSAL.

- Interest rates are fixed for terms up to 10 years. For terms greater than 10 years, upon receipt of the 7th payment, at sole discretion of the Lessor, the remaining payments can be adjusted based on an index determined at contract issuance and then will remain fixed for the remaining term.
- The quoted interest rate is valid for 10-days from the date of the proposal. To lock in the interest rate, a credit submission would be required, and a credit approval attained within the same 10-day period. This financing is to be executed & funded within 30 days of the date of the proposal or Lessor reserves the right to adjust the interest rate. The proposal is subject to credit review and approval and mutually acceptable documentation.
- This proposal has been prepared assuming the lessee is bank qualified and that the proposed lease qualifies for Federal Income Tax Exempt Status for the Lessor under Section 103 of the IRS Code.

<u>Thank you</u> for allowing Community Leasing Partners the opportunity to provide this proposal. If you have any questions regarding the options presented, need additional options, or would like to proceed with a financing, please contact me at 1-877-525-1776.

Respectively,

Dave Fike Director-Business Development davefike@clpusa.net



4/27/2023

SAFE Industries Attn: Cameron Marler/William Gray

REF: GSO# 11694-95 Precon Letter Addendum

Dear Apparatus Committee,

The following is a list of changes, additions, and clarifications discussed to date, post pre-construction meeting and prior to Final Production Release. Please carefully review this list and return a signed copy of this letter by 5/4/2023. Delays beyond this timeframe may alter KME's ability to deliver your apparatus to contract requirements, may necessitate price increases to the options, or limit our ability to provide some or all of the changes.

Upon receipt of a signed copy of these documents, the below changes and clarifications will be amended to the build specification for your apparatus. The list is as follows:

ITEM	DESCRIPTION	CUST ACCEP	OMER TANCE
		ACCEPT	DECLINE
1	The wheelbase shall be updated from 207" to 211" in accordance with the engineering driveline pre-check. The overall length of the apparatus shall be 405" \pm 2".	X	

Respectfully,

and Eickhold

Jared Eickhoff Contract Administrator

Customer Authorization

Signature:

Print Name: William Gray

Title: Apparatus Regional Manager

Date: 4-27-2023

kmefire.com



KME FIRE APPARATUS

July 13, 2022

GSO# 11694-95

Presented By:

Safe Industries 5031 Hwy. 153 Easley, SC 29642 Phone: 877-997-7233

PO00025823 - DESIGN CLAUSE

QTY: 1.00

These specifications outline the components, installation methods, and operational characteristics KME is agreeing to provide in order to meet the purchaser's requirements. Subject to the terms of the purchase agreement, other construction details not explicitly listed in these specifications will be determined at the discretion of the builder. In the event the purchaser desires a different construction or installation not already described in these specifications, additional charges may apply, and quoted lead time commitments will be adjusted.

PO00024988 - VEHICLE TRANSPORTATION - DEALER PROVIDED

Transportation for the completed vehicle from KME Fire Apparatus in Nesquehoning, PA to the end user shall be provided by the sales representative.

PO00011063 - PROPOSED BY - SAFE INDUSTRIES, MARLER

QTY: 1.00

QTY: 1.00

Safe Industries is pleased to offer the proposed vehicle to meet the intent of the fire department specifications.

KME Fire Apparatus is a leading manufacturer in custom and commercial fire fighting vehicles.

Questions or concerns pertaining to this proposal can be answered by contacting the following KME representative:

Safe Industries 5031 Hwy. 153 Easley, SC 29642

Fax (864) 845-7176 Cell (864) 245-7937

Cameron Marler

cmarler@safeindustries.com

PO00011108 - PROPOSED SERVICE BY - SAFE INDUSTRIES

KME FIRE APPARATUS SERVICE STATEMENT

QTY: 1.00

Safe Industries is proud to offer over 100 years of combined experience in the fire service and apparatus industry.

We offer a twenty-four hour service commitment with three(3) service technicians on call and five(5) service vehicles available.

Our certifications include EVT, Hale, Waterous, Darley, Akron, and Bendix brakes.

We can perform all pump tests at your location with the Draft Commander 3000 mobile pump test trailer, to eliminate removing your apparatus from your department. In case of an emergency we can UN hook from the test and have the apparatus in operation in less than 5 minutes.

Safe Industries is fully insured with Workman's Compensation.

Contact: Safe Industries 5031 Hwy. 153 Easley, SC 29642

Phone:864-845-7175 Fax: 864-845-7176

PO00010968 - PROPRIETARY PARTS

It is the intention of the Purchaser for all bidder's to furnish the apparatus with major parts commonly used by the heavy-duty truck manufacturers and open market vendors where as replacement parts are more readily available and at reduced cost. The use of proprietary parts such as but not limited to axles, suspensions, engines, transmissions, frontal air bags, electronic controls, multiplexing systems, seats, pumps, gauges, foam systems, etc., may not be acceptable by the purchaser.

PO00010973 - FAIR ETHICAL & LEGAL COMPETITION

QTY: 1.00 In order to ensure fair, ethical, and legal competition, neither original equipment manufacturer (OEM) nor parent company of the OEM shall have ever been fined or convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.

There will be no exceptions.

PO00010974 - NON-COLUSION AGREEMENT

By submission of this bid, each bidder and each person signing on behalf of any bidder, certifies, and in the case of a joint bid, each party thereof certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief:

The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for purpose of restricting competition, as to any matter relating to sale price with any other bidder or any competitor.

Unless otherwise required by law, the prices that have been quoted in this bid have not been knowingly disclosed by the bidder and shall not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor.

No attempt has been made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a bid for the purpose of restricting competition.

That all requirements of the law including amendatory provisions as to non-collusive bidding have been complied with.

PO00010976 - MATERIAL & WORKMANSHIP

All equipment furnished shall be guaranteed to be new and of current manufacture, to meet all requirements of these specifications.

All workmanship shall be of high quality and accomplished in a professional manner so as to insure a functional apparatus with a pleasing, aesthetic appearance.

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00010978 - CONTRACT ADMINISTRATOR

QTY: 1.00 The successful bidder shall designate a contract administrator to provide a single point interface between the purchaser and the contractor on all matters concerning the contract.

PO00010979 - APPROVAL DRAWING

A detailed drawing of the apparatus shall be provided to the purchaser for approval before construction begins. A copy of this drawing shall also be provided to the manufacturer's representative. Upon purchaser's approval, the finalized drawing shall become a part of the total contract.

The drawing shall show, but is not limited to, such items as the chassis make and model, major components, location of lights, sirens, all compartment locations and dimensions, special suctions, discharges, etc. The drawing shall be a visual interpretation of the apparatus as it is to be supplied.

PO00010980 - DIGITAL PICTURES

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

KME will provide, on a weekly or as requested basis, from the time the chassis arrives/begins and construction of the body compartments begins, "digital" color photos of each phase of construction.

The digital photos shall be e-mailed or otherwise provided to the fire department..

The above specified digital photos shall include, but not be limited to: bare chassis (as it arrives from chassis factory), modifications to the chassis, installation of the fire pump and its related valves and piping (prior to being enclosed inside the fire pump cavity), water tank and foam tank (prior to their installation inside the apparatus body), fabricated apparatus body components (prior to their being assembled), assembly of the pump compartment fabrications, assembly of the compartmented body fabrications, installation of the water and foam tanks, interior compartment shelving arrangement, hose bed arrangement, and assembly of the fire pump control panel.

In addition to the specified photo shots, the purchaser shall have the right to request certain views of other features and accessories, during their manufacture and installation.

PO00010981 - DELIVERY

Delivery of the apparatus to the customer shall remain the bidder's responsibility.

On initial delivery of the fire apparatus, a qualified and responsible representative of the contractor shall demonstrate the apparatus and provide initial instruction to representatives of the customer regarding the operation, care, and maintenance of the apparatus and equipment supplied.

PO00010982 - VEHICLE FLUID PLATE

As required by NFPA-1901, the contractor shall affix a permanent plate in the driver's compartment specifying the quantity and type of the following fluids used in the vehicle:

A permanent plate in the driving compartment shall specify the quantity and type of the following fluids used in the vehicle:

- Engine oil
- · Engine coolant
- Chassis transmission fluid
- Pump transmission lubrication fluid

- Pump primer fluid
- Drive axle(s) lubrication fluid
- Air-conditioning refrigerant
- Air-conditioning lubrication oil
- Power steering fluid
- Cab tilt mechanism
- Transfer case fluid
- Equipment rack fluid
- Air compressor system lubricant
- Generator system lubricant
- Aerial systems

PO00010988 - EXACT BLUEPRINT WITH BID

QTY: 1.00

A scale drawing of the specific apparatus being proposed shall be submitted WITH THE BID.

Drawings of similar units or demo units shall not be permitted.

Bidders should be clear that this provision is requiring a SCALE drawing of the truck which is actually being bid.

The drawing shall be done at the manufacturer's facility by the manufacturer's engineering department in order to guarantee the accuracy of the drawing.

Failure to comply with this requirement shall be grounds for rejection of the bid!

PO00010990 - FAMA MEMBERSHIP

QTY: 1.00

QTY: 1.00

The apparatus manufacturer must be a current member of the Fire Apparatus Manufacturer's Association (FAMA).

PO00010992 - MANUFACTURED IN UNITED STATES

QTY: 1.00 The entire apparatus shall be assembled within the borders of the Continental United States to insure more readily available parts (without added costs and delays caused by tariffs and customs) and service.

PO00010997 - AMP DRAW REPORT

The bidder shall provide with their bid proposal and at the time of delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

A written load analysis, which shall include the following:

- The rating of the alternator.
- The minimum continuous load of each component that is specified per: Applicable NFPA-1901.
- 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 shall be provided by the bidder per the applicable NFPA-1901.

PO00011001 - COOPERATIVE PURCHASING

The Manufacturer shall be pleased to allow other public agencies to use the purchase agreement resulting from this invitation to bid unless the bidder expressly notes on the proposal form that prices are not available for tag-on.

The condition of such use by other agencies shall be that any such agency must make and pursue contact, purchase order/contract, and all contractual remedies with the successful bidder.

Such tag-ons shall be done so that the original purchasing agency has no responsibility for performance by either the manufacturer or the agency using the contract.

PO00011002 - PRODUCTION LEVEL ELECTRICAL DRAWINGS

KME shall provide production level harness drawings for the specific unit to be built.

PO00011022 - VEHICLE DATA PLATE DESCRIPTION

The following safety signs shall be provided in the cab:

- A label displaying the maximum number of personnel the vehicle is designed to carry shall be visible to the driver.
- "Occupants will be seated and belted when apparatus is in motion" signs shall be visible from each seat.
- "Do Not Move Apparatus When Light Is On" sign adjacent to the warning light indicating a hazard if the apparatus is moved (as described in subsequent section).
- A label displaying the height, length, and GVWR of the vehicle shall be visible to driver.
- This label shall indicate that the fire department will revise the dimension if vehicle height changes while vehicle is in service.

The following information shall be on labels affixed to the vehicle:

Fluid Data

- Engine Oil
- Engine Coolant
- Chassis Transmission Fluid
- Pump Transmission Lubrication Fluid
- Pump Primer Fluid (if applicable)
- Drive Axle(s) Lubrication Fluid
- Air Conditioning Refrigerant
- Air Conditioning Lubrication Oil
- Power Steering Fluid
- Cab Tilt Mechanism Fluid
- Transfer Case Fluid (if applicable)
- Equipment Rack Fluid (if applicable)
- Air Compressor System Lubricant
- Generator System Lubricant (if applicable)
- Front Tire Cold Pressure

QTY: 1.00

QTY: 1.00

QTY: 1.00

- Rear Tire Cold Pressure
- Aerial Hydraulic Fluid (if applicable)
- Maximum Tire Speed Rating

Chassis Data

- Chassis Manufacturer
- Production Number
- Year Built
- Month Manufactured
- Vehicle Identification Number

Manufacturers weight certification:

- Gross Vehicle (or Combination) Weight Rating (GVWR or GCWR)
- Gross Axle Weight Rating, Front
- Gross Axle Weight Rating, Rear

PO00011120 - INSPECTION TRIP (1)

QTY: 1.00 The successful bidder shall provide one (1) factory inspection trip to the apparatus manufacturer's facility.

Transportation, meals, lodging, and other requisite expenses shall be the bidder's responsibility.

PO00011128 - ACCOMMODATIONS FOR THREE (3) FIRE DEPARTMENT PERSONNEL

Accommodations shall be for three (3) Fire Department representatives per trip.

The factory visits shall occur at the following stages of production of the apparatus:

PO00011140 - TRIP ONE (1) AT FINAL COMPLETION

Final inspection upon completion.

PO00011160 - AIR TRANSPORTATION (GREATER THAN 500 MILES)

Travel arrangements greater than 500 miles from the manufacturing facility shall be via commercial airline transportation.

The {Company} maintains the right to inspect the apparatus, within normal business hours, at any other point during construction.

Expenses incurred during non-specified inspection visits shall be the responsibility of the {Company}.

During inspection visits, the {Company} reserves the right to conduct actual performance tests to evaluate completed portions of the unit.

Testing shall be accomplished with the assistance and resources of the contractor.

PO00011181 - COMPLETION INFORMATION

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

The contractor shall supply, at the time of delivery, at least one (1) copy of the following documents.

- Owners name and address Apparatus manufacturer, model and serial number
- · Chassis make, model and serial number
- Front tire size and total rated capacity in pounds
- Rear tire size and total rated capacity in pounds
- Chassis weight distribution in pounds with water and manufacturer mounted equipment, front and rear
- Engine make, model, serial number, rated horsepower, rated speed and governed speed
- Type of fuels and fuel tank capacity
- Electrical system voltage and alternator output in amps.
- Battery make, model and total capacity in cold crank amps (CCA)
- Transmission make, model, and serial number. If so equipped chassis transmission PTO(s) make, model and gear ratio
- Pump make, model, rated capacity in gallons per minute (liters per minute where applicable) and serial number
- Pump transmission make, model, serial number and gear ratio
- Auxiliary pump make, model, rated capacity in gallons per minute (liters per minute where applicable) and serial number
- Water tank certified capacity in gallons or liters
- Paint manufacturer and paint number(s)
- Company name and signature of responsible company representative
- Certification of slip resistance of all stepping, standing and walking surfaces.

If the apparatus has a fire pump or an industrial supply pump, the pump manufacturer's certification of suction capability.

If the apparatus has a fire pump or an industrial supply pump, a copy of the apparatus manufacturer's approval for stationary pumping applications.

If the apparatus has a fire pump or an industrial supply pump, the engine manufacturers certified brake horsepower curve for the engine furnished, showing the maximum governed speed.

If the apparatus has a fire pump or an industrial supply pump, the pump manufacturers certification of hydrostatic test.

If the apparatus has a fire pump or an industrial supply pump, the third party certification of inspection and test for the fire pump (if applicable).

If the apparatus has an aerial device the third party certification of inspection and test for the aerial device.

If the apparatus has an aerial device, all the technical information required for inspections to comply with NFPA 1911, Standards for Testing Fire Department Aerial Devices.

If the apparatus has a fixed line voltage power source, the certification of the test for the fixed power source (if applicable).

If the apparatus is equipped with an air system, test results of the air quality, the SCBA fill station, and the air system installation.

Weight documents from certified scale - showing actual loading on the front axle, rear axle(s) and overall vehicle (with the water tank full but without personnel, equipment and hose) shall be supplied with the complete vehicle to determine compliance with NFPA-1901.

Written load analysis and results of electrical performance tests.

If the apparatus is equipped with a water tank, the certification of water tank capacity by the tank manufacturer.

PO00011182 - FMVSS REQUIREMENT

QTY: 1.00

QTY: 1.00

The chassis shall be certified by the apparatus manufacturer as conforming to all applicable Federal Motor Vehicle Safety Standards in effect at the date of contract.

This shall be attested to by the attachment of a FMVSS certification label on the vehicle by the contractor who shall be recognized as the responsible final manufacturer.

PO00011183 - RECORDS

The successful bidder shall be responsible for preparing and maintaining a record file of parts and assemblies used to manufacture the apparatus.

These records shall be maintained in the factory of the bidder for a minimum of twenty (20) years.

File shall contain copies of any and all reported deficiencies, all replacement parts required to maintain the apparatus, and original purchase documents including specifications, contract, invoices, incomplete chassis certificates, quality control reports and final delivery acceptance documents.

The {Company} shall have access to any and all documents contained in this file upon official written request.

PO00011186 - GENERAL CONSTRUCTION

QTY: 1.00 The complete apparatus, assemblies, subassemblies, component parts, etc., shall be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subject.

All parts of the apparatus shall be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in fire fighting service.

All parts of the apparatus shall be strong enough to withstand general service under full load.

The apparatus shall be so designed that the various parts and readily accessible for lubrication, inspection, adjustment and repair.

Bidder's specifications must meet minimum requirements of N.F.P.A. Pamphlet #1901 and all State and Federal Department of Transportation vehicle regulations at time of sale of unit.

The apparatus shall be designed and constructed, and the equipment so mounted, with due consideration to distribution of the load between front and rear axles that all specified equipment, including a full complement of specified ground ladders, full water tank, loose equipment, and firefighters shall be carried without overloading or injuring the apparatus.

PO00011188 - PRODUCT LIABILITY

Each bidder shall supply proof of product liability and facility insurance equal to or exceeding \$30,000,000.00.

This shall be provided as part of the proposal. There will be no exceptions.

PO00011192 - PAINT CERTIFICATION

The finish paint shall be certified by the apparatus manufacturer as conforming to all applicable Commercial Vehicle Paint Standards in effect at the date of contract.

This shall be attested to by the attachment of a Sikkens certification.

PO00023879 - PRICES & PAYMENTS

QTY: 1.00 The bid price will be F.O.B. Destination, on a delivered and accepted basis at the Fire Department. Total price on KME's proposal sheet will include all items listed in these specifications. KME has computed pricing less federal and state taxes. It is understood that any applicable taxes will be added to the proposed prices, unless the purchaser furnishes appropriate tax-exempt forms.

PO00025825 - INSTRUCTION MANUALS - TWO (2) SETS - USB

In accordance with standard commercial practices, applicable to each vehicle (including body and special equipment) furnished under the contract, the following listed manuals and schematics, in the quantity specified, shall be provided at time of delivery of each vehicle.

The contractor shall supply at time of delivery, two (2) USB copies of a complete operation and service manual covering the complete apparatus as delivered and accepted.

The manual shall contain the following:

- Descriptions, specifications, and ratings of chassis, pump (if applicable), and aerial device
- Wiring diagrams
- Lubrication charts
- Operating instructions for the chassis, any major components such as a pump and any auxiliary systems
- Instructions regarding the frequency and procedures recommended for maintenance
- Parts replacement information

PO00026312 - FC-94 HANDLING

PO00009794 - !!! CRITICAL OVERALL LENGTH REQUIREMENT !!! - "NO"

PO00009792 - !!! CRITICAL OVERALL HEIGHT REQUIREMENT !!! - "NO"

July 13, 2022

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00010995 - NFPA CERTIFICATION

QTY: 1.00

QTY: 1.00

The proposed apparatus will be constructed to withstand the severe and continuous use encountered during emergency fire fighting services.

The apparatus will be of the latest type, carefully designed and constructed with due consideration to the nature and distribution of the load to be sustained.

This proposal details the general design criteria of cab and chassis components, aerial device (if applicable), fire pump and related components (if applicable), water tank (if applicable), fire body, electrical components, painting, and equipment.

All items of these proposal specifications will conform to the fullest extent possible with the National Fire Protection Association Pamphlet No. 1901, latest edition, except as noted in the Statement-of-Exceptions.

KME will furnish satisfactory evidence of our ability to construct, supply service parts and technical assistance for the apparatus specified.

PO00011070 - GENERAL INFORMATION - NFPA 1901

QTY: 1.00

The proposed apparatus will be constructed to withstand the severe and continuous use encountered during emergency fire fighting services. The apparatus will be of the latest type, carefully designed and constructed with due consideration to the nature and distribution of the load to be sustained.

This proposal details the general design criteria of cab and chassis components, aerial device (if applicable), fire pump and related components (if applicable), water tank (if applicable), fire body, electrical components, painting, and equipment.

All items of these proposal specifications will conform to the fullest extent possible with the National Fire Protection Association Pamphlet No. 1901, latest edition, except as noted in the Statement-of-Exceptions.

KME will furnish satisfactory evidence of our ability to construct, supply service parts and technical assistance for the apparatus specified.

PO00026614 - NFPA TREAD PLATE STEPPING/STANDING/WALKING SURFACE CERTIFICATION

QTY: 1.00

All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards.

Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be NFPA embossed compliant.

Upon request by the purchaser, the manufacturer shall supply proof of compliance with this requirement.

PO00026616 - VERTICAL TREAD PLATE - NON-EMBOSSED

QTY: 1.00

The following vertical surfaces on the vehicle (if applicable) shall have non-embossed tread plate:

To include but not limited to:

- Rear of cab overlay
- Rear body overlay
- Front of body overlay

- Front pump house panel
- Custom cab step well
- · Fender overlay
- Fender compartment doors
- Interior cab trim
- Upper body walkway walls
- Rescue body interior (walk-In/walk through)

PO00009789 - "PUMPER FIRE APPARATUS" NFPA 2016 CHAPTERS OF COMPLIANCE

QTY: 1.00

The unit shall be designed to conform fully to the "Pumper Fire Apparatus" requirements as stated in the NFPA 1901 Standard (2016 Revision), which shall include the following required chapters as stated in this revision:

- Chapter 1 Administration
- Chapter 2 Referenced Publications
- Chapter 3 Definitions
- Chapter 4 General Requirements
- Chapter 5 Pumper Fire Apparatus
- Chapter 12 Chassis and Vehicle Components
- Chapter 13 Low Voltage Electrical Systems and Warning Devices
- Chapter 14 Driving and Crew Areas
- Chapter 15 Body, Compartments and Equipment Mounting
- Chapter 16 Fire Pumps and Associated Equipment
- Chapter 18 Water Tanks

PO00011169 - NFPA "CHAPTER 16" FIRE PUMP REQUIREMENTS

Chapter 16 Fire Pump and Associated Equipment

PO00010889 - SAFETY SIGNS (NFPA REQUIRED)

Safety sign(s) shall be located on the vehicle at the rear step, and at any cross walkway(s), to warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.

PO00025814 - THIRD PARTY TESTING

If required by the specific chapters of NFPA-1901, the proposed unit shall be tested and certified by independent third party inspectors.

All test work for fire pumps outlined in NFPA 1901, Edition shall be conducted.

The third party inspectors shall provide the manufacturer a complete written examination and test report for each inspection performed at the manufacturer's facility.

This report specifies the points of inspection and results of such examinations and tests.

The inspectors performing the test work on the units are certified to Level II in the required NDT methods, under the requirements outlined in ASNT document CP-189.

QTY: 1.00

QTY: 1.00

QTY: 1.00

The actual person(s) performing the inspection shall present for review proof of Level II Certification in the required NDT methods.

The apparatus manufacturer shall designate, in writing, who is qualified to witness and certify these test results.

Prior to submittal to the automotive fire apparatus manufacturer, the final Report shall be reviewed by the Supervisor of Fire Equipment Services and a Registered Professional Engineer, both of whom are directly involved with the aerial device certification program.

When the unit successfully meets all the requirements outlined in NFPA 1901, current edition, the third party inspector shall issue a Certificate of Automotive Fire Apparatus Examination and Test stating the unit's compliance with NFPA- 1901.

***SPECIAL: SP00040990 - FC-94 SINGLE AXLE CHASSIS

QTY: 1.00

MODEL

The chassis shall be an FC-94 model. The cab and chassis shall include design considerations for multiple emergency vehicle applications, rapid transit and maneuverability. The chassis shall be manufactured for heavy duty service with the strength and capacity to support a fully laden apparatus, one hundred (100) percent of the time. MODEL YEAR

The chassis shall have a vehicle identification number that reflects a 2023 model year. <u>COUNTRY OF SERVICE</u>

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

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

The cab and chassis shall include the applicable caution, warning, and safety notice labels with text to be written in English. APPARATUS TYPE

The apparatus shall be a pumper vehicle designed for emergency service use which shall be equipped with a permanently mounted fire pump which has a minimum rated capacity of 750 gallons per minute (3000 L/min). The apparatus shall include a water tank and hose body whose primary purpose is to combat structural and associated fires. VEHICLE TYPE

The chassis shall be manufactured for use as a straight truck type vehicle and designed for the installation of a permanently mounted apparatus behind the cab. The apparatus of the vehicle shall be supplied and installed by the apparatus manufacturer. <u>VEHICLE ANGLE OF APPROACH PACKAGE</u>

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

NFPA1901 Angle of Approach definition:

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

The chassis shall feature a 4 x 2 axle configuration consisting of a single rear drive axle with a single front steer axle. GROSS AXLE WEIGHT RATINGS FRONT

The front gross axle weight rating (GAWR) of the chassis shall be 20,000 pounds.

This front gross axle weight rating shall be adequate to carry the weight of the completed apparatus including all equipment and personnel. <u>GROSS AXLE WEIGHT RATINGS REAR</u>

The rear gross axle weight rating (GAWR) of the chassis shall be 27,000 pounds.

This rear gross axle weight rating shall be adequate to carry the weight of the completed apparatus including all equipment and personnel. <u>PUMP PROVISION</u>

The chassis shall include provisions to mount a drive line pump in the middle of the chassis, behind the cab, more commonly known as the midship location. Chassis driveline pump provisions shall include an interlock feature for automatic setting of the park brake when the vehicle is shifted into pump mode while the transmission is in neutral and the transmission output speed translates to less than 1 mph. When the conditions are met the driver side parking brake valve shall activate. Once shifted to road mode the condition for electric automatic brake engagement is no longer present and the driver's parking brake control valve shall function normally.

WATER FOAM TANK CAPACITY

The chassis shall include a carrying capacity of 750 gallons (2839 liters) to 1250 gallons (4732 liters). The water and/or foam tank(s) shall be supplied and installed by the apparatus manufacturer. CAB STYLE

The cab shall be a custom, fully enclosed, MFD model with a 10.00 inch raised roof over the driver, officer, and crew area, designed and built specifically for use as an emergency response vehicle by a company specializing in cab and chassis design for all emergency response applications. The cab shall be designed for heavy-duty service utilizing superior strength and capacity for the application of protecting the occupants of the vehicle. This style of cab shall offer up to eight (8) seating positions.

The cab shall incorporate a fully enclosed design with side wall roof supports, allowing for a spacious cab area with no partition between the front and rear sections of the cab. To provide a

superior finish by reducing welds that fatigue cab metal; the roof, the rear wall and side wall panels shall be assembled using a combination of welds and proven industrial adhesives designed specifically for aluminum fabrication for construction.

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

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

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

The exterior width of the cab shall be 94.00 inches wide with a minimum interior width of 88.00 inches. The overall cab length shall be 131.10 inches with 54.00 inches from the centerline of the front of the axle to the back of the cab.

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

The cab shall offer an interior height of 57.50 inches from the front floor to the headliner in the non-raised roof area and a rear floor to headliner height of 65.00 inches in the raised roof area, at a minimum. The cab shall offer an interior measurement at the floor level from the rear of the engine tunnel to the rear wall of the cab of 51.88 inches. All interior measurements shall include the area within the interior trimmed surfaces and not to any unfinished surface.

The cab shall include a driver and officer area with two (2) cab doors large enough for personnel in full firefighting gear. The front doors shall offer a clear opening of 40.25 inches wide X 53.50 inches high, from the cab floor to the top of the door opening. The cab shall also include a crew area with up to two (2) cab doors, also large enough for personnel in full firefighting gear. The rear doors shall offer a clear opening of 32.25 inches wide X 61.00 inches high, from the cab floor to the top of the door opening.

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

The first step for the driver and officer area shall measure approximately 11.50 inches deep X 31.13 inches wide. The intermediate step shall measure approximately 8.50 inches deep X 32.50 inches wide. The height from the first step to the intermediate step and the intermediate step to the cab floor shall not exceed 11.00 inches.

The first step for the crew area shall measure approximately 11.50 inches deep X 20.44 inches wide. The intermediate step shall measure approximately 10.25 inches deep X 22.75 inches wide. The height from the first step to the intermediate step and the intermediate step to the cab floor shall not exceed 12.80 inches. CAB FRONT FASCIA The front cab fascia shall be constructed of 5052-H32 Marine Grade, 0.13 of an inch thick plate which shall be an integral part of the cab.

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

The front cab fascia shall include two (2) modules on each side accommodating a total of up to four (4) Hi/Low beam headlights and two (2) turn signal lights or up to four (4) warning lights. Two (2) chrome plated bezels shall be provided on each side around each set of two lamps. <u>FRONT GRILLE</u>

The front fascia shall include a 304 stainless steel front grille. <u>CAB UNDERCOAT</u>

There shall be a rubberized undercoating applied to the underside of the cab that provides abrasion protection, sound deadening and corrosion protection. <u>CAB SIDE DRIP RAIL</u>

There shall be a drip rail along the top radius of each cab side. The drip rails shall help prevent water from the cab roof running down the cab side. <u>CAB PAINT EXTERIOR</u>

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

All metal surfaces on the entire cab shall be ground by disc to remove any surface oxidation or surface debris which may hinder the paint adhesion. Once the surface is machine ground a high quality acid etching of base primer shall be applied. Upon the application of body fillers and their preparation, the cab shall be primed with a coating designed for corrosion resistance and surface paint adhesion. The maximum thickness of the primer coat shall be 2.00 mils.

The entire cab shall then be coated with an intermediate solid or epoxy surfacing agent that is designed to fill any minor surface defects, provide an adhesive bond between the primer and the paint and improve the color and gloss retention of the color. The finish to this procedure shall be a sanding of the cab with 360 grit paper followed by sealing the seams with SEM brand seam sealer.

The cab shall then be painted the specific color designated by the customer with an acrylic urethane type system designed to retain color and resist acid rain and most atmospheric chemicals found on the fire ground or emergency scene. The paint shall have a minimum thickness of 2.00 mils, followed by a clear top coat not to exceed 2.00 mils. The entire cab shall then be baked at 180 degrees for one (1) hour to speed the curing process of the coatings. <u>CAB PAINT MANUFACTURER</u>

The cab shall be painted with Sikkens paint. CAB PAINT PRIMARY/LOWER COLOR

The primary/lower paint color shall be Sikkens FLNA 31979 Red. CAB PAINT WARRANTY

Purchaser shall receive a Paint and Finish (Exterior Clear coated) One (1) Year limited warranty in accordance with, and subject to, warranty certificate RFW0701. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

CAB PAINT INTERIOR

The visible interior cab structure surfaces shall be painted with a multi-tone silver gray texture finish. CAB ENTRY DOORS

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

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

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

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

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

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

Purchaser shall receive a Cab Structure (Aluminum) Five (5) Years limited warranty in accordance with, and subject to, warranty certificate RFW0601. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request. <u>CAB TEST INFORMATION</u>

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

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

The chassis shall include a single starting electrical system which shall include a 12 volt direct current multiplexing system, suppressed per SAE J551. The wiring shall be appropriate gauge cross link with 311 degree Fahrenheit insulation. All SAE wires in the chassis shall be color coded and shall include the circuit number and function where possible. The wiring shall be

protected by 275 degree Fahrenheit minimum high temperature flame retardant loom. All nodes and sealed Deutsch connectors shall be waterproof. DATA RECORDING SYSTEM

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

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

Each portion of the data shall be recorded at the specified intervals and stored for the specified length of time to meet NFPA 1901 guidelines and shall be retrievable by connecting a laptop computer to the VDR system. The laptop connection shall be a panel mounted female type B USB connection point, remotely mounted in the left side foot well. LOAD MANAGEMENT SYSTEM

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

The electrical distribution panel shall include two (2) power studs. The studs shall be size #10 and each of the power studs shall be circuit protected with a fuse of the specified amperage. One (1) power stud shall be capable of carrying up to a 40 amp battery direct load. One (1) power stud shall be capable of carrying up to a 15 amp ignition switched load. The two (2) power studs shall share one (1) #10 ground stud. A 225 amp battery direct power and ground stud shall be provided and installed on the chassis near the left hand battery box for OEM body connections. EXTERIOR ELECTRICAL TERMINAL COATING

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

Purchaser shall receive an Electrical System One (1) Year or 18,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0201. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request. ENGINE

The chassis engine shall be a Cummins L9 engine. The L9 engine shall be an in-line six (6) cylinder, four cycle diesel powered engine. The engine shall offer a rating of 450 horse power at

2100 RPM and shall be governed at 2200 RPM. The torque rating shall feature 1250 foot pounds of torque at 1200 RPM with 543 cubic inches (8.9 liters) of displacement.

The L9 engine shall feature a VGT[™] Turbocharger, a high pressure common rail fuel system, fully integrated electronic controls with an electronic governor, and shall be EPA certified to meet the 2021 emissions standards using cooled exhaust gas recirculation and selective catalytic reduction technology.

The engine shall include an engine mounted combination full flow/by-pass oil filter with replaceable spin on cartridge for use with the engine lubrication system. The engine shall include Citgo brand Citgard 500, or equivalent SAE 15W40 CK-4 low ash engine oil which shall be utilized for proper engine lubrication.

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

The cab interior shall include an integrated engine tunnel constructed of 5052-H32 Marine Grade, 0.19 of an inch thick aluminum. The tunnel shall be a maximum of 41.50 inches wide X 25.50 inches high.

DIESEL PARTICULATE FILTER CONTROLS

There shall be two (2) controls for the diesel particulate filter. One (1) control shall be for regeneration and one (1) control shall be for regeneration inhibit. ENGINE PROGRAMMING HIGH IDLE SPEED

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

ENGINE HIGH IDLE CONTROL

The vehicle shall be equipped with a high-idle speed rocker switch and an automatic high-idle speed control. It shall be pre-set so when activated, it will operate the engine at the appropriate RPM to increase alternator output. This device shall operate only when the engine is running and the transmission is in neutral with the parking brake set. When automatically engaged the high idle shall disengage when the operator depresses the brake pedal, or the transmission is placed in gear, and shall be available to manually or automatically re-engage when the brake is released, or when the transmission is placed in neutral. ENGINE PROGRAMMING ROAD SPEED GOVERNOR

The engine shall include programming which will govern the top speed of the vehicle. <u>AUXILIARY ENGINE BRAKE</u>

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

The engine shall utilize a variable geometry turbo (VGT) as an integrated auxiliary engine brake to offer a variable rate of exhaust flow, which when activated in conjunction with the compression brake shall enhance the engine's compression braking capabilities. <u>AUXILIARY ENGINE BRAKE CONTROL</u> An engine compression brake control device shall be included. The electronic control device shall monitor various conditions and shall activate the engine brake only if all of the following conditions are simultaneously detected:

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

The compression brake shall be controlled through an on/off switch and a low/medium/high selector switch. ELECTRONIC ENGINE OIL LEVEL INDICATOR

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

The engine oil, coolant, transmission, and power steering fluid fills shall be located under the cab. The windshield washer fill shall be accessible through the front left side mid step. <u>ENGINE DRAIN PLUG</u>

The engine shall include an original equipment manufacturer installed oil drain plug. <u>ENGINE WARRANTY</u>

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

An apparatus interface wiring harness for the engine and transmission pump interlocks shall be supplied with the chassis. The harness shall include a connector for connection to a chassis pump panel harness supplied by the body builder and shall terminate in the left frame rail behind the cab for connection by the body builder. The harness shall include circuits deemed for a pump panel and shall contain circuits for a hand throttle, and a multiplexed gauge. Separate circuits shall also be included for a pump control switch, "Pump Engaged" and "OK to Pump" indicator lights, open compartment ground, start signal, park brake ground, ignition signal, master power, clean power, customer ignition, air horn solenoid switch, high idle switch and high idle indicator light. The harness shall contain interlocks that will prevent shifting to road or pump mode unless the transmission output speed translates to less than 1 mph and the transmission is in neutral. The shift to pump mode shall also require the park brake be set. <u>ENGINE PROGRAMMING REMOTE THROTTLE</u>

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

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

The engine air intake system shall include an ember separator. This ember separator shall be designed to protect the downstream air filter from embers using a combination of unique flat and

crimped metal screens packaged in a heavy duty galvanized steel frame. This multilayered screen shall trap embers and allow them to burn out before passing through the pack.

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

The air intake system shall include a restriction indicator light in the warning light cluster on the instrument panel, which shall activate when the air cleaner element requires replacement. <u>ENGINE FAN DRIVE</u>

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

The variable speed fan clutch only engages at the amount needed for proper cooling to facilitate improved vehicle performance, cab heating in cold climates, and fuel economy. The fan clutch design shall be fail-safe so that if the clutch drive fails the fan shall engage to prevent engine overheating due to the fan clutch failure. The fan speed shall include a J-1939 CAN clutch controller to receive signal from the engine control module to activate at variable rates of speed. Variable speeds shall be set through thermostatic and engine speed signals to run as efficiently and quietly as required to maintain temperature. ENGINE COOLING SYSTEM

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

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

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

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

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

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

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

The radiator and charge air cooler shall be removable through the bottom of the chassis. <u>ENGINE COOLING SYSTEM PROTECTION</u>

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

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

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

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

ENGINE PUMP HEAT EXCHANGER

A single bundle type coolant to water heat exchanger shall be installed between the engine and the radiator. The heat exchanger shall be designed to prohibit water from the pump from coming in contact with the engine coolant. This shall allow the use of water from the discharge side of the pump to assist in cooling the engine. COOLANT HOSES

The cooling systems hose shall be formed silicone hose and formed aluminized steel tubing and include stainless steel constant torque band clamps. <u>ENGINE COOLANT OVERFLOW BOTTLE</u>

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

The exhaust system shall include an end-in end-out horizontally mounted single module after treatment device, and downpipe from the charge air cooled turbo. The single module shall include four temperature sensors, diesel particulate filter (DPF), urea dosing module (UL2), and a selective catalytic reduction (SCR) catalyst to meet current EPA standards. The selective catalytic reduction catalyst utilizes a diesel exhaust fluid solution consisting of urea and purified water to convert NOx into nitrogen, water, and trace amounts of carbon dioxide. The solution shall be mixed and injected into the system through the DPF and SCR.

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

The single module after treatment through the end of the tailpipe shall be connected with zero leak clamps. The discharge shall terminate horizontally on the right side of the vehicle ahead of the rear tires.

The exhaust system after treatment module shall be mounted below the frame in the outboard position.

DIESEL EXHAUST FLUID TANK

The exhaust system shall include a molded cross linked polyethylene tank for Diesel Exhaust Fluid (DEF). The tank shall have a capacity of six (6) usable gallons and shall be mounted on the left hand side of the chassis frame behind the batteries below the frame. The tank shall have a fill with splash guard on the battery box under the cab for access when the cab is tilted.

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

ENGINE EXHAUST ACCESSORIES

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

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

The exhaust flex joint shall not include the thermal exhaust wrap. **EMISSIONS SYSTEMS WARRANTY**

Purchaser shall receive a Regulated Emissions Systems Five (5) Years or 100,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0140. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request. TRANSMISSION

The drive train shall include an Allison model EVS 3000 torgue converting, automatic transmission which shall include electronic controls. The transmission shall feature two (2) 10bolt PTO pads located on the converter housing.

The transmission shall include two (2) internal oil filters and Castrol TranSynd™ synthetic TES 295 transmission fluid which shall be utilized in the lubrication of the EVS transmission. An electronic oil level sensor shall be included with the readout located in the shift selector.

The transmission gear ratios shall be:

1st 3.49:1 2nd 1.86:1 3rd 1.41:1 4th 1.00:1 5th 0.75:1

6th 0.65:1 (if applicable) Rev 5.03:1 TRANSMISSION MODE PROGRAMMING

The transmission, upon start-up, will select a six (6) speed operation without the need to press the mode button.

TRANSMISSION FEATURE PROGRAMMING

The Allison Gen V/VI-E transmission EVS group package number 127 shall contain the 198 vocational package in consideration of the duty of this apparatus as a pumper. This package shall incorporate an automatic neutral with selector override. This feature commands the transmission to neutral when the park brake is applied, regardless of drive range requested on the shift selector. This requires re-selecting drive range to shift out of neutral for the override.

This package shall be coupled with the use of a split shaft PTO and incorporate pumping circuits. These circuits shall be used allowing the vehicle to operate in the fourth range lockup while operating the pump mode due to the 1 to 1 ratio through the transmission, therefore the output speed of the engine is the input speed to the pump. The pump output can be easily calculated by using this input speed and the drive ratio of the pump itself to rate the gallons of water the pump can provide.

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

Function ID	<u>Description</u>		<u>Wire assignment</u>
Inputs			
С	PTO Request		142
J	Fire Truck Pump Mode (4th Lockup)		122 / 123
Outputs			
C	Range Indicator		145 (4th)
G	PTO Enable Output		130
Signal Retur	n	103	
ELECTRONI	C TRANSMISSION OIL LEVEL INDICATOR		

The transmission fluid shall be monitored electronically and shall send a signal to activate a warning in the instrument panel when levels fall below normal. <u>TRANSMISSION SHIFT SELECTOR</u>

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

When the auxiliary brake is engaged, the transmission shall automatically shift to second gear to decrease the rate of speed assisting the secondary braking system and slowing the vehicle. <u>TRANSMISSION COOLING SYSTEM</u>

The transmission shall include a water to oil cooler system located in the cooling loop between the radiator and the engine. The transmission cooling system shall meet all transmission

manufacturer requirements. The transmission cooling system shall feature continuous flow of engine bypass water to maintain uninterrupted transmission cooling. TRANSMISSION DRAIN PLUG

The transmission shall include an original equipment manufacturer installed magnetic transmission fluid drain plug. <u>TRANSMISSION WARRANTY</u>

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

The transmission shall have two (2) power take off (PTO) mounting locations, one (1) in the 8:00 o'clock position and one (1) in the 4:00 o'clock position. <u>DRIVELINE</u>

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

A temporary jackshaft driveline shall be installed by the chassis manufacturer to accommodate the mid-ship split shaft pump as specified by the apparatus manufacturer. <u>MIDSHIP PUMP / GEARBOX MODEL</u>

The midship pump/gearbox provisions shall be for a Hale DSD forward pump. <u>MIDSHIP PUMP GEARBOX DROP</u>

The Hale pump gearbox shall have an "L" (long) drop length. <u>MIDSHIP PUMP RATIO</u>

The ratio for the midship pump shall be 2.28:1 (23). <u>MIDSHIP PUMP LOCATION C/L SUCTION TO C/L REAR AXLE</u>

The midship pump shall be located so the dimension from the centerline of the suction to the centerline of the rear axle is 100.00 inches. PUMP SHIFT CONTROLS

One (1) air pump shift control panel shall be located on the left hand side of the engine tunnel, integrated with the shifter pod. The following shall be provided on the panel: a three (3) position control lever; an engraved PUMP ENGAGED identification light; and an engraved OK TO PUMP identification light. The pump shift control panel shall be black with a yellow border outline and shall include pump instructions. An instruction plate describing the transmission shift selector position used for pumping shall be provided and located so it can be read from the driver's position per NFPA 16.10.1.3. The road mode shall be selected when the control lever is in the forward position and pump mode shall be selected when the control lever is in the rearward position.

The control lever center position shall exhaust air from both pump and road sides of the pump gear box shift cylinder. PUMP SHIFT CONTROL PLUMBING

Air connections shall be provided from the air supply tank to the pump shift control valve and from the pump shift control valve to the frame mounted bracket. The frame mounted bracket shall

include labeling identifying the pump and road connection points with threaded 0.25 inch NPT fittings on the solenoid for attaching the customer installed pump. The air supply shall be pressure protected from service brake system. FUEL FILTER/WATER SEPARATOR

The fuel system shall have a Fleetguard FS20121 fuel filter/water separator as a primary filter. The fuel filter shall have a drain valve.

A water in fuel sensor shall be provided and wired to an instrument panel lamp and audible alarm to indicate when water is present in the fuel/water separator.

A secondary fuel filter shall be included as approved by the engine manufacturer. <u>FUEL LINES</u>

The fuel system supply and return lines installed from the fuel tank to the engine shall be reinforced nylon tubing rated for diesel fuel. The fuel lines shall be brown in color and connected with brass fittings. ELECTRIC FUEL PRIMER

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

The fuel tank shall have a capacity of fifty (50) gallons and shall measure 35.00 inches in width X 15.00 inches in height X 24.00 inches in length.

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

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

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

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

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

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

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

The fuel tank fill ports shall be offset with the left fill port located in the rearward position and the right fill port located in the middle position on the fuel tank. <u>FUEL TANK DRAIN PLUG</u>

A 0.5 inch NPT magnetic drain plug shall be centered in the bottom of the fuel tank. <u>FRONT AXLE</u>

The front axle shall be a Meritor Easy Steer Non drive front axle, model number MFS-20. The axle shall include a 3.74 inch drop and a 71.00 inch king pin intersection (KPI). The axle shall include a conventional style hub with a standard knuckle. FRONT AXLE WARRANTY

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

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

Two (2) Bilstein inert, nitrogen gas filled shock absorbers shall be provided and installed as part of the front suspension system. The shocks shall be a monotubular design and fabricated using a special extrusion method, utilizing a single blank of steel without a welded seam, achieving an extremely tight peak-to-valley tolerance and maintains consistent wall thickness. The monotubular design shall provide superior strength while maximizing heat dissipation and shock life.

The ride afforded through the use of a gas shock is more consistent and shall not deteriorate with heat, the same way a conventional oil filled hydraulic shock would.

The Bilstein front shocks shall include a digressive working piston assembly allowing independent tuning of the compression and rebound damping forces to provide optimum ride and comfort without compromise. The working piston design shall feature fewer parts than most conventional twin tube and "road sensing" shock designs and shall contribute to the durability and long life of the Bilstein shock absorbers.

Proposals offering the use of conventional twin tube or "road sensing" designed shocks shall not be considered. FRONT SUSPENSION

The front suspension shall include a ten (10) leaf spring pack in which the longest leaf measures 54.00 inch long and 4.00 inches wide and shall include a military double wrapped front eye. Both spring eyes shall have a case hardened threaded bushing installed with lubrication counter bore and lubrication land off cross bore with grease fitting. The spring capacity shall be rated at 21,500 pounds.

STEERING COLUMN/ WHEEL

The cab shall include a Douglas Autotech steering column which shall include a seven (7) position tilt, a 2.25 inch telescopic adjustment, and an 18.00 inch, two (2) spoke steering wheel
located at the driver's position. The steering wheel shall be covered with black polyurethane foam padding.

The steering column shall contain a horn button, self-canceling turn signal switch, four-way hazard switch and headlamp dimmer switch. <u>ELECTRONIC POWER STEERING FLUID LEVEL INDICATOR</u>

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

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

The chassis shall have a front axle cramp angle of 48-degrees to the left and 44-degrees to the right. POWER STEERING GEAR

The power steering gear shall be a TRW model TAS 65 with an assist cylinder. <u>CHASSIS ALIGNMENT</u>

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

<u>REAR AXLE</u>

The rear axle shall be a Meritor model RS-25-160 single drive axle. The axle shall include precision forged, single reduction differential gearing, and shall have a fire service rated capacity of 27,000 pounds.

The axle shall be built of superior construction and quality components to provide the rugged dependability needed to stand up to the fire industry's demands. The axle shall include rectangular shaped, hot-formed housing with a standard wall thickness of 0.63 of an inch for extra strength and rigidity and a rigid differential case for high axle strength and reduced maintenance.

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

REAR AXLE DIFFERENTIAL LUBRICATION

The rear axle differential shall be lubricated with oil. <u>REAR AXLE WARRANTY</u>

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

The rear axle wheel bearings shall be lubricated with oil. VEHICLE TOP SPEED The top speed of the vehicle shall be approximately 68 MPH +/-2 MPH at governed engine RPM. <u>REAR SUSPENSION</u>

The single rear axle shall feature a Reyco 79KB vari-rate, self-leveling captive slipper type conventional multi-leaf spring suspension, with 57.50 inch X 3.00 inch springs. One (1) adjustable and one (1) fixed torque rod shall be provided.

The rear suspension capacity shall be rated from 21,000 to 31,500 pounds. <u>TIRE INTERMITTENT SERVICE RATING</u>

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

The front tires shall be Michelin 315/80R-22.5 20PR "L" tubeless radial XZUS 2 regional tread.

The front tire stamped load capacity shall be 20,000 pounds per axle with a nominal speed rating of 65 miles per hour when properly inflated to 130 pounds per square inch.

The Michelin Intermittent Service Rating maximum load capacity shall be 21,400 pounds per axle with a maximum speed of 65 miles per hour when properly inflated to 130 pounds per square inch.

The Michelin Intermittent Service Rating maximum speed capacity shall be 20,000 pounds per axle with a speed rating of 75 miles per hour when properly inflated to 130 pounds per square inch.

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

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

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

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

The rear axle ratio shall be 5.38:1. TIRE PRESSURE INDICATOR

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

The front wheels shall be Alcoa hub piloted, 22.50 inch X 9.00 inch aluminum wheels featuring a mirror polish on the outer face. The hub piloted mounting system shall provide easy installation and shall include two-piece flange nuts. REAR WHEEL

The outer rear wheels shall be Alcoa hub piloted, 22.50 inch X 8.25 inch aluminum wheels with a mirror polished outer surface. The inner rear wheels shall be Alcoa hub piloted, 22.50 inch X 8.25 inch aluminum wheels with bright machine finish. The hub piloted mounting system shall provide easy installation and shall include two-piece flange nuts. BRAKE SYSTEM

A rapid build-up air brake system shall be provided. The air brakes shall include, at a minimum, a two (2) air tank, three (3) reservoir system with a total of 4152 cubic inch of air capacity. A floor mounted treadle valve shall be mounted inside the cab for graduated control of applying and releasing the brakes. An inversion valve shall be installed to provide a controlled service brake application during an unlikely event including primary air supply loss. All air reservoirs provided on the chassis shall be labeled for identification.

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

A four (4) sensor, four (4) modulator Anti-lock Braking System (ABS) shall be installed on the front and rear axles in order to prevent the brakes from locking or skidding while braking during hard stops or on icy or wet surfaces. This in turn shall allow the driver to maintain steering control under heavy braking and in most instances, shorten the braking distance. The electronic monitoring system shall incorporate diagonal circuitry which shall monitor wheel speed during braking through a sensor and tone ring on each wheel. A dash mounted ABS lamp shall be provided to notify the driver of a system malfunction. The ABS system shall automatically disengage the auxiliary braking system device when required. The speedometer screen shall be capable of reporting all active defaults using PID/SID and FMI standards. FRONT BRAKES

The front brakes shall be Meritor 16.50 inch x 6.00 inch S-cam drum type. <u>REAR BRAKES</u>

The rear brakes shall be Meritor 16.50 inch X 8.63 inch S-cam drum type. The brakes shall feature a cast iron shoe. <u>PARK BRAKE</u>

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

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

The parking brake actuation valve shall be mounted to the left side of the engine tunnel integrated into the transmission shift pod console within easy access of the driver. <u>FRONT BRAKE SLACK ADJUSTERS</u>

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

The rear brakes shall include Meritor automatic slack adjusters installed on the axle which features a simple, durable design offering reduced weight. The automatic slack adjusters shall

feature a manual adjusting nut which cannot inadvertently be backed off and threaded grease fittings for easy serviceability. AIR DRYER

The brake system shall include a Wabco System Saver 1200 air dryer with an integral 100 watt heater with a Metri-Pack sealed connector. The air dryer incorporates an internal turbo cutoff valve that closes the path between the air compressor and air dryer purge valve during the compressor "unload" cycle. The turbo cutoff valve allows purging of moisture and contaminants without the loss of turbo boost pressure. The air dryer shall be located on the right hand frame rail forward of the front wheel behind the right hand cab step. FRONT BRAKE CHAMBERS

The front brakes shall be provided with MGM type 30 brake chambers. <u>*REAR BRAKE CHAMBERS*</u>

The rear axle shall include TSE 30/36 brake chambers which shall convert the energy of compressed air into mechanical force and motion. This shall actuate the brake camshaft, which in turn shall operate the foundational brake mechanism forcing the brake shoes against the brake drum. The TSE Type 36 brake chamber has a 36.00 square inch effective area. <u>AIR COMPRESSOR</u>

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

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

Manual pet-cock type drain valves shall be installed on all reservoirs of the air supply system. <u>AIR SUPPLY LINES</u>

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

Push to connect type fittings shall be used on the nylon tubing. All drop hoses shall include fiber reinforced neoprene covered hoses. WHEELBASE

The chassis wheelbase shall be 187.00 inches. <u>REAR OVERHANG</u>

The chassis rear overhang shall be 52.00 inches. <u>FRAME</u>

The frame shall consist of double rails running parallel to each other with cross members forming a ladder style frame. The frame rails shall be formed in the shape of a "C" channel, with the outer rail measuring 10.25 inches high X 3.50 inches deep upper and lower flanges X 0.38 inches thick

with an inner channel of 9.44 inches high X 3.13 inches deep and 0.38 inches thick. Each rail shall be constructed of 110,000 psi minimum yield high strength low alloy steel. Each double rail section shall be rated by a Resistance Bending Moment (RBM) minimum of 3,213,100 inch pounds and have a minimum section modulus of 29.21 cubic inches. The frame shall measure 35.00 inches in width.

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

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

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

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

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

FRAME PAINT

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

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

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

Purchaser shall receive a Frame Assembly Structural Five (5) Years limited warranty in accordance with, and subject to, warranty certificate RFW0301. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

FRAME RAIL CORROSION

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

Purchaser shall receive a Frame Components Corrosion (Powder Coat) One (1) Year or 18,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0313. The

warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request. FRONT BUMPER

A one piece, two (2) rib wrap-around style, polished stainless steel front bumper shall be provided. The material shall be 10 gauge 304 stainless steel, 12.00 inches high and 99.00 inches wide.

FRONT BUMPER EXTENSION LENGTH

The front bumper shall be extended approximately 6.00 inches ahead of the cab. <u>*AIR HORN*</u>

The front bumper shall include two (2) Hadley brand E-Tone air horns which shall measure 21.00 inches long with a 6.00 inch round flare. The air horns shall be trumpet style with a chrome finish on the exterior and a painted finish deep inside the trumpet. <u>AIR HORN LOCATION</u>

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

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

ELECTRONIC SIREN SPEAKER

There shall be one (1) Cast Products Inc. model SA4301, 100 watt speaker provided. The speaker shall measure 6.20 inches tall X 7.36 inches wide X 3.06 inches deep. The speaker shall include a flat mounting flange which shall be polished aluminum. ELECTRONIC SIREN SPEAKER LOCATION

The electronic siren speaker shall be located on the front bumper face on the right side outboard of the frame rail in the far outboard position. <u>FRONT BUMPER TOW HOOKS</u>

Two (2) heavy duty tow hooks, painted to match the frame components, shall be installed behind the front bumper in the forward position, bolted directly to the side of each chassis frame rail with grade 8 bolts. CAB TILT SYSTEM

The entire cab shall be capable of tilting approximately 45-degrees to allow for easy maintenance of the engine and transmission. The cab tilt pump assembly shall be located on the right side of the chassis above the battery box.

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

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

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

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

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

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

The remote control pendant shall include 20.00 feet of cable with a mating Deutsch connector. The remote control pendant shall be shipped loose with the chassis. <u>CAB TILT LOCK DOWN INDICATOR</u>

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

In addition to the alert message an audible alarm shall sound when the cab is unlocked and ajar with the parking brake released. <u>CAB WINDSHIELD</u>

The cab windshield shall have a surface area of 2825.00 square inches and be of a two (2) piece wraparound design for maximum visibility.

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

Each windshield shall be installed using black self locking window rubber. <u>GLASS FRONT DOOR</u>

The front cab doors shall include a window which is 27.00 inches in width X 26.00 inches in height. These windows shall have the capability to roll down completely into the door housing. This shall be accomplished manually utilizing a crank style handle on the inside of the door. A reinforced window regulator assembly shall be provided for severe duty use.

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

The windows shall be mounted within the frame of the front doors trimmed with a black anodized ring on the exterior. GLASS TINT FRONT DOOR

The windows located in the left and right front doors shall have a standard green automotive tint which shall allow seventy-five percent (75%) light transmittance.

GLASS REAR DOOR RH

The rear right hand side door shall include a window which is 27.00 inches in width X 26.00 inches in height. This window shall roll up and down manually utilizing a crank style handle on the inside of the door. A reinforced window regulator assembly shall be provided for severe duty use. <u>GLASS TINT REAR DOOR RIGHT HAND</u>

The window located in the right hand side rear door shall include a standard green automotive tint which shall allow seventy-five percent (75%) light transmittance. <u>GLASS REAR DOOR LH</u>

The rear left hand side door shall include a window which is 27.00 inches in width X 26.00 inches in height. This window shall roll up and down manually utilizing a crank style handle on the inside of the door. A reinforced window regulator assembly shall be provided for severe duty use. <u>GLASS TINT REAR DOOR LEFT HAND</u>

The window located in the left hand side rear door shall include a standard green automotive tint which shall allow seventy-five percent (75%) light transmittance. <u>GLASS SIDE MID RH</u>

The cab shall include a window on the right side behind the front and ahead of the crew door which shall measure 16.00 inches wide X 26.00 inches high. This window shall be fixed within this space and shall be rectangular in shape. The window shall be mounted using self locking window rubber. The glass utilized for this window shall include a green automotive tint unless otherwise noted.

GLASS TINT SIDE MID RIGHT HAND

The window located on the right hand side of the cab between the front and rear doors shall include a standard green automotive tint which shall allow seventy-five percent (75%) light transmittance. GLASS SIDE MID LH

The cab shall include a window on the left side behind the front door and ahead of the crew door and above the wheel well which shall measure 16.00 inches wide X 26.00 inches high. This window shall be fixed within this space and shall be rectangular in shape. The window shall be mounted using self locking window rubber. The glass utilized for this window shall include a green automotive tint unless otherwise noted. GLASS TINT SIDE MID LEFT HAND

The window located on the left hand side of the cab between the front and rear doors shall include a standard green automotive tint which shall allow seventy-five percent (75%) light transmittance. <u>CLIMATE CONTROL</u>

The cab shall include a 57,500 BTU @ 425 CFM front overhead heater/defroster which shall be provided and installed above the windshield between the sun visors.

The cab shall also include a combination heater air-conditioning unit mounted on the engine tunnel. This unit shall offer eight (8) adjustable louvers, four (4) forward facing and four (4) rearward facing, a temperature control valve and two (2) blowers offering three (3) speeds which shall be capable of circulating 550 cubic feet of air per minute. The unit shall be rated for 42,500 BTU/Hr of cooling and 36,000 BTU/Hr of heating.

All defrost/heating systems shall be plumbed with one (1) seasonal shut-off valve at the front corner on the right side of the cab.

The air conditioner lines shall be a mixture of custom bend zinc coated steel fittings and Aeroquip flexible hose with Aeroquip EZ clip fittings. **CLIMATE CONTROL DRAIN**

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

The heating and defrosting controls shall be located on the front overhead climate control unit. There shall be additional heating and air conditioning controls located on the engine tunnel mounted climate control unit. A/C CONDENSER LOCATION

A roof mounted A/C condenser shall be installed centered on the cab forward of the raised roof against the slope rise. A/C COMPRESSOR

The air-conditioning compressor shall be a belt driven, engine mounted, open type compressor that shall be capable of producing a minimum of 32,000 BTU at 1500 engine RPMs. The compressor shall utilize R-134A refrigerant and PAG oil. **UNDER CAB INSULATION**

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

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

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

The insulation shall be cut precisely to fit each section and sealed for additional heat and sound deflection. The insulation shall be held in place by acrylic pressure sensitive adhesive. **INTERIOR TRIM FLOOR**

The floor of the cab shall be covered with a multi-layer mat consisting of 0.25 inch thick sound absorbing closed cell foam with a 0.06 inch thick non-slip vinyl surface with a pebble grain finish. The covering shall be held in place by a pressure sensitive adhesive and aluminum trim molding. All exposed seams shall be sealed with silicone caulk matching the color of the floor mat to reduce the chance of moisture and debris retention. **INTERIOR TRIM**

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

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

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The cab interior shall feature header trim over the driver and officer dash constructed of 5052-H32 Marine Grade, 0.13 inch thick aluminum. <u>TRIM CENTER DASH</u>

The main center dash area shall be constructed of 5052-H32 Marine Grade, 0.13 inch thick aluminum plate. There shall be four (4) holes located on the top of the dash near each outer edge of the electrical access cover for ventilation. <u>TRIM LH DASH</u>

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

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

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

Each cab entry door shall include a three step entry. The first step closest to the ground shall be constructed of polished 5032 H32 aluminum Grip Strut® grating with angled outer corners. The step shall feature a splash guard to reduce water and debris from splashing in to the step. The splash guard shall have an opening on the outer edge to allow debris and water to flow through rather than becoming trapped within the stepping surface. The lower step shall be mounted to a frame which is integral with the construction of the cab for rigidity and strength. The middle step shall be integral with the cab construction and shall be trimmed with a Flex-Tred[®] adhesive grit surface material.

The interior trim on the doors of the cab shall consist of an aluminum panel constructed of Marine Grade 5052-H32 0.13 of an inch thick aluminum plate. The door panels shall include a painted finish.

CAB DOOR TRIM REFLECTIVE

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

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

INTERIOR GRAB HANDLE FRONT DOOR

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

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

The cab interior soft trim surfaces shall be gray in color. INTERIOR TRIM SUNVISOR

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

The cab interior floor mat shall be gray in color. CAB PAINT INTERIOR DOOR TRIM

The inner door panel surfaces shall be painted with multi-tone silver gray texture finish. <u>HEADER TRIM INTERIOR PAINT</u>

The metal surfaces in the header area shall be coated with multi-tone silver gray texture finish. <u>TRIM CENTER DASH INTERIOR PAINT</u>

The entire center dash shall be coated with multi-tone silver gray texture finish. Any accessory pods attached to the dash shall also be painted this color. <u>TRIM LH DASH INTERIOR PAINT</u>

The left hand dash shall be painted with a multi-tone silver gray texture finish. TRIM RIGHT HAND DASH INTERIOR PAINT

The right hand dash shall be painted with multi-tone silver gray texture finish. DASH PANEL GROUP

The main center dash area shall include three (3) removable panels located one (1) to the right of the driver position, one (1) in the center of the dash and one (1) to the left of the officer position. The center panel shall be within comfortable reach of both the driver and officer. <u>SWITCHES CENTER PANEL</u>

The center dash panel shall include twelve (12) rocker switch positons in a single row across the top of the panel.

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

The left dash panel shall include eight (8) switches. There shall be six (6) switches across the top of the panel and two (2) staggered on the left hand portion of the panel. Five (5) of the top row of switches shall be rocker type and the left one (1) shall be the headlight switch. The remaining

switches shall consist of one (1) windshield wiper/washer control switch and one (1) instrument lamp dimmer switch.

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

The right dash panel shall include no rocker switches or legends. <u>SEAT BELT WARNING</u>

A Weldon seat belt warning system, integrated with the Vehicle Data Recorder system, shall be installed for each seat within the cab. The system shall activate a digital seat position indicator with a seat position legend and integrated audible alarm in the switch panel.

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

The Bostrom Firefighter seats shall include a covering of extra high strength, wear resistant fabric made of durable low seam Durawear Plus™ ballistic polyester. A PVC coating shall be bonded to the back side of the material to help protect the seats from UV rays and from being saturated or contaminated by fluids. Durawear Plus™ meets or exceeds specification of the common trade name Imperial 1800. The material meets FMVSS 302 flammability requirements. If applicable, Theatre style seats located in the cab shall be high strength, wear resistant fabric made of durable ballistic polyester. A PVC coating shall be bonded to the back side of the material to help protect the seats from UV rays and from being saturated or contaminated by fluids. Common trade names for this material are Imperial 1200 and Durawear. SEAT COLOR

All seats supplied with the chassis shall be gray in color. All seats shall include red seat belts. <u>SEAT BACK LOGO</u>

The seat back shall include the "KME" logo. The logo shall be centered on the standard headrest of the seat back and on the left side of a split headrest. <u>SEAT DRIVER</u>

The driver's seat shall be an H.O. Bostrom 400 Series Firefighter model seat. The seat shall feature two-way manual fore and aft adjustment with 5.00 inches of travel. The seat shall also feature integral springs to isolate shock.

The seat shall feature an all belts to seat (ABTS) safety restraint system. The ABTS feature shall include a three-point shoulder harness with the lap belt, automatic retractor and buckle as an integral part of the seat assembly. The buckle portion of the seat belt shall be mounted on a semi-rigid stalk extending from the seat base within easy reach of the occupant.

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

This model of seat shall have successfully completed the static load tests set forth by FMVSS 207, 209, and 210 in effect at the time of manufacture. This testing shall include a simultaneous

forward load of 3000 pounds each on the lap and shoulder belts and twenty (20) times the weight through the center of gravity.

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

The driver's seat shall include a standard seat back incorporating the all belts to seat feature (ABTS). The seat back shall feature a contoured head rest. <u>SEAT MOUNTING DRIVER</u>

The driver's seat shall be installed in an ergonomic position in relation to the cab dash. <u>SEAT OFFICER</u>

The officer's seat shall be a H.O. Bostrom 300 Series Firefighter series. The seat shall feature a tapered and padded seat, and cushion. The seat shall be a non-adjustable type seat.

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

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

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

SEAT BACK OFFICER

The officer's seat shall feature a SecureAll[™] SCBA locking system which shall be one bracket model and store most U.S. and International SCBA brands and sizes while in transit or for storage within the seat back. The bracket shall be easily adjustable for all SCBA brands and cylinder diameters. All adjustment points shall utilize similar hardware and adjustments shall be made with one tool.

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

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

The SecureAll[™] shall include a release handle which shall be integrated into the seat cushion for quick and easy release. This shall eliminate the need for straps or pull cords to interfere with other SCBA equipment.

The seat back shall include a removable padded cover which shall be provided over the SCBA cavity. SEAT MOUNTING OFFICER

The officer's seat shall be installed in an ergonomic position in relation to the cab dash. <u>SEAT BELT ORIENTATION CREW</u>

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

The crew area shall include two (2) forward facing center crew seats with both located at the center of the rear wall. SEAT CREW FORWARD FACING CENTER

The crew area shall include a seat in the forward facing center position which shall be a H.O. Bostrom 300 Series Firefighter model seat. The seat shall feature a tapered and padded seat, and cushion. The seat and cushion shall be hinged and compact in design for additional room and shall remain in the stored position until occupied.

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

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

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

SEAT BACK FORWARD FACING CENTER

The forward facing center seat shall feature a SecureAll[™] self contained breathing apparatus (SCBA) locking system which shall be one bracket model and store most U.S. and International SCBA brands and sizes while in transit or for storage within the seat back. The bracket shall be easily adjustable for all SCBA brands and cylinder diameters. All adjustment points shall utilize similar hardware and adjustments shall be made with one tool.

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

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

The SecureAll[™] shall include a release handle which shall be integrated into the seat cushion for quick and easy release. This shall eliminate the need for straps or pull cords to interfere with other SCBA equipment.

The seat back shall include a removable padded cover which shall be provided over the SCBA cavity. SEAT FRAME FORWARD FACING

The forward facing seating position shall include two (2) channel type risers for each seat. The risers shall be constructed of 0.19 inch thick steel with 1.50 inch flanges. The risers shall be painted black. SEAT MOUNTING FORWARD FACING CENTER

The forward facing center seats shall be installed facing the front of the cab.

WINDSHIELD WIPER SYSTEM

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

ELECTRONIC WINDSHIELD FLUID LEVEL INDICATOR

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

The cab entry doors shall be equipped with exterior pull handles, suitable for use while wearing firefighter gloves. The handles shall be made of a fiber reinforced plastic composite with a black

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

All cab entry doors shall include locks which are keyed alike. The door locks shall be designed to prevent accidental lockout. <u>DOOR LOCKS</u>

Each cab entry door shall include a manually operated door lock. Each door lock may be actuated from the inside of the cab by means of a red knob located on the paddle handle of the respective door or by using a TriMark key from the exterior. The door locks are designed to prevent accidental lock out. GRAB HANDLES

The cab shall include one (1) 18.00 inch knurled, anti-slip, one-piece exterior assist handle behind each cab door. The grab handle shall be made of SAE 304 stainless steel and be 1.25 inch diameter to enable non-slip assistance with a gloved hand. <u>REARVIEW MIRRORS</u>

matt finish.

Retrac West Coast style single vision mirror heads model 1171 shall be provided and installed on each of the front cab doors. The mirrors shall be mounted to the cab doors with tubular stainless steel swing away arms and the mirror heads shall be center mounted on the arms to provide rigid mounting to reduce vibration.

The flat mirrors shall measure 7.00 inches wide x 16.00 inches high. A separate lower 8.00 inch round manually adjustable convex mirror model 980-4 shall be provided below the flat mirror for a wider field of vision. The mirror glass shall be held in a plastic housing with a stainless steel back. The mirrors shall be manufactured with the finest quality non-glare glass.

The flat mirrors shall be remotely adjustable vertically and horizontally via four way actuation switches. The control switches shall be mounted in the cab with in easy reach of the driver. <u>CAB FENDER</u>

Full width wheel well liners shall be installed on the extruded cab to limit road splash and enable easier cleaning. Each two-piece liner shall consist of an inner liner 16.00 inches wide made of vacuum formed ABS composite and an outer fenderette 3.50 inches wide made of rubber. <u>CAB EXTERIOR FRONT_SIDE EMBLEMS</u>

The cab shall include one (1) Spartan emblem installed on the front air intake grille. <u>IGNITION</u>

A master battery system with a keyless start ignition system shall be provided. Each system shall be controlled by a one-quarter turn Cole Hersee switch, both of which shall be mounted to the left of the steering wheel on the dash. A chrome push type starter button shall be provided adjacent to the master battery and ignition switches.

Each switch shall illuminate a green LED indicator light on the dash when the respective switch is placed in the "ON" position.

The starter button shall only operate when both the master battery and ignition switches are in the "ON" position.

BATTERY

The single start electrical system shall include three (3) Harris BCI 31 925 CCA batteries with a 210 minute reserve capacity and 4/0 welding type dual path starter cables per SAE J541. BATTERY TRAY

The batteries shall be installed on a steel battery tray located on the left side of the chassis, securely bolted to the frame rails. The battery tray shall be coated with the same material as the frame.

The battery tray shall include drain holes in the bottom for sufficient drainage of water. A durable, non-conducting, interlocking mat made by Dri-Dek shall be installed in the bottom of the tray to allow for air flow and help prevent moisture build up. The batteries shall be held in place by non-conducting phenolic resin hold down boards. BATTERY BOX COVER

The battery box shall include a steel cover which protects the top of the batteries on the left hand side of the vehicle. The cover shall include flush latches which shall keep the cover secure as well as a black powder coated handle for convenience when opening. <u>BATTERY CABLE</u>

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

The battery terminals shall not be utilized for auxiliary connections. The only acceptable auxiliary connections shall be for the cross over link from the left bank to the right bank, power for jumper studs and starter cables. All other auxiliary connections will use remote studs mounted in the battery box area. There shall be four (4) remote studs labeled as Common Power, Common Ground, Clean Power, and Clean Ground. BATTERY JUMPER STUD

The starting system shall include battery jumper studs. These studs shall be located on the rear face of the left hand battery tray. The studs shall allow the vehicle to be jump started, charged, or the cab to be raised in an emergency in the event of battery failure. ALTERNATOR

The charging system shall include a 270 amp Leece Neville 12 volt alternator. The alternator shall include a self-excited integral regulator. <u>STARTER MOTOR</u>

The single start electrical system shall include a Delco brand starter motor. <u>BATTERY CONDITIONER</u>

A Kussmaul Auto Charge 40 LPC battery conditioner shall be supplied. The battery conditioner shall provide a 40 amp output for the chassis batteries and a 15 amp output circuit for accessory loads. The battery conditioner shall be mounted in the cab in the LH rear facing outer seating position.

BATTERY CONDITIONER DISPLAY

A Kussmaul battery conditioner display shall be supplied. The battery conditioner display shall be mounted in the cab, viewable through the cab mid side window behind the left front door. <u>ELECTRICAL INLET LOCATION</u>

An electrical inlet shall be installed on the left hand side of cab over the wheel well. <u>ELECTRICAL INLET</u>

A Kussmaul 20 amp super auto-eject electrical receptacle shall be supplied. It shall automatically eject the plug when the starter button is depressed.

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

Amp Draw Reference List: Kussmaul 40 LPC Charger - 5 Amps Kussmaul 40/20 Charger - 8.5 Amps Kussmaul 80 LPC Charger - 13 Amps Kussmaul EV-40 - 6.2 Amps Blue Sea P12 7532 - 7.5 Amps Iota DLS-45/IQ4 - 11 Amps 1000W Engine Heater - 8.33 Amps 1500W Engine Heater - 12.5 Amps 120V Air Compressor - 4.2 Amps 120V Dometic HVAC - 15 Amps ELECTRICAL INLET CONNECTION

The electrical inlet shall be connected to the battery conditioner.

ELECTRICAL INLET COLOR

The electrical inlet connection shall include a yellow cover. <u>HEADLIGHTS</u>

The cab front shall include four (4) rectangular halogen headlamps with separate high and low beams mounted in bright chrome bezels. FRONT TURN SIGNALS

The front fascia shall include two (2) Techniq model K60 4.00 inch X 6.00 inch amber LED sequential arrow turn signals which shall be installed in an outboard position within the front fascia chrome bezel. HEADLIGHT LOCATION

The headlights shall be located on the front fascia of the cab directly below the front warning lights. SIDE TURN/MARKER LIGHTS

The sides of the cab shall include two (2) Tecniq S170 LED side marker lights which shall be provided just behind the front cab radius corners. The lights shall be amber with chrome bezels. <u>MARKER AND ICC LIGHTS</u>

In accordance with FMVSS, there shall be five (5) Tecniq S170 LED cab marker lamps designating identification, center and clearance provided. These lights shall be installed on the face of the cab within full view of other vehicles from ground level. The lights shall be amber with chrome bezels. <u>HEADLIGHT AND MARKER LIGHT ACTIVATION</u>

The headlights and marker lights shall be controlled through a rocker switch within easy reach of the driver. There shall be a dimmer switch within easy reach of the driver to adjust the brightness of the dash lights. The headlamps shall be equipped with the "Daytime Running" light feature, which shall illuminate the headlights when the ignition switch is in the "On" position and the parking brake is released. LIGHTBAR SWITCH

The light bar shall be controlled by a rocker switch located on the switch panel. This switch shall be clearly labeled for identification. INTERIOR OVERHEAD LIGHTS

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

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

There shall be one (1) light bar installed on the cab roof. The light bar shall be provided and installed by the chassis manufacturer. The light bar installation shall include a lowered mounting that shall place the light bar just above the junction box and wiring to a control switch on the cab dash.

CAB FRONT LIGHTBAR

The lightbar provisions shall be for one (1) Whelen brand Freedom IV LED lightbar mounted centered on the front of the cab roof. The lightbar shall be 72.00 inches in length. The lightbar shall feature six (6) red LED light modules and two (2) clear LED light modules. The entire lightbar

shall feature a clear lens. The clear lights shall be disabled with park brake engaged. The cable shall exit the lightbar on the right side of the cab. GROUND LIGHTS

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

The ground lighting shall be activated when the parking brake is set. LOWER CAB STEP LIGHTS

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

The intermediate step well area at the front doors shall include a TecNiq D06 LED light within a chrome housing. The front egress step lights shall provide visibility to the step well area for the first step exiting the vehicle. The Egress step lights shall activate with entry step lighting. <u>ENGINE COMPARTMENT LIGHT</u>

There shall be a LED NFPA compliant light mounted under the engine tunnel for area work lighting on the engine. The light shall include a polycarbonate lens, a housing which is vibration welded and a bulb which shall be shock mounted for extended life. The light shall activate automatically when the cab is tilted.

DO NOT MOVE APPARATUS LIGHT

The front headliner of the cab shall include a flashing red TecNiq K50 LED light clearly labeled "Do Not Move Apparatus". In addition to the flashing red light, an audible alarm shall be included which shall sound while the light is activated.

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

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

A master switch shall be included in the main rocker switch panel. The switch shall be a rocker type, red in color and labeled "Master" for identification. The switch shall feature control over all devices wired through it. Any warning device switch left in the "ON" position shall automatically power up when the master switch is activated. <u>INBOARD FRONT WARNING LIGHTS</u>

The cab front fascia shall include two (2) Whelen C6 SurfaceMax[™] series Super LED front warning lights in the left and right inboard positions. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the front fascia of the cab within a chrome bezel. INBOARD FRONT WARNING LIGHTS COLOR

The warning lights mounted on the cab front fascia in the inboard positions shall be red with a clear lens. FRONT WARNING SWITCH

GSO# 11694-95

The front warning lights shall be controlled via rocker switch on the panel. This switch shall be clearly labeled for identification. INTERSECTION WARNING LIGHTS

The chassis shall include two (2) Whelen C6 SurfaceMax series Super LED intersection warning lights, one (1) each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted within a chrome bezel.

INTERSECTION WARNING LIGHTS COLOR

The intersection lights shall be red with a clear lens. INTERSECTION WARNING LIGHTS LOCATION

The intersection lights shall be mounted on the side of the cab on the front radius. <u>SIDE AND INTERSECTOR WARNING SWITCH</u>

The side and intersector warning lights shall be controlled by a rocker switch on the switch panel. This switch shall be clearly labeled for identification. <u>SIREN CONTROL HEAD</u>

A Whelen 295HFS2 electronic siren control head with remote amplifier shall be provided and flush mounted in the switch panel with a location specific to the customer's needs. The siren shall feature 200-watt output, hands free mode and shall be in "standby" mode awaiting instruction. The siren shall offer radio broadcast, public address, wail, yelp, or piercer tones and hands free operation which shall allow the operator to turn the siren on and off from the horn ring if a horn/siren selector switch option is also selected. AUDIBLE WARNING LH FOOT SWITCH

A foot switch wired to actuate the air horn(s) shall be supplied for installation in the front section of the cab for driver actuation. AIR HORN FOOT SWITCH LH

The air horn foot switch shall be a Linemaster model 491-S. <u>AIR HORN FOOT SWITCH LH LOCATION</u>

The air horn foot switch shall be located on the left hand side accessible to the driver between the steering column and the door. AIR HORN FOOT SWITCH LH POSITION

The air horn foot switch shall be positioned inboard of any other foot switch, if applicable. <u>AUDIBLE WARNING LH FOOT SWITCH BRACKET</u>

A 30.00 degree angled foot switch bracket, wide enough to accommodate (2) foot switches, shall be installed outboard of the steering column for specified driver accessible foot switch activations.

AUDIBLE WARNING RH FOOT SWITCH

A foot switch wired to actuate the air horn(s) shall be supplied for installation in the front section of the cab for officer actuation. AIR HORN FOOT SWITCH RH

The air horn foot switch shall be a Linemaster model 491-S. <u>AIR HORN FOOT SWITCH RH LOCATION</u> The air horn foot switch shall be temporarily tied up with a coiled wire drop at the firewall inboard for installation by the customer on the right hand side accessible to the officer. BACK-UP ALARM

An ECCO model 575 backup alarm shall be installed at the rear of the chassis with an output level of 107 dB. The alarm shall automatically activate when the transmission is placed in reverse. <u>INSTRUMENTATION</u>

An ergonomically designed instrument panel shall be provided. Each gauge shall be backlit with LED lamps. Stepper motor movements shall drive all gauges. The instrumentation system shall be multiplexed and shall receive ABS, engine, and transmission information over the J1939 data bus to reduce redundant sensors and wiring.

A twenty eight (28) icon lightbar message center with integral LCD odometer/trip odometer shall be included. The odometer shall display up to 999,999.9 miles. The trip odometer shall display 9,999.9 miles. The LCD message center screen shall be capable of custom configuration by the users for displaying certain vehicle status and diagnostic functions.

The instrument panel shall contain the following gauges:

One (1) three-movement gauge displaying vehicle speed, fuel level, and Diesel Exhaust Fluid (DEF) level. The primary scale on the speedometer shall read from 0 to 100 MPH, and the secondary scale on the speedometer shall read from 0 to 160 KM/H. The scale on the fuel and DEF level gauges shall read from empty to full as a fraction of full tank capacity. Red indicator lights in the gauge and an audible alarm shall indicate low fuel or low DEF at 1/8th tank level.

One (1) three-movement gauge displaying engine RPM, and primary and secondary air system pressures shall be included. The scale on the tachometer shall read from 0 to 3000 RPM. The scale on the air pressure gauges shall read from 0 to 150 pounds per square inch (PSI) with a red line zone indicating critical levels of air pressure. Red indicator lights in the gauge and an audible alarm shall indicate low air pressure.

One (1) four-movement gauge displaying engine oil pressure, coolant temperature, voltmeter, and transmission temperature shall be included. The scale on the engine oil pressure gauge shall read from 0 to 100 pounds PSI with a red line zone indicating critical levels of oil pressure. A red indicator light in the gauge and audible alarm shall indicate low engine oil pressure. The scale on the coolant temperature gauge shall read from 100 to 250 degrees Fahrenheit (°F) with a red line zone indicating critical coolant temperatures. A red indicator light in the gauge and audible alarm shall indicate low engine oil pressure. The scale on the coolant temperature gauge shall read from 100 to 250 degrees Fahrenheit (°F) with a red line zone indicating critical coolant temperatures. A red indicator light in the gauge and audible alarm shall indicate high coolant temperature. The scale on the voltmeter shall read from 9 to 18 volts with a red line zone indicating critical levels of battery voltage. A red indicator light in the gauge and an audible alarm shall indicate high or low system voltage. The low voltage alarm shall indicate when the system voltage has dropped below 11.8 volts for more than 120 seconds in accordance with the requirements of NFPA 1901. The scale on the transmission temperature gauge shall read from 100 to 300 degrees °F with a red line zone indicating critical temperatures. A red indicator light in the gauge and an audible alarm shall indicate negative in the gauge and an audible alarm shall indicator light in the gauge and an audible alarm shall indicate negative seconds in accordance with the requirements of NFPA 1901. The scale on the transmission temperature gauge shall read from 100 to 300 degrees °F with a red line zone indicating critical temperatures. A red indicator light in the gauge and an audible alarm shall indicate a high transmission temperature.

The light bar portion of the message center shall include twenty-eight (28) LED backlit indicators. The lightbar shall be split with fourteen (14) indicators on each side of the LCD message screen. The lightbar shall contain the following indicators and produce the following audible alarms when supplied in conjunction with applicable configurations:

RED INDICATORS

Stop Engine - indicates critical engine fault Air Filter Restricted - indicates excessive engine air intake restriction Park Brake - indicates parking brake is set Seat Belt - indicates a seat is occupied and corresponding seat belt remains unfastened Low Coolant - indicates critically low engine coolant Cab Tilt Lock - indicates the cab tilt system locks are not engaged.

AMBER INDICATORS

Malfunction Indicator Lamp (MIL) - indicates an engine emission control system fault Check Engine - indicates engine fault Check Transmission - indicates transmission fault Anti-Lock Brake System (ABS) - indicates anti-lock brake system fault High exhaust system temperature – indicates elevated exhaust temperatures Water in Fuel - indicates presence of water in fuel filter Wait to Start - indicates active engine air preheat cycle Windshield Washer Fluid – indicates washer fluid is low DPF restriction - indicates a restriction of the diesel particulate filter Regen Inhibit-indicates regeneration of the DPF has been inhibited by the operator Range Inhibit - indicates a transmission operation is prevented and requested shift request may not occur. SRS - indicates a problem in the supplemental restraint system Check Message - indicates a vehicle status or diagnostic message on the LCD display requiring attention.

GREEN INDICATORS

Left and Right turn signal indicators ATC - indicates low wheel traction for automatic traction control equipped vehicles, also indicates mud/snow mode is active for ATC system High Idle - indicates engine high idle is active. Cruise Control - indicates cruise control is enabled OK to Pump - indicates the pump is engaged and conditions have been met for pump operations Pump Engaged - indicates the pump transmission is currently in pump gear Auxiliary Brake - indicates secondary braking device is active

BLUE INDICATORS High Beam indicator

AUDIBLE ALARMS

Air Filter Restriction Cab Tilt Lock **Check Engine** Check Transmission **Open Door/Compartment** High Coolant Temperature High or Low System Voltage High Transmission Temperature Low Air Pressure Low Coolant Level Low DEF Level Low Engine Oil Pressure Low Fuel Seatbelt Indicator Stop Engine Water in Fuel Extended Left/Right Turn Signal On

ABS System Fault **BACKLIGHTING COLOR**

The instrumentation gauges and the switch panel legends shall be backlit using red LED backlighting. **CAB EXTERIOR PROTECTION**

The cab face shall have a removable plastic film installed over the painted surfaces to protect the paint finish during transport to the body manufacturer. FIRE EXTINGUISHER

A 2.50 pound D.O.T approved fire extinguisher with BC rating shall be shipped loose with the cab. **DOOR KEYS**

The cab and chassis shall include a total of four (4) door keys for the manual door locks. WARRANTY

Purchaser shall receive a Custom Chassis One (1) Year or 18,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0101. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

CHASSIS OPERATION MANUAL

There shall be two (2) digital copies of the chassis operation manual provided with the chassis. The digital data shall include a parts list specific to the chassis model. ENGINE AND TRANSMISSION OPERATION MANUALS

The following manuals specific to the engine and transmission models ordered will be included with the chassis in the ship loose items:

(1) Hard copy of the Engine Operation and Maintenance manual with USB flash drive (1) Digital copy of the Transmission Operator's manual on USB flash drive (1) Digital copy of the Engine Owner's manual on USB flash drive CAB/CHASSIS AS BUILT WIRING DIAGRAMS

The cab and chassis shall include two (2) digital copies of wiring schematics and option wiring diagrams. SALES TERMS

The sale of the chassis shall be governed by the terms contained on the Sales Terms – Acceptance of Purchase Order document, a copy of which is attached to this option.

PO00010573 - FUEL POCKET, DRIVER SIDE REAR WHEEL WELL PANEL

QTY: 1.00

A fuel fill shall be provided in the driver side rear wheel well area.

A Cast Products heavy duty cast aluminum spring loaded hinged fill door shall be provided.

A label indicating "Ultra Low Sulfur Diesel Fuel Only" shall be provided adjacent to the fuel fill.

PO00022590 - 12 VOLT ELECTRICAL SYSTEM TESTING - ALL UNITS

QTY: 1.00

The apparatus low voltage electrical system shall be tested and certified by the manufacturer. The certification shall be provided with the apparatus. All tests shall be performed with the air temperature between 0°F and 100°F.

The following three (3) tests shall be performed in order. Before each test, the batteries shall be fully charged.

The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load shall be activated for 10 minutes. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a test failure.

The minimum continuous electrical load shall be activated with the engine running at idle speed. The engine temperature shall be stabilized at normal operating temperature. The battery system shall be tested to detect the presence of battery discharge current. The detection of battery discharge current shall be considered a test failure.

The total continuous electrical load shall be activated with the engine running up to the engine manufacturers governed speed. The test duration shall be a minimum of 2 hours. Activation of the load management system shall be permitted during this test. However, an alarm sounded due to excessive battery discharge, as detected by the system, or a system voltage of fewer than 11.7 volts DC for a 12-volt system, for more than 120 seconds, shall be considered a test failure.

Following completion of the preceding tests, the engine shall be shut off. The total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm is activated.

The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of fewer than 11.7 volts shall be considered a test failure. The battery system shall then be able to restart the engine.

At the time of delivery, documentation shall be provided with the following information:

- Documentation of the electrical system performance test
- A written load analysis of the following;
- Nameplate rating of the alternator
- Alternator rating at idle while meeting the minimum continuous electrical load
- Each component load comprising the minimum continuous electrical load.
- Additional loads that, when added to the minimum continuous load, determine the total connected load.
- Each individual intermittent load.

PO00011799 - DIRECT BATTERY GROUNDING STRAP

Direct grounding straps shall be mounted to the following areas; frame to cab, frame to body and frame to pump enclosure.

All exposed electrical connections shall be coated with "Z-Guard 8000" to prevent corrosion.

PO00010737 - DELETE BODY STEP LIGHTS - LIGHTED STEPS SELECTED

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00010735 - HOSE BED WORK LIGHT - SWITCH

The hose bed work light shall have a protected 12-volt switch at the rear body panel.

The switch will be labeled "HOSE BED WORK LIGHTS."

***SPECIAL: SP00040468 - REAR SCENE LIGHT SWITCH - RECESSED

A switch shall be provided at the rear of the body for the rear scene lights. The switch shall be installed in a recessed pocket that shall be painted to match the body color.

PO00003389 - CONTROL SWITCHES ON PUMP PANEL FOR REAR OF CAB LIGHTS

Two (2) switches shall be provided on the pump panel to turn the rear of cab lights on and off.

One (1) switch shall control the driver side light and one (1) switch shall control the officer side light.

P000003234 - CONTROL SWITCH IN CAB FOR 12 V REAR OF BODY SCENE LIGHTS

QTY: 1.00

QTY: 1.00

Controls shall be provided in the cab control system (or optional mechanical switch) to turn the rear of body lights on and off.

P000003240 - CONTROL SWITCH IN CAB FOR 12 V DRIVER SIDE OF BODY SCENE LIGHTS

QTY: 1.00

Controls shall be provided in the cab control system (or optional mechanical switch) to turn the driver side of body lights on and off.

P000003242 - CONTROL SWITCH IN CAB FOR 12 V OFFICER SIDE OF BODY SCENE LIGHTS

QTY: 1.00

QTY: 1.00

Controls shall be provided in the cab control system (or optional mechanical switch) to turn the officer side of body lights on and off.

***SPECIAL: SP00041049 - AKRON SCENESTAR 150W TELESCOPING W/POLES, 12V - REAR OF FC-94

Two (2) Akron SceneStar, ELSS-SLDC, 150 watt, 12 volt, LED flood lights shall be installed, one (1) on each side, on the rear of the cab, each using a Extenda-Lite, side mount, telescoping pole.

Each lamp head shall draw 12 amps and generate 14,000 lumens.

Each light shall be switched at the light head.

PO00003399 - WIRE UPGRADE FOR 12V HIGH AMP LIGHTS - REAR OF CAB

QTY: 1.00

PO00010755 - NFPA COMPLIANT WARNING LIGHT PACKAGE

QTY: 1.00

The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901 Fire Apparatus Standard.

The lighting as specified shall meet the requirements for both "Clearing Right of Way" and "Blocking Right of Way" which includes disabling all white warning lights when the apparatus is in "Blocking Right of Way" mode.

PO00010757 - WARNING LIGHT FLASH PATTERN - NFPA FLASH PATTERN

QTY: 1.00

All of the perimeter warning lights shall be set to a default NFPA compliant flash pattern as provided by the light manufacturer.

PO00010756 - LIGHT PACKAGE ACTUATION/CONTROLS

QTY: 1.00 The entire warning light package shall be actuated with a single warning light switch located on the cab switch panel. The wiring for the warning light package shall engage all of the lights required for "Clearing Right of Way" mode when the vehicle parking brake is not engaged. An automatic control system shall be provided to switch the warning lights to the "Blocking Right of Way" mode when the vehicle parking brake is engaged.

PO00010759 - LIGHT PACKAGE NFPA CERTIFICATION

The warning light system(s) specified above shall not exceed a combined total amperage draw of 45 AMPS with all lights activated in either the "Clearing Right of Way" or the "Blocking Right of Way"

The warning light system(s) shall be certified by the light system manufacturer(s), to meet all of the requirements in the current revision of the NFPA 1901 Fire Apparatus Standard as noted in the General Requirements section of these specifications.

The NFPA required "Certificate of Compliance" shall be provided with the completed apparatus.

Any large truck as defined by NFPA shall have the lower zone warning lights mounted no higher than 62" to the optical center of the warning light from ground level. {No Exceptions}

PO00003639 - C-UPPER, WHELEN C9 SUPER LEDS

Two (2) Whelen, C9, super LED light heads shall be furnished and mounted one (1) on each side on the upper rear face of the body, facing rear.

PO00024573 - UPPER ZONE C WARNING LIGHT LENS - RED

The upper zone C warning lights shall include red LEDs and a red lens if available from the manufacturer. If a red lens is unavailable, a clear lens shall be included.

PO00024593 - UPPER ZONE C WARNING LIGHT BEZEL - CHROME

QTY: 1.00 The upper zone C warning lights shall include a chrome bezel if available from the manufacturer. If a chrome bezel is unavailable, a black bezel shall be included.

PO00003662 - B/D-UPPER FRONT, COVERED BY LIGHTS IN ZONE A-UPPER

The lighting requirement for this area is covered by the lights noted in Zone "A" - Upper.

PO00003651 - B/D-UPPER REAR, WHELEN C6 SUPER LEDS

Two (2) Whelen, C6 super LED light heads shall be furnished and mounted one (1) on each side on the upper side face, towards the rear of the body, facing to each side of the unit.

The lights shall be installed with a chrome plated mounting flange.

PO00024577 - UPPER ZONE B/D REAR WARNING LIGHT LENS - RED

The upper zone B/D rear warning lights shall include red LEDs and a red lens if available from the manufacturer. If a red lens is unavailable, a clear lens shall be included.

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00024597 - UPPER ZONE B/D REAR WARNING LIGHT BEZEL - CHROME

QTY: 1.00 The upper zone B/D rear warning lights shall include a chrome bezel if available from the manufacturer. If a chrome bezel is unavailable, a black bezel shall be included.

PO00003878 - C-LOWER REAR, WHELEN C6 SUPER LEDS

Two (2) Whelen, C6, super LED light heads shall be provided and installed one (1) each side directly below the DOT stop, tail, turn and backup lights.

PO00024581 - LOWER ZONE C WARNING LIGHT LENS - RED

The lower zone C warning lights shall include red LEDs and a red lens if available from the manufacturer. If a red lens is unavailable, a clear lens shall be included.

PO00003903 - B/D-LOWER MID, WHELEN C6 SUPER LEDS

Two (2) Whelen, C6 super LED light heads shall be provided and installed with one (1) on each side.

PO00024585 - LOWER ZONE B/D MID WARNING LIGHT LENS - RED

The lower zone B/D mid warning lights shall include red LEDs and a red lens if available from the manufacturer. If a red lens is unavailable, a clear lens shall be included.

PO00024605 - LOWER ZONE B/D MID WARNING LIGHT BEZEL - CHROME

The lower zone B/D mid warning lights shall include a chrome bezel if available from the manufacturer. If a chrome bezel is unavailable, a black bezel shall be included.

PO00003925 - B/D-LOWER REAR, WHELEN C6 SUPER LEDS

Two (2) Whelen C6 super LED light heads shall be provided and installed with one (1) on each side.

PO00024587 - LOWER ZONE B/D REAR WARNING LIGHT LENS - RED

The lower zone B/D rear warning lights shall include red LEDs and a red lens if available from the manufacturer. If a red lens is unavailable, a clear lens shall be included.

PO00024607 - LOWER ZONE B/D REAR WARNING LIGHT BEZEL - CHROME

QTY: 1.00

The lower zone B/D rear warning lights shall include a chrome bezel if available from the manufacturer. If a chrome bezel is unavailable, a black bezel shall be included.

PO00003298 - GROUND LIGHTS, 2 LED BELOW PUMP PANEL RUNNING BOARD - TECNIQ E10

QTY: 1.00

One (1) TecNiq LED, 6" long ground light with stainless steel mounting bracket, shall be provided under each side pump panel running board, two (2) total.

PO00003301 - GROUND LIGHTS, 2 LED AT REAR BODY CORNERS - TECNIQ E10

QTY: 1.00

One (1) TecNiq LED, 6" long ground light with stainless steel mounting bracket, shall be provided under each rear body corner, two (2) total.

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QTY: 1.00 side.

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00026832 - CAB AND BODY GROUND LIGHTS ACTIVATE AS PROVIDED BY CHASSIS MANUFACTURER

QTY: 1.00

QTY: 1.00

Ground light activation shall be as provided by the chassis manufacturer and shall be wired through the load management system.

PO00011821 - BODY ELECTRICAL SYSTEM

All electrical lines in the body shall be protected by automatic circuit breakers, conveniently located to permit ease of service.

Flashers, heavy solenoids and other major electrical controls shall be located in a central area near the circuit breakers.

All lines shall be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram.

A complete wiring diagram shall be supplied with the apparatus.

Wiring shall be carefully protected from weather elements and snagging. Heavy duty loom shall be used for the entire length.

Grommets shall be utilized where wiring passes through panels.

In order to minimize the risk of heat damage, wires run in the engine compartment area shall be carefully installed and suitably protected by the installation of heat resistant shielded loom.

All electrical equipment shall be installed to conform to the latest federal standards as outlined in NFPA 1901.

PO00010752 - BODY ELECTRICAL HARNESS - V-MUX

QTY: 1.00

PO00026555 - BLUE SEA FUSE BLOCK IN BODY COMPARTMENT - BATTERY POWER

QTY: 1.00

The Blue Sea fuse block(s) installed in the body shall have the power source connected directly to battery.

PO00025517 - BLUE SEA FUSE BLOCK - 6 CIRCUIT FORWARD WALL L1

QTY: 1.00

A Blue Sea 5025B, 6 circuit fuse block, shall be installed on the upper forward wall of the body L1 compartment interior.

This block has a maximum amperage of 60 Amps per block and 30 Amps per circuit.

PO00025540 - BLUE SEA FUSE BLOCK - 6 CIRCUIT FORWARD WALL R3

QTY: 1.00

A Blue Sea 5025B, 6 circuit fuse block, shall be installed on the upper forward wall of the body R3 compartment interior.

This block has a maximum amperage of 60 Amps per block and 30 Amps per circuit.

PO00009693 - DUNNAGE AREA LIGHTING, TECNIQ EON 3 LED

Two (2) stainless steel, TecNig Eon 3-LED horizontal surface mounted lights shall be provided in the dunnage area to provide adequate illumination of this area.

These lights shall be switched in the same manner as the step lights.

PO00011816 - COMPARTMENT LIGHT ACTIVATION

Compartment lighting shall be switched either from an integral switch as provided by the roll up door manufacturer or a magnetic proximity switch if it is a KME manufactured door.

PO00003419 - COMPARTMENT LIGHTS, AMDOR LUMA BAR LED LIGHTING - SINGLE

QTY: 7.00 Each individual, equipment storage compartment shall be equipped with the AMDOR Luma Bar, LED light fixture, mounted on the forward (or rearward) vertical door frame.

PO00002999 - MARKER/TURN LIGHTS @ EA SIDE OF BODY

Red, LED marker lights with integral reflectors shall be provided at the lower side rear, having one (1) on each side.

Yellow, LED side marker and turn lights shall be provided on the apparatus lower side, forward of rear axle that puts one (1) on each side, if the apparatus is 30' long or longer.

PO00003003 - DOT MARKER LIGHTS @ REAR OF BODY

Red, LED clearance lights shall be provided on the apparatus rear upper having one (1) on each side at the outermost practical location.

Red, LED, 3-lamp identification bar will be provided on the apparatus rear center.

PO00003007 - DOT AMBER REFLECTORS @ SIDE OF BODY

QTY: 1.00 Yellow reflectors shall be provided on the apparatus body lower side, as far forward and low as practical with one (1) on each side if the apparatus is 30' long or longer.

PO00003008 - DOT RED REFLECTORS @ REAR OF BODY

Red reflectors shall be provided on the apparatus rear with one (1) on each side at the outermost practical location.

PO00026701 - TECNIQ #L10 LED LICENSE PLATE LIGHT

One (1) Tecniq model #L10 LED license plate light shall be provided above the mounting position of the license plate. The license plate shall be located on the driver's side rear of body.

The light shall be clear in color and shall have a chrome finish.

PO00003037 - WHELEN C6 LED BRAKE, REVERSE, TURN W/ QUAD HOUSING

QTY: 1.00

Two (2) Whelen C6 series, 4-1/8" x 6-1/2", LED red combination tail and stop lights, shall be mounted one each side at the rear of the body.

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

Two (2) Whelen C6 series, 4-1/8" x 6-1/2", LED amber arrow turn signal lights, shall be mounted one each side, on a vertical plane with the tail/stop lights.

Two (2) Whelen C6 series, 4-1/8" x 6-1/2", LED white back-up lights, shall be mounted one each side on a vertical plane with the turn/tail/stop signals.

These lights shall activate when the transmission is placed in reverse gear.

Two (2) Whelen PLASC4V mounting flanges, installed one (1) on each side, shall be provided to mount the lights described above in one common mounting flange.

The fourth opening shall be for the lower rear warning lights.

The lights shall be mounted in order, from top to bottom, as described above.

PO00003402 - PUMP ENCLOSURE WORK LIGHTS - TECNIQ LED

QTY: 1.00

Two (2) Tecniq, model #E18 lights shall be provided inside the pump enclosure, providing 800 lumens each.

Each light shall have their own independent switch incorporated into the light head.

PO00003106 - AMDOR LED STRIP HOSE BED LIGHT-FRONT HOSEBED WALL

QTY: 1.00

One (1) Amdor, LED, strip surface mounted lights shall be mounted in the hose bed on the front wall to illuminate the hose bed area.

PO00003179 - WHELEN C6 SERIES LED SCENE LIGHTS ON REAR OF BODY

QTY: 1.00

Two (2) Whelen, # C6, super LED scene lights shall be provided, (1) one on each side of the rear body panel in a chrome plated flange.

The scene lights shall be controlled by a rocker switch in the master warning light switch console.

All scene lights shall be wired through the load management system.

PO00003182 - WHELEN C6 SERIES LED SCENE LIGHTS ON DRIVER SIDE OF BODY

QTY: 1.00

Two (2) Whelen, # C6, super LED scene lights shall be provided.

The scene lights shall be installed one rearward and one forward on the driver side of the body in a chrome plated flange.

The scene lights shall be wired through the load management system.

PO00003183 - WHELEN C6 SERIES LED SCENE LIGHTS ON OFFICER SIDE OF BODY

QTY: 1.00

Two (2) Whelen, # C6, super LED scene lights shall be provided.

The scene lights shall be installed, one rearward and one forward, on the officer side of the body in a chrome plated flange.

The scene lights shall be wired through the load management system.

PO00003552 - WIRE UPGRADE FOR 12V HIGH AMP LIGHTS - REAR OF DUNNAGE

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00012247 - FEDERAL Q2B SIREN @ CAB FRONT

One (1) Federal Model #Q2B mechanical siren shall be provided to provide audible warning.

PO00012253 - Q2B MOUNT - SEMI-RECESSED INTO DRIVER'S SIDE OF BUMPER

The Q2B siren shall be semi-recessed into the bumper on the driver's side.

The siren shall be recessed so the front grille portion of the siren is exposed and protruding beyond the bumper.

PO00026753 - ELECTRO/MECHANICAL SIREN BRAKE CONTROL - DASH SWITCH, DRIVER SIDE

QTY: 1.00

A dash mounted push button switch shall be provided for the driver to control the brake on the electro/mechanical siren.

PO00026761 - ELECTRO/MECHANICAL SIREN CONTROL - FLOOR SWITCH, DRIVER SIDE

QTY: 1.00

QTY: 1.00

A floor mounted foot switch shall be provided for the driver to activate the electro/mechanical siren.

PO00026764 - ELECTRO/MECHANICAL SIREN CONTROL - FLOOR SWITCH, OFFICER SIDE

QTY: 1.00 A floor mounted foot switch shall be provided for the officer to activate the electro/mechanical siren.

PO00004695 - HALE QMAX-150 1500 GPM SINGLE STAGE PUMP

HALE QMAX-150

• 1500 G.P.M.

Single Stage The pump must deliver the percentage of rated capacity at the pressure listed below:

- 100% of rated capacity at 150 P.S.I. net pump pressure
- 100% of rated capacity at 165 P.S.I. net pump pressure
- 70% of rated capacity at 200 P.S.I. net pump pressure
- 50% of rated capacity at 250 P.S.I. net pump pressure.

The pump shall be of a size and design to mount on the chassis rails of commercial and custom truck chassis and have the capacity of 1500 gallons per minute (U.S. GPM), NFPA-1901 rated performance.

The entire pump shall be manufactured and tested at the pump manufacturer's factory. The pump shall be driven by a drive line from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable the pump to meet and exceed its rated performance. The entire pump both suction and discharge passages, shall be hydrostatically tested to a pressure of 600 PSI. The pump shall be fully tested at the pump manufacturer's factory to performance specs as outlined by the latest NFPA-1901. Pump shall be free from objectionable pulsation and vibration. The pump body and related parts shall be of fine grain alloy cast iron with a minimum tensile strength of 30,000 PSI. All moving parts in contact with water shall be of high quality bronze or stainless steel. Pumps utilizing castings made of lower tensile

strength cast iron are not acceptable. Pump body shall be horizontally split, on a single plane in two sections for easy removal of entire impeller assembly including wear rings and bearings from beneath the pump without disturbing piping or the mounting of the pump in chassis.

Pump shaft to be rigidly supported by three bearings for minimum deflection. One high lead bronze sleeve bearing shall be located immediately adjacent to the impeller (on side opposite the gearbox). The sleeve bearing is to be lubricated by a force fed, automatic oil lubricated design, pressure balanced to exclude foreign material. The pump shaft shall be heat-treated, electric furnace, corrosion resistant stainless steel to be super-finished under packing with galvanic corrosion (zinc foil separators in packing) protection for longer shaft life. Pump shaft must be sealed with double-lip oil seal to keep road dirt and water out of gearbox.

The pump shall have one double suction impeller. The pump body shall have two opposed discharge volute cutwaters to eliminate radial unbalance. Pump impeller shall be hard, fine grain bronze of the mixed flow design, accurately machined, and individually balanced. The vanes of the impeller intake eyes shall be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. Impeller clearance rings shall be bronze, easily renewable without replacing impeller or pump volute body, and of wrap-around double labyrinth design for maximum efficiency.

PO00010792 - PUMP RATIO

The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.

The manufacturer shall supply at time of delivery copies of the pump manufacturer's certification of hydrostatic testing, the engine manufacturer's current certified brake horsepower curve.

PO00009802 - PUMP MOUNTS - MID-SHIP PUMPS

Extra heavy duty pump mounting brackets shall be furnished.

These shall be bolted to the frame rails in such a position to perfectly align the pump so that the angular velocity of the drive line joints shall be the same on each end of the drive shaft.

This shall assure full capacity performance with a minimum of vibration. Mounting hardware shall utilize Grade 8 bolts.

PO00009138 - HALE MECHANICAL PUMP SEAL

QTY: 1.00 The mid ship pump shall be equipped with a high quality, spring loaded, self-adjusting mechanical seal capable of providing a positive seal to atmosphere under all pumping conditions.

This positive seal to atmosphere must be achievable under vacuum conditions up to 26 Hg (draft) or positive suction pressures up to 250 PSI.

The mechanical seal assembly shall be 2 inches in diameter and consists of a carbon sealing ring, stainless steel coil spring,

Viton rubber boot, and a tungsten carbide seat with a Teflon backup seal provided.

Only one (1) mechanical seal shall be required, located on the first stage suction (inboard) side of the pump and be designed to be compatible with a one piece pump shaft.

QTY: 1.00

A continuous cooling flow of water from the pump shall be directed through the seal chamber when the pump is in operation.

PO00009105 - HALE PUMP "G" DRIVE UNIT, ALL HALE FULL CAST PUMPS

QTY: 1.00

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

Pump drive unit shall be of sufficient size to withstand up to 16,000 lbs. ft. of torque of the engine in both road and pump operating conditions.

The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.

The gearbox drive shafts shall be of heat treated chrome nickel steel and at least 2-3/4 inches in diameter on both the input and output drive shafts.

They shall withstand the full torque of the engine in both road and pump operating conditions.

All gears, both drive and pump, shall be of the highest quality electric furnace chrome nickel steel.

Bores shall be ground to size and teeth integrated, chrome-shaven and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability.

An accurately cut spur design shall be provided to eliminate all possible end thrust.

PO00026827 - PUMP SHIFT MANUAL OVERRIDE

QTY: 1.00

An emergency manual pump shift control shall be furnished on the left side pump panel which may be utilized if the air shift control does not operate.

PO00012078 - HALE PUMP SHIFT INDICATOR LIGHTS

QTY: 1.00 For automatic transmissions, three (3) green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift for Road to Pump position.

Two (2) green lights to be located in the truck driving compartment and one (1) green light on pump operator's panel adjacent to the throttle control.

For manual transmissions, one (1) green warning light shall be provided for the driving compartment.

All lights to have appropriate identification/instruction plates.

PO00010750 - AUXILIARY ENGINE COOLER

QTY: 1.00 An auxiliary cooler or heat exchanger shall be installed in the engine compartment between the engine and the chassis radiator.

The cooler shall permit the use of water from the pump for cooling the engine.

The cooling shall be done without mixing engine and pump water.

PO00004811 - FIRE RESEARCH "IN CONTROL" TGA-300 PRESSURE GOVERNOR

The apparatus shall be equipped with a Fire Research InControl series TGA300 pressure governor and monitoring display kit shall be installed. The kit shall include a control module, intake pressure sensor, discharge pressure sensor, and cables. The control module case shall be waterproof and have dimensions not to exceed 5 1/2" high by 10 1/2" wide by 2" deep. Inputs for monitored information shall be from a J1939 databus or independent sensors. Outputs for engine control shall be on the J1939 databus or engine specific wiring.

The following continuous displays shall be provided:

- Pump discharge; shown with four daylight bright LED digits more than 1/2" high
- Pump Intake; shown with four daylight bright LED digits more than 1/2" high
- Pressure / RPM setting; shown on a dot matrix message display
- Pressure and RPM operating mode LEDs
- Throttle ready LED
- Engine RPM; shown with four daylight bright LED digits more than 1/2" high
- Check engine and stop engine warning LEDs
- Oil pressure; shown on a dual color (green/red) LED bar graph display
- Engine coolant temperature; shown on a dual color (green/red) LED bar graph display
- Transmission Temperature: shown on a dual color (green/red) LED bar graph display
- Battery voltage; shown on a dual color (green/red) LED bar graph display.
- The dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options when selected by the operator. All LED intensity shall be automatically adjusted for day and night time operation.

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

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

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

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

The governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A throttle ready LED shall light when the interlock signal is recognized. The governor shall start in pressure mode and set the engine RPM to idle. In pressure mode the governor shall automatically regulate the discharge pressure at the level set

by the operator. In RPM mode the governor shall maintain the engine RPM at the level set by the operator except in the event of a discharge pressure increase. The governor shall limit a discharge pressure increase in RPM mode to a maximum of 30 psi. Other safety features shall include recognition of no water conditions with an automatic programmed response and a push button to return the engine to idle.

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

PO00011415 - TASK FORCE TIPS #A18 SERIES INTAKE RELIEF VALVE

A Task Force Tips relief valve shall be provided.

The valve shall be adjustable from 50 to 300 psi (3 to 14 bar) with easy to see 25 psi (2 bar) increments.

The aluminum casting shall be hardcoat anodized, and powder coat finished inside and out for maximum corrosion protection.

PO00009890 - TRIDENT "MANUAL" AIR PRIMING SYSTEM

The priming pump will be a Trident air primer system.

A push in primer handle will open the priming valve and prime the pump.

PO00004825 - ROTARY MASTER DRAIN VALVE

A rotary type, 12 port, master drain valve shall be provided and controlled at the lower portion of the side pump panel.

The valve shall be located in pump compartment lower than the main body and connected in such a manner as to allow complete water drainage of the pump body and all required accessories.

Water shall be drained below the apparatus body and away from the pump operator.

PO00004830 - DRAINS/BLEEDER "INNOVATIVE CONTROLS" LIFT UP @ ALL 1-1/2" OR LARGER QTY: 1.00

All lines shall drain through the master drain valve or shall be equipped with individual drain valves, easily accessible, and labeled.

One (1) individual "Innovative Control" lift up drain valve shall be furnished for each 1-1/2" or larger discharge port and each 2-1/2" gated auxiliary suction.

Drain/bleeder valves shall be located at the bottom of the side pump module panels. All drains and bleeders shall discharge below the running boards.

PO00004840 - SYNFLEX SUCTION, DISCHARGE, PRESSURE AND CONTROL LINES

QTY: 1.00

Small lines within the pump enclosure shall be constructed from Synflex hose.

Uses include but are not limited to such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush, and air bleeder valves.

PO00010965 - SUCTION INLETS - 6" INLETS

QTY: 1.00

QTY: 1.00

QTY: 1.00

Two (2) 6" N.S.T. suction inlets shall be provided, one on the driver side and one on the officer side pump panel.

A removable strainer shall be installed on each inlet.

PO00024018 - SHORT NECK MAIN PUMP SUCTION INLETS

The main pump suction inlets shall be furnished with a short suction end, terminating with only the suction threads protruding through the side panel to minimize the distance an exterior appliance protrudes beyond the pump panel.

PO00012076 - BEHIND PANEL MOUNT

QTY: 1.00 All side gated inlet valves shall be recess mounted behind the side pump panels or body panels. There will be no exceptions.

PO00023976 - 6" NST INTAKE CAP - DRIVER SIDE

A 6" NST chrome plated long handle pressure vented cap shall be installed on driver side intake.

PO00023980 - 6" NST INTAKE CAP - OFFICER SIDE

A 6" NST chrome plated long handle pressure vented cap shall be installed on officer side intake.

PO00011333 - 2-1/2" DRIVER SIDE AUX PRIMARY SUCTION INLET FORWARD OF MAIN

QTY: 1.00 One (1) 2-1/2" auxiliary suction shall be provided at the driver side pump panel, to the front of the main inlet.

The 2-1/2" auxiliary suction shall terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.

PO00004969 - 2-1/2" AKRON #8800 S.S. BALL VALVE, DRIVER SIDE FRONT AUX SUCTION

QTY: 1.00 An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side front auxiliary suction.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PO00004984 - SWING CONTROL @ VALVE, DRIVER SIDE FRONT AUX SUCTION

QTY: 1.00

A 1/4 turn swing control handle shall be provided on the driver side, front auxiliary suction valve.

PO00011335 - 2-1/2" OFFICER SIDE AUX SUCTION INLET FORWARD OF MAIN

QTY: 1.00

One (1) 2-1/2" auxiliary suction shall be provided at the officer side pump panel, to the front of the main inlet (if space and other components allow).

The 2-1/2" auxiliary suction shall terminate with a removable strainer, chrome plated 2-1/2" NST female swivel with a chrome plated plug and retaining chain.

PO00023917 - 2-1/2" AKRON #8800 S.S. BALL VALVE, OFFICER SIDE FRONT AUX SUCTION

QTY: 1.00

QTY: 1.00

QTY: 1.00
An Akron Brass 2 1/2" Generation II Swing-Out[™] Valve (will/shall) be provided for the officer's side front auxiliary suction. The valve (will/shall) have an all-brass body with flow optimizing stainless steel ball and dual polymer seats.

PO00009373 - SWING CONTROL @ VALVE, OFFICER SIDE AUX SUCTION

A 1/4 turn swing control handle shall be provided on the officer side auxiliary suction valve.

PO00011323 - TANK TO PUMP

One (1) 4" tank to pump line shall be piped through the front bulkhead of the tank with a 90 degree elbow down into the tank sump.

This line shall be plumbed directly into the rear of the pump suction manifold for maximum efficiency.

A check valve shall be provided to prevent accidental pressurization of the water tank through the pump connection.

Connection from the valve to the tank shall be made by using a non-collapsible flexible rubber hose.

PO00004999 - 3" AKRON #8800 SERIES - S.S. BALL, VALVE , TANK TO PUMP

An Akron Brass 3" Generation II Swing-Out Valve shall be provided between the pump suction manifold and the water tank.

The valve shall have an all brass body with flow optimizing, stainless steel ball and dual polymer seats.

PO00010956 - 3" PUSH/PULL CONTROL FOR TANK TO PUMP

A push/pull control handle shall be located on the operator's panel with function plate.

PO00010962 - TANK FILL LINE 2" FROM PUMP - SIDE MOUNT

One (1) 2" gated full flow pump to tank refill line controlled at the pump panel shall be provided. A deflector shield inside the tank shall be furnished. Tank fill plumbing shall utilize 2" high pressure hose for tank connection to accommodate flexing between components. There will be no exceptions.

PO00005031 - 2" AKRON #8800 SERIES - S.S. BALL TANK FILL, SIDE MOUN

QTY: 1.00 An Akron Brass 2" Generation II Swing-Out Valve shall be provided between the pump discharge manifold and the water tank.

The valve shall have an all brass body with flow optimizing, stainless steel ball, and dual polymer seats.

PO00011330 - TOP MOUNT SWING CONTROL FOR TANK FILL - TOP MOUNT

A locking push/pull swing control handle shall be located on the operator's panel with function plate.

PO00012083 - DRIVER SIDE MAIN DISCHARGE #1

A discharge shall be provided and located at the driver's side pump panel.

The driver's side discharges # 1 shall terminate with NST threads, through the left panel above the main pump intake.

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.

PO00009226 - 2-1/2" AKRON #8800 SERIES - S.S. BALL, DRIVER SIDE #1

QTY: 1.00

QTY: 1.00

QTY: 1.00

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side #1 discharge.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PO00005039 - DS #1 DISCHARGE - 2-1/2" STRAIGHT NST & 30-DEGREE NST ELBOW

QTY: 1.00 The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.

PO00005050 - 2-1/2" NST PRESSURE VENTED CAP - DRIVER SIDE DISCHARGE #1

A 2 1/2 " NST, chrome plated pressure vented cap shall be installed on driver's side #1 discharge.

PO00005093 - 2-1/2" AKRON #9335 ELECTRIC VALVE CONTROL FOR DRIVER SIDE DISCHARGE #1

The driver's side # 1 discharge Akron ball valve shall be equipped with an Akron Brass Style 9335 Navigator Pro Valve Controller.

The electric controls shall be of current limiting design, requiring no clutches in the motor.

Unit shall have booted switches with momentary open and close as well as an optional one touch full open feature to operate the actuator.

Three additional buttons shall be available to be used for preset selection, preset activation, CAFS activation, and menu navigation.

The unit shall be equipped with a flow/pressure Meter.

The meter shall have a flow range up to 2500 GPM (9500 LPM) and a maximum hydrostatic pressure of 600 PSI (41.4 bar).

The unit shall have programmed pipe sizes and be capable of custom calibration to high and low flow ranges.

The unit shall be capable of turning on and off a solenoid used in a CAFS system.

The only calibration required is to set the unit to the valve during initial set up. No other calibration shall be required.

The display shall be a full color, backlit, LCD display.

It shall have manual adjustment of the brightness as well as an auto-dimming option.

A stainless steel flow sensor paddle wheel shall be installed in the discharge pipe with a machined housing or clamp.

PO00012084 - DRIVER SIDE MAIN DISCHARGE #2

A discharge shall be provided and located at the driver's side pump panel.

The driver's side discharges # 2 shall terminate with NST threads, through the left panel above the main pump intake.

The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.

PO00009304 - 2-1/2" AKRON #8800 SERIES - S.S. BALL, DRIVER SIDE #2

QTY: 1.00

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side #2 discharge.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PO00005145 - DS #2 DISCHARGE - 2-1/2" STRAIGHT NST & 30-DEGREE NST ELBOW

QTY: 1.00

The discharge valve shall be equipped with a straight 2 1/2" NST adapter that shall be equipped with a 2 1/2" NST, 30-degree, chrome plated elbow.

PO00005156 - 2-1/2" NST PRESSURE VENTED CAP - DRIVER SIDE DISCHARGE #2

QTY: 1.00

A 2 1/2" NST, chrome plated, pressure vented cap shall be installed on driver's side # 2 discharge.

PO00005194 - TOP MOUNT SWING CONTROL HANDLE - DRIVER SIDE DISCHARGE #2

QTY: 1.00

QTY: 1.00

The driver's side # 2 discharge valve shall be controlled by a locking push/pull swing handle located on the top mount operator's panel.

PO00005223 - INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS- DRIVER SIDE DISCHARGE #2

The driver's side # 2 discharge shall be equipped with a 2.5", Innovative Controls pressure gauge.

The gauge shall have a rugged, corrosion free, stainless steel case and clear, scratch resistant, molded crystals with captive, O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation, and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous, bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished, chrome-plated, stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

PO00012086 - OFFICER SIDE MAIN DISCHARGE #1

A discharge shall be provided and located at the officer's side pump panel.

The officer's side discharges #1 shall terminate with NST threads, through the officer's side panel above the main pump intake.

The main pump discharge shall be plumbed directly from the pump discharge manifold utilizing direct connect discharge valve flanges.

PO00005280 - 3" AKRON #8800 SERIES - S.S. BALL, VALVE OFFICER SIDE #1, SIDE MOUNT

QTY: 1.00

An Akron Brass, 3" Generation II, Swing-Out Valve shall be provided for the officer's side #1 discharge.

The valve shall have an all brass body with flow optimizing, stainless steel ball, and dual polymer seats.

PO00005292 - OS #1 DISCHARGE - 3" STRAIGHT NST & 30-DEGREE NST ELBOW

QTY: 1.00

The discharge valve shall be equipped with a straight, 3" NST adapter that shall be equipped with a 3" NST, 30-degree, chrome plated elbow.

PO00005340 - TOP MOUNT SWING CONTROL HANDLE - OFFICER SIDE DISCHARGE #1

QTY: 1.00

QTY: 1.00

The officer's side, # 1 discharge valve shall be controlled by a locking push/pull swing handle located on the top mount, operator's panel.

PO00005370 - INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS- OFFICER SIDE DISCHARGE #1

The officer's side, # 1 discharge shall be equipped with a 2.5", Innovative Controls pressure gauge.

The gauge shall have a rugged, corrosion free, stainless steel case and clear, scratch resistant, molded crystals with captive, O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous, bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished, chrome-plated, stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

PO00012103 - DRIVER SIDE HOSE BED DISCHARGE 2-1/2"

QTY: 1.00

A 2 1/2" rear hose bed discharge shall be plumbed to the upper front body panel, extending into the front of the hose bed.

PO00005863 - DS HOSE BED DISCHARGE TERMINATE @ FLOOR LEVEL FRONT

QTY: 1.00

The rear hose bed discharge shall terminate just above the hosebed floor, in the driver side front of the hose bed.

PO00015487 - TOP MOUNT DRIVER SIDE HOSEBED DISCHARGE 1 - SWING HANDLE CONTROLS

QTY: 1.00

All top mount valves shall be controlled by a locking push/pull swing handle unless otherwise noted in the individual discharge below.

PO00005867 - 2-1/2" NST MALE THREADS ON DRIVER SIDE HOSE BED DISCHARGE

QTY: 1.00

The driver side hose bed discharge pipe shall be equipped with a chrome 2 1/2" NSTM thread adapter.

PO00005871 - DS HOSE BED DISCHARGE, PLUMBING, 2-1/2" STAINLESS STEEL PIPING

QTY: 1.00

The driver side hose bed discharge shall be plumbed utilizing 2 1/2" schedule 10 stainless steel piping, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the rear of the vehicle.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.

PO00005876 - 2-1/2" AKRON #8800 SERIES - S.S. BALL, VALVE DRIVER SIDE HOSE BED DISCHARGE

QTY: 1.00

An Akron Brass 2 1/2" Generation II Swing-Out Valve shall be provided for the driver's side hose bed rear discharge. The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PO00005886 - PUSH/PULL CONTROL FOR DRIVER SIDE HOSE BED DISCHARGE

QTY: 1.00

The driver side hose bed discharge valve shall be controlled by a push/pull handle located on the operator's panel.

PO00005919 - 2-1/2" NST DRIVER SIDE HOSE BED DISCHARGE PRESSURE VENTED CAP

QTY: 1.00

QTY: 1.00

A 2 1/2" NST chrome plated pressure vented cap shall be installed the driver's side hose bed discharge.

PO00005925 - INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS- DRIVER SIDE HOSE BED DISCHARGE

The driver's side hose bed discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

PO00012108 - DECK GUN DISCHARGE

A deck gun discharge shall be plumbed from the pump to an area on top of the vehicle.

The deck gun piping shall be firmly supported and braced.

PO00006023 - DECK GUN DISCHARGE TERMINATE @ CENTER OF DUNNAGE

QTY: 1.00

QTY: 1.00

The deck gun discharge shall be located in the center of the dunnage area above the pump module.

A pedestal type, 1/4" steel plate support assembly shall be provided to stabilize deck gun plumbing below deck gun mount flange.

PO00006030 - 3" NPT MALE THREADS ON DECK GUN DISCHARGE

The deck gun discharge pipe shall terminate with 3" NPT threads.

PO00015531 - 3" TFT MANUAL EXTEND-A-GUN (12") PIPE - MODEL # XG12VL-**

QTY: 1.00

QTY: 1.00

QTY: 1.00

To improve the operation range of the deck gun, the discharge pipe shall be outfitted with a TFT (12") Extend-A-Gun, part # XG12VL-**. The Extend-A-Gun shall be wired to the hazard light on the cab dash.

PO00006036 - DECK GUN DISCHARGE - OVA HEIGHT NOT EXCEED CRITICAL OVERALL HEIGHT RESTRICTION

Deck gun height will be limited to the critical overall apparatus height listed in the spec. To avoid excessive travel heights the monitor will be positioned as low a practical while still allowing functionality of water stream.

PO00006039 - DECK GUN DISCHARGE, PLUMBING, 3" STAINLESS STEEL PIPING

QTY: 1.00

The deck gun discharge shall be plumbed utilizing 3" schedule 10 stainless steel piping, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to the deck gun location.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.

PO00006045 - 3" AKRON #8800 SERIES - S.S. BALL, VALVE DECK GUN DISCHARGE

QTY: 1.00

An Akron Brass 3" Generation II Swing-Out Valve shall be provided for the deck gun discharge.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PO00006058 - PUSH/PULL CONTROL FOR DECK GUN DISCHARGE

QTY: 1.00

The deck gun discharge valve shall be controlled by a push/pull handle located on the operator's panel.

PO00006091 - INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS- DECK GUN DISCHARGE

QTY: 1.00

The deck gun discharge shall be equipped with a 2.5" diameter Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

PO00012120 - LOWER SPEEDLAY

lower speedlay shall be a transverse hose bed, which shall be designed as an integral part of the pump module design, located forward of the pump above main inlet and side discharge connections.

Hose deployment shall be accomplished from either side of the apparatus.

The speedlay hose bed flooring shall be designed to be removable, constructed from brushed finish, perforated aluminum material.

PO00012194 - STAINLESS STEEL SCUFF PLATES - LOWER SPEEDLAY

QTY: 1.00

QTY: 1.00

The outer edge of the lower speedlay hosebed shall be trimmed stainless steel scuff plates. The scuff plate will reduce the clear opening of the speedlay on each side.

PO00006879 - 1-1/2" NST CHICKSAN SWIVEL - LOWER SPEEDLAY

QTY: 1.00

The lower speedlay discharge shall terminate through the rear wall of the hosebed with a 1 1/2" NSTM chicksan swivel adapter.

The hosebed rear wall shall be slotted to allow the swivel to through the wall, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.

PO00012430 - TOP MOUNT LOWER SPEEDLAY DISCHARGE - SWING HANDLE CONTROLS

QTY: 1.00

The Speedlay # 1 discharge will be controlled at the top mount control panel with a locking swing handle.

PO00006890 - LOWER SPEEDLAY CAPACITY - 200 FEET OF 1-3/4" HOSE

QTY: 1.00

lower speedlay shall be designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA -1901 to accommodate a minimum of 200 feet of 1-3/4" fire hose.

The hose shall be loaded in a double stack configuration.

PO00006897 - LOWER SPEEDLAY, PLUMBING, 2" STAINLESS STEEL PIPING

The lower speedlay discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to speedlay hosebed.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.

PO00006907 - 2" AKRON #8800 SERIES - S.S. BALL, VALVE LOWER SPEEDLAY

QTY: 1.00

An Akron Brass 2" Generation II Swing-Out Valve shall be provided for the lower speedlay discharge.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PO00006925 - PUSH/PULL CONTROL LOWER SPEEDLAY

QTY: 1.00

QTY: 1.00

The lower speedlay discharge valve shall be controlled by a push/pull handle located on the operator's panel.

PO00006957 - INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS - LOWER SPEEDLAY

The lower speedlay discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

PO00012198 - STAINLESS STEEL SCUFF PLATES - UPPER SPEEDLAY

QTY: 1.00

The outer edge of the upper speedlay hosebed shall be trimmed stainless steel scuff plates. The scuff plate will reduce the clear opening of the speedlay on each side.

PO00012432 - TOP MOUNT UPPER SPEEDLAY DISCHARGE - SWING HANDLE CONTROLS

QTY: 1.00

The Speedlay # 3 discharge will be controlled at the top mount control panel with a locking swing handle.

PO00007081 - 1-1/2" NST CHICKSAN SWIVEL - UPPER SPEEDLAY

QTY: 1.00

The upper speedlay discharge shall terminate through the rear wall of the hosebed with a 1 1/2" NSTM chicksan swivel adapter.

The hosebed rear wall shall be slotted to allow the swivel to through the wall, allowing the pre-connected hose to be pulled off either side of the apparatus without kinking the hose at the coupling connection.

PO00007086 - UPPER SPEEDLAY CAPACITY - 200 FEET OF 1-3/4" HOSE

QTY: 1.00

QTY: 1.00

upper speedlay shall be designed to have a minimum total capacity of 3.5 cubic feet as required by NFPA -1901 to accommodate a minimum of 200 feet of 1-3/4" fire hose.

The hose shall be loaded in a double stack configuration.

PO00007091 - UPPER SPEEDLAY, PLUMBING, 2" STAINLESS STEEL PIPING

The upper speedlay discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose, 45 degree elbows and a limited number of 90 degree sweep elbows in an assembly from the pump to speedlay hosebed.

A minimum of one (1) grooved pipe coupling shall be furnished in this assembly to allow for flex and serviceability.

PO00007101 - 2" AKRON #8800 SERIES - S.S. BALL, VALVE UPPER SPEEDLAY

QTY: 1.00

QTY: 1.00

QTY: 1.00

An Akron Brass 2" Generation II Swing-Out Valve shall be provided for the upper speedlay discharge.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PO00007114 - PUSH/PULL CONTROL UPPER SPEEDLAY

The upper speedlay discharge valve shall be controlled by a push/pull handle located on the operator's panel.

PO00007147 - INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS - UPPER SPEEDLAY

The upper speedlay discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

PO00000054 - WALKWAY ACCESS FOR SPEEDLAY #1

The hose shall be capable of being reloaded from either side of the vehicle and from access slots provided on the front of the pump module while standing in the pump module walkway.

PO00000060 - WALKWAY ACCESS FOR SPEEDLAY #3

QTY: 1.00

The hose shall be capable of being reloaded from either side of the vehicle and access slots provided on the front of the pump module while standing in the pump module walkway.

PO00012200 - VINYL END FLAPS FOR SPEEDLAYS

Vinyl coated polyester covers shall be provided on each side of the speed lays to retain hose in the speed lays.

The covers shall be secured with expandable loops sewn into the covers and hooks on the apparatus.

PO00012202 - SPEEDLAY FLAP BLACK IN COLOR

The speed lay end flap shall be black in color.

PO00012123 - WELL DISCHARGE - OFFICER SIDE 1-1/2"

A 1-1/2" discharge shall be plumbed to the officer side lower pump panel.

PO00007224 - 1-1/2" NST STRAIGHT ADAPTER IN OFFICER SIDE WELL STORAGE

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

The officer side storage well discharge shall terminate in the driver side storage well as directed by engineering.

The discharge pipe shall be equipped with a chrome 1 1/2" NSTM straight adapter.

PO00007227 - OS WELL STORAGE, PLUMBING, 2" STAINLESS STEEL PIPING

QTY: 1.00

A discharge shall be plumbed utilizing 2" schedule 10 stainless steel piping and/or flexible hose in an assembly from the pump to the officer side well storage of the vehicle.

PO00007229 - 2" AKRON #8800 SERIES - S.S. BALL, VALVE OFFICER SIDE WELL STORAGE

QTY: 1.00

An Akron Brass 2" Generation II Swing-Out Valve shall be provided for the officer's side well storage discharge.

The valve shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats.

PO00007233 - PUSH/PULL CONTROL FOR OFFICER SIDE WELL STORAGE

QTY: 1.00

An officer side well storage discharge valve shall be controlled by a push/pull handle located on the operator's panel.

PO00007247 - 1-1/2" NST OFFICER SIDE WELL STORAGE PRESSURE VENTED CAP

QTY: 1.00

A 1 1/2" NST chrome plated pressure vented cap shall be installed the officer side storage well discharge.

PO00007251 - INNOVATIVE CONTROLS LIQUID FILLED 2-1/2" PRESS GAUGE SS - OFFICER SIDE WELL STORAGE

QTY: 1.00

The officer side storage well discharge shall be equipped with a 2.5" Innovative Controls pressure gauge.

The gauge shall have a rugged corrosion free stainless steel case and clear scratch resistant molded crystals with captive O-ring seals to ensure distortion free viewing and seal the gauge.

The gauge shall be filled with glycerin to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from -40F to +160F.

The gauge shall exceed ANSI B40.1 Grade A requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated stainless steel bezel shall be provided to prevent corrosion and protect the lens and gauge case.

The gauge shall have black graphics on a white background.

PO00012125 - BOOSTER REEL #1

PO00015491 - BOOSTER REEL #1 DISCHARGE

A 1 1/2" booster reel discharge shall be plumbed from the pump to the booster reel.

PO00015492 - BOOSTER REEL #1 DISCHARGE, PLUMBING, 1" HOSE

The booster reel discharge shall be plumbed from the valve to the hose reel utilizing 1" hose. The end of the hose connected to the hose reel shall be equipped with a swivel end for ease in hose replacement.

PO00007275 - 1-1/2" AKRON #8800 SERIES - S.S. BALL, VALVE BOOSTER REEL

A 1 1/2" Akron, #8800 series, full flow, stainless steel ball valve shall be provided for the booster reel #1 discharge.

PO00007282 - PUSH/PULL CONTROL FOR BOOSTER REEL #1

The booster reel discharge valve shall be controlled by a push/pull handle located on the operator's panel.

PO00007312 - BOOSTER REEL #1- PAINTED STEEL

One (1) painted steel electric rewind booster reel shall be furnished.

The reel shall be equipped with a one(1) inch 90 full flow swivel joint and an adjustable brake for freewheeling, drag or full lock operation.

Color shall be graphite.

PO00007314 - BOOSTER REEL #1 LOCATED ABOVE PUMP ENCLOSURE - DRIVER SIDE

The booster reel #1 shall be mounted above the pump enclosure towards the driver's side of the unit.

PO00007320 - HOSE REEL #1 REWIND DRIVER'S SIDE PUMP PANEL

Booster reel rewind shall be controlled by a pump panel mounted push button on the driver's side panel.

The booster reel circuit shall be equipped with a shielded toggle switch to act as a booster reel disconnect to avoid accidental actuation of the booster reel rewind button.

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QTY: 1.00 r reel #1

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00007332 - BOOSTER REEL #1 HOSE, 200 FEET OF 1" HOSE

Each booster reel shall be equipped with 200' of 1" booster hose in 100' sections.

Each length shall be fitted with NST couplings.

PO00007345 - TWO (2) BOOSTER REEL HOSE ROLLERS - DRIVER SIDE & OFFICER SIDE BLANK OFF

Two (2) horizontal hose rollers of polished stainless steel and guide spools shall be placed one (1) on each side panel.

PO00010791 - PUMP INSTALLATION - CUSTOM

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00026334 - TOP MOUNT PUMP MODULE, PUMPER

QTY: 1.00

The pump module shall be a self-supported structure mounted independently from the body and chassis cab.

The design must allow normal frame deflection without imposing stress on the pump module structure or side running boards.

The pump module shall be securely mounted to the chassis frame rails.

The pump module shall incorporate a formed structure on the top front to support the top mount control panel and required mechanical control handles.

The valves shall be controlled by vertically operated swing handles.

Each handle shall be equipped with a twist-lock, easy-grip knob.

The valve control handles shall be mounted in-line.

Each valve control handle shall be connected to its respective valve via a control rod and a bell crank mechanism, if needed.

Each control rod shall consist of a linkage with pressed in threaded adapters.

Each pressure gauge shall be located directly above its respective discharge control handle, and shall be clearly marked by color coded name plates.

PO00000007 - PUMP MODULE - ALUMINUM CONSTRUCTION

The pump module shall be a welded frame work utilizing structural aluminum components properly braced to withstand the rigors of chassis frame flex.

PO00010828 - TOP MOUNT DUNNAGE AREA

QTY: 1.00 A dunnage area shall be provided above the pump enclosure, behind the top mount control panel, for equipment mounting and storage. This area shall be furnished with a removable 3/16" tread plate floor and shall be enclosed on the sides.

NOTE: The size of this storage area may vary when top mounted crosslays, booster reel(s), etc., are specified and located in this area.

PO00011445 - PUMP MODULE WALKWAY

QTY: 1.00

There shall be a transverse walkway located at the rear of the chassis cab, ahead of the pump module.

The walkway shall be constructed of 3/16" tread plate and shall be clear and unobstructed for through traffic.

Folding step(s) shall be provided if necessary to maintain NFPA step heights. The folding steps shall match all other steps on the body. If the step is not illuminated, step lighting shall be provided.

If steps adjacent to walkway (such as commercial chassis cab access steps) provide NFPA compliant step height, folding steps shall not be provided.

A miscellaneous equipment storage compartment shall be provided at both sides of the walkway, outboard of the chassis frame rails. A ROM compartment light shall be provided and activate with the compartment door.

A vertically hinged, tread plate door with positive closure latch shall be provided on the outboard face of each compartment.

Compartments shall be ventilated.

PO00011447 - WALKWAY WIDTH = 20"

The pump house walkway shall be approximately 20" wide.

PO00011571 - RUNNING BOARD STEPS (NON-AERIALS)

The driver and officer running board steps shall be fabricated of 3/16" tread plate plate.

The outside edge on each step shall be fabricated with a double break, return flange.

The steps shall be rigidly reinforced with a heavy duty support structure.

The running boards shall not form any part of the compartment design, and shall be bolted into place with a minimum 1/2" clearance gap between any panel to facilitate water runoff.

PO00011573 - STORAGE WELL IN OFFICERS SIDE RUNNING BOARD

QTY: 1.00

QTY: 1.00

QTY: 1.00

A storage well, constructed of 1/8" aluminum, shall be recessed into the officer's side running board.

The storage well shall measure 9" deep x 9" wide x as long as possible between the running board support members.

Drain holes shall be located in the bottom corners to allow water to drain from the storage well.

PO00011578 - TWO (2) VELCRO STRAPS ON OFFICER'S SIDE STORAGE WELL

QTY: 1.00

The officer's side running board hose well shall be furnished with Velcro straps to secure the hose stored in the well.

The straps shall be attached to each side of the hose well with stainless steel footman loops.

PO00011591 - OFFICER'S SIDE WELL - GENERAL STORAGE

The officer's side storage well shall be utilized for general storage of tools or equipment, the well shall be a large as space allows.

PO00011608 - STORAGE WELL IN DRIVERS SIDE RUNNING BOARD

A storage well, constructed of 1/8" aluminum, shall be recessed into the driver's side running board.

The storage well shall measure 9" deep x 9" wide x as long as possible between the running board support members.

Drain holes shall be located in the bottom corners to allow water to drain from the storage well.

PO00011613 - TWO (2) VELCRO STRAPS ON DRIVER'S SIDE STORAGE WELL

QTY: 1.00

QTY: 1.00

QTY: 1.00

The driver's side running board hose well shall be furnished with Velcro straps to secure the hose stored in the well.

The straps shall be attached to each side of the hose well with stainless steel footman loops.

PO00011626 - DRIVER'S SIDE WELL - GENERAL STORAGE

The driver's side storage well shall be utilized for general storage of tools or equipment, the well shall be a large as space allows.

PO00000085 - TOP MOUNT PUMP PANEL - PUMPER

The pump operator's control panel shall be located above the pump towards the rear of the transverse walkway area with the operator facing the rear of the apparatus to operate the pump controls. The top and side panels shall be completely removable and designed for easy access and servicing.

PO00000098 - TOP MOUNT GAUGE PANEL - 14 GAUGE BRUSHED STAINLESS STEEL

QTY: 1.00 The top operator's panel shall be fabricated from 14-gauge 304L stainless steel with a #4 (150/180 grit) standard polished finish.

PO00000104 - TOP MOUNT SIDE PANELS - 14 GA. BRUSHED STAINLESS STEEL

QTY: 1.00

The left and right side pump panel shall be fabricated from 14-gauge 304L stainless steel with a #4 (150/180 grit) standard polished finish.

PO00000131 - HORIZONTALLY HINGED GAUGE PANEL - TOP MOUNT

QTY: 1.00

An angled, full width, horizontally hinged gauge access panel shall be provided at the top mount operator's position. Chrome plated positive locks shall be provided along with chain holders to secure the panel in the opened position.

PO00000138 - DRIVER'S SIDE VERTICALLY HINGED PUMP ACCESS DOOR - TOP MOUNT

QTY: 1.00

The driver side pump panel shall be split and vertically hinged to provide complete access to the pump and plumbing on the driver side of the pump enclosure.

QTY: 1.00

The panels shall be equipped with stainless steel hinges and secured with push type locks to hold the panels closed.

The drains located on the driver side panel shall be fastened to the lower panel, which shall be stationary.

P000000139 - OFFICER'S SIDE VERTICALLY HINGED PUMP ACCESS DOOR - TOP MOUNT

The officer's side pump panel shall be split and vertically hinged to provide complete access to the pump and plumbing on the officer's side of the pump enclosure.

The panels shall be equipped with stainless steel hinges and secured with push type locks to hold the panels closed.

The drains located on the officer's side panel shall be fastened to the lower panel, which shall be stationary.

PO00010829 - PANEL FASTENERS

Stainless steel machine screws and lock washers shall be used to hold these panels in position.

The panels shall be easily removable to provide complete access to the pump for major service.

PO00010830 - CAPS AND ADAPTERS SAFETY TETHER - BALL CHAIN

All applicable discharge and suction caps, plugs and adapters shall be equipped with chrome plated ball chain and secured to the vehicle.

P000010832 - PUMP PANEL DISCHARGE/SUCTION TRIM PLATES, HIGH POLISHED

A high polished trim plate shall be provided around each discharge port and suction inlet opening to allow accessibility to the respective valve for service and repairs.

PO00010833 - DISCHARGE GAUGE TRIM BEZELS

QTY: 1.00 Each individual discharge gauge shall be installed into a decorative chrome-plated mounting bezel that incorporates valve-identifying verbiage and color labels, unless manufacturer supplied otherwise.

PO00010834 - IDENTIFICATION PLATES

Color coded identification tags shall be provided for all gauges, controls, connections, switches, inlets and outlets.

PO00011788 - PUMP OPERATOR'S PANEL LIGHT SHIELD - TOP-MOUNT

The pump operator's panel shall be equipped with a light shield that shall be full width of the control panel, and shall be positioned to cover the lights and prevent glare.

The light shield shall be equipped with the following lights:

PO00011738 - TECNIQ E18 LED LIGHTS - PANEL TOP-MOUNT

Six (6) Tecniq #E18 LED lights.

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

One (1) light under the operator's panel light shield shall be actuated when fire pump is engaged in addition to the pump engaged light.

PO00011741 - TECNIQ EON 3 LED LIGHTS - DRIVER SIDE TOP-MOUNT

Four (4) TecNig Eon, 3-LED illumination lights mounted in horizontal stainless steel bezels and mounting gaskets.

The lights shall be switched with the top mount panel lights.

PO00011786 - STEP LIGHTS FOR WALKWAY AREA - TOP MOUNT

The top mount walkway shall be illuminated by the following lights:

PO00011785 - TECNIQ EON 3 LED LIGHTS - WALKWAY TOP-MOUNT

Four (4) TecNig Eon, 3-LED illumination lights mounted in horizontal stainless steel bezels and mounting gaskets.

The lights shall be controlled with the marker lights.

PO00011765 - TECNIQ EON 3 LED LIGHTS - OFFICER SIDE TOP-MOUNT

Four (4) TecNiq Eon, 3-LED illumination lights mounted in horizontal stainless steel bezels and mounting gaskets.

The lights shall be switched with the top mount panel lights.

PO00011409 - PUMP PRESSURE & VACUUM TEST PORTS @ PANEL

The pump panel shall be equipped with Vacuum Pressure test plugs to allow for test equipment to monitor pump pressure and vacuum levels.

Chrome plugs and labels shall be provided for the test ports.

PO00025813 - PUMP THIRD PARTY CERTIFICATION - 750 GPM & UP

The pump shall be third party performance tested to meet the requirements of NFPA-1901. There will be no exceptions.

PO00023805 - TANK 1000 GAL POLY

The water tank shall have a capacity of 1000 gallons, constructed from Poly material.

PO00027025 - WATER TANK CAPACITY

Water tank capacity may be reduced due to weight restrictions.

PO00010843 - WATER TANK FILL TOWER POLY (TANK CAPACITY 1000-1250)

QTY: 1.00

The tank shall have a combination vent and manual fill tower.

The fill tower shall be constructed of 1/2" PT3 polypropylene and shall be a minimum dimension of 12" x 12" outer perimeter.

The fill tower shall be blue in color indicating that it is a water-only fill tower.

The tower shall have a 1/4" thick removable polypropylene screen and a PT3 polypropylene hinged cover.

The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the fill tower there shall be a combination vent/overflow pipe.

The vent overflow shall be a minimum of schedule 40 polypropylene pipe with a minimum I.D. of that is designed to run through the tank, and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction.

PO00007665 - WATER TANK 4" OVERFLOW & VENT PIPE

The fill tower shall be fitted with an integral 4" I.D. schedule 40 P.V.C. combination overflow/vent pipe running from the fill tower through the tank to a 4" coupling flush mounted into the bottom of the tank to allow water to overflow behind the chassis rear axle.

PO00007667 - WATER TANK 3" SUMP DRAIN

A 3" drain plug shall be provided.

PO00007586 - IC, SL ULTRA-BRIGHT 10 LIGHT LED WATER TANK GAUGE - PUMP

QTY: 1.00

An Innovative Controls model #3030358, Ultra-Bright LED water level monitor shall be provided on the pump operator's panel.

The level gauge shall contain ten (10) high intensity LEDs on the display in a vertical pattern allowing the full, 3/4, 1/2, 1/4 and refill levels to be easily distinguished at a glance.

The display shall use a two-dimensional, two-element lens to refract the light from the LEDs to provide full 180 visibility for the level indications.

<u>***SPECIAL: SP00036743 - IC, SL ULTRA-BRIGHT 10 LIGHT LED WATER TANK GAUGE - PUMP</u> PANEL OFFICER SIDE

QTY: 1.00

A secondary Innovative Controls model #3030358, Ultra-Bright LED water level monitor shall be provided on the officer side pump panel.

The level gauge shall contain ten (10) high intensity LEDs on the display in a vertical pattern allowing the full, 3/4, 1/2, 1/4 and refill levels to be easily distinguished at a glance.

The display shall use a two-dimensional, two-element lens to refract the light from the LEDs to provide full 180 visibility for the level indications.

PO00023606 - IC SL ULTRA BRIGHT 10 LED REAR OF BODY

QTY: 1.00

An additional Innovative Controls model #3030358, Ultra-Bright LED water level monitor shall be provided on the rear of the vehicle. The level gauge shall contain ten (10) high-intensity LEDs on the display in a vertical pattern allowing the full, 3/4, 1/2, 1/4 and refill levels to be easily distinguished at a glance. The

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QTY: 1.00

display shall use a two-dimensional, two-element lens to refract the light from the LEDs to provide full 180° visibility for the level indications.

PO00007592 - IC WATER LEVEL - 1/4" NPT PRESS TRANSDUCER @ BOTTOM OF TANK

QTY: 1.00

The gauge shall use a pressure transducer #3030376-01 installed near the bottom of the water tank to determine the correct volume in the tank.

PO00012226 - DIRECT TANK FILL, DS REAR, 2-1/2" FIREMENS FRIEND, 2-1/2" NST FITTING

QTY: 1.00

One (1) 2-1/2" NST direct tank fill shall be provided at the rear of the body, on the driver side, as low as possible.

The direct tank fill shall be gated with a 2-1/2" Fireman's Friend (TTMA 6-bolt attachment pattern) check-type fill valve.

The fill valve shall be capable of flowing at a rate in excess of 1,000 gallons per minute and will be of a self deflecting design, requiring no additional diffusion device.

The fill valve shall be constructed of stainless steel, with a spring actuated piston-type sealing mechanism to minimize seal wear and provide positive sealing of the valve.

The fill shall be equipped with a 30 degree elbow terminating with a 2-1/2" NST female swivel connection.

PO00023912 - APPARATUS BODY DESCRIPTION (CHALLENGER)

QTY: 1.00

The body side and compartment assemblies (will/shall) be designed and assembled to provide maximum strength and durability under all operating conditions.

Special attention (will/shall) be taken to minimize corrosion on all fabricated parts and structural members of the body. All bolt-on components (will/shall) be provided with a dissimilar metals isolation barrier to prevent electric corrosion. The body design (will/shall) also incorporate removable panels to access rear body mounts and fuel tank sending units.

The body (will/shall) be completely isolated from the cab and pump module structure.

PO00017089 - SUPER STRUCTURE FOR ALUMINUM BODIES

QTY: 1.00

The body super structure shall be an all welded configuration utilizing a combination of 6061-T6 thick walled extrusion and 6061 structural channel.

This structure shall be designed to totally support the full length and width of the body and shall be welded to the body side compartments by use of reinforcement plates to incorporate the compartments into an integral part of the body weldment.

The super structure shall be bolted to the sides of the chassis frame at four (4) points.

STEPPING, STANDING, WALKING SURFACES

All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards. tread plate utilized for stepping, standing, and walking surfaces shall be ALCOA No Slip type. Upon request by the Purchaser, the manufacturer shall supply proof of compliance with this requirement.

PO00010863 - BODY SUB FRAME - ALUMINUM

QTY: 1.00

The body sub structure shall be an all welded configuration utilizing a combination of 3" x 1-1/2" 6061-T6 thick walled structural tubing and 6061 structural channel.

This structure shall be designed to totally support the full length and width of the body and shall be welded to the body side compartments by use of reinforcement plates to incorporate the compartments into an integral part of the body weldment.

The sub structure shall be bolted to the sides of the chassis frame at four (4) points.

The two (2) forward mounting points shall utilize a spring mount to help isolate the body from chassis deflection.

This design shall provide storage capacity in each side compartment for a minimum of 500 lbs of equipment, and a minimum of 1000 lbs of equipment in the rear step compartment.

PO00000628 - 100" WIDE BODY, 29"/14" DEEP SIDE COMPARTMENTS

The fire body shall be 100" wide to provide the maximum amount of usable hose bed and compartment space. The side body compartments shall be 29" deep in any full depth areas and 14" deep in any split depth areas.

PO00018427 - CHALLENGER; WB FAMILY

PO00009804 - SWEEP-OUT COMPARTMENTS (NON-AERIALS)

Compartment floors shall be welded to the compartment walls and have a sweep out design for easy cleaning.

Compartments with hinged doors shall have the door opening flanges bend down to produce the sweepout design.

Compartments with roll-up style doors shall have the external floor flange stepped down to produce a sealing surface for the roll-up doors below the compartment floor.

The sweep out design shall also permit easy cleaning.

PO00016952 - BODY 3/16" ALUMINUM; CHALLENGER-FB/WB/LH/PRO

All compartment panels and body side sheets shall be entirely 3/16" aluminum (5052-H32). Each side compartment assembly shall be both plug welded and stitch welded to ensure proper weld penetration on all panels while avoiding the possible warping caused by a full seam weld. The side compartments shall be welded on a fixture to ensure true body dimensions of all door openings. The side compartments and body side panels are then set into a body squaring fixture where the super structure is installed and the entire body is aligned to be completely symmetrical. The super structure is then welded to the compartment side panels and reinforcement plates are inserted which allows the compartment panels to become an integral component of the body support structure. A full seam weld shall not be used due to the applied heat which could distort sheet metal and remove the protective coating from the perimeter of the welded area. All seams shall be caulked prior to finish paint to ensure proper compartment seal.

PO00008936 - 64" WIDE FENDER - CUSTOM

The body fender shall be 64" long, this shall allow for the suspension and related components to be contained within the fender, preventing any intrusion into the body compartment storage area. Bodies with notches in the front and/or rear compartment for suspension components are not acceptable. There will be no exceptions.

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QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00009647 - STANDARD FENDER - NO STORAGE (COMMERCIAL)

The standard body fender shall be provided, no special storage options have been specified for the fender area.

PO00018443 - CHALLENGER WB STYLE BODIES

PO00026493 - CHALLENGER, WB-FF-FS-R (1000 MAX COMBINED TANK CAPACITY)

DRIVER'S SIDE COMPARTMENTATION

One (1) full height/full depth compartment, with a roll up door, shall be provided forward of the rear wheels. Compartment dimensions 68" high x 49" wide x 29" deep, with a door opening of 64" high x 46" wide.

One (1) high side compartment, with a roll up door, shall be provided above the rear wheels. Compartment dimensions 34-5/8" high x 64" wide by 29" deep, with a door opening of 31-1/8" high by 58" wide.

One (1) full height/full depth compartment, with a roll up door, shall be provided behind the rear wheels. Compartment dimensions 68" high x 46" wide x 29" deep, with a door opening of 64" high x 46" wide.

OFFICER'S SIDE COMPARTMENTATION

One (1) full height/split depth compartment, with a roll up door, shall be provided forward of the rear wheels. Compartment dimensions 68" high x 49" wide x 29" deep in the lower 30" high area, 14" deep in the upper 38" high area, with a door opening of 64" high x 46" wide.

One (1) high side compartment, with a roll up door, shall be provided above the rear wheels. Compartment dimensions 34-5/8" high x 64" wide by 14" deep, with a door opening of 31-1/8" high by 58" wide.

One (1) full height/split depth compartment, with a roll up door, shall be provided behind the rear wheels. Compartment dimensions 68" high x 46" wide x 29" deep in the lower 30" high area, 14" deep in the upper 38" high area, with a door opening of 64" high x 46" wide.

The water tank capacity will be reduced by the size of the foam tank added.

PO00019775 - ISOLATED REAR STEP COMPARTMENT - CHALLENGER WB

QTY: 1.00

One (1) rear step compartment 51" high x 42" wide x 29" deep in the lower portion and 12" deep in the upper portion shall be provided with a door opening of 47 5/8" high x 42" wide.

PO00010936 - ROLL-UP DOORS

Roll-up doors shall be provided on all compartments.

The roll-up doors shall be constructed from aluminum extruded slats which shall have a flexible seal between each slat for proper sealing of the door.

A synthetic rubber seal shall be provided at each side, top and bottom edge of the door to prevent entry of dirt into the compartment.

QTY: 1.00

QTY: 1.00

QTY: 1.00

The door shall be equipped with a lift bar style latch mechanism which shall latch at the bottom of the door mounting extrusion.

The roll-up door assembly shall be furnished with a spring-loaded, counter balance assembly to assist in door actuation.

All running board and high side compartments shall be equipped with roll-up doors.

PO00000264 - AMDOR BRAND ROLL-UP DOORS, SATIN

QTY: 1.00 The roll-up doors shall be Amdor brand roll-up doors. They should be equipped with a satin finish and a dual durometer slat seal. The slats shall be made from a 1" double-wall aluminum and have a continuous ball and socket hinge joint. The interior of the door shall be made of a smooth interior door curtain, preventing equipment hang-ups. The bottom panel flange shall have a stainless steel lift bar latching system. The lifting bar will have a cut out for easy access if using gloves.

PO00010862 - REAR BODY PANEL

The rear body panel shall extend the full width between the body side compartments.

This panel shall be full height from the rear step to the hose bed floor.

No part of the rear panel shall be attached to the booster tank.

The rear body panel material shall be tread plate as standard.

If Chevron striping is specified for the rear of the body then smooth aluminum shall be utilized.

PO00027030 - BODY RUB RAILS, C-CHANNEL - ALUMINUM EXTRUSION

Sacrificial extruded aluminum C-Channel style, rub rails shall be mounted at the base of the body. extending outward from the body. The rub rails shall extend the full length of the main body.

PO00022571 - WHEEL WELL LINERS W/ FENDERETTE (ONE PIECE UNIT) - ALUMINUM

QTY: 1.00 Fully removable, one piece, bolt-in, aluminum rear wheel well liner and fenderette will be provided. The wheel well liners will be natural metal finish and will protect the front and rear compartments and the main body supports from damage. Wheel well liners and fenderettes which are welded in place or are only partially removable shall not be considered. {No Exceptions}

PO00010934 - REAR MUD FLAPS

Heavy duty mud flaps shall be provided behind the rear wheels.

PO00023896 - REAR STEP 8"D X 100"W - TAPERED CORNER

The rear step (will/shall) be fabricated from 3/16" tread plate plate and (will/shall) be rigidly reinforced. The rear step (will/shall) extend 8" past the rear edge of the body and (will/shall) be 100" wide with tapered corners.

The rear edge of the step (will/shall) be designed to accommodate the rear clearance lights and recessed for protection in the step reinforcement channel. The step tread plate overlay (will/shall) be bolted to the step frame for ease of replacement.

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PO00011558 - GRAB RAILS, HANSEN KNURLED STAINLESS STEEL TYPE

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

All hand rails shall be Hansen 1-1/4" outer diameter, knurled stainless steel, designed to meet NFPA 1901 requirements.

Molded gaskets shall be installed between the handrail stanchion castings and body surfaces to prevent electrolytic reaction between dissimilar metals and to protect paint.

Grab rails shall be provided at the following specified locations.

Additional grab rails shall be provided adjacent to any additional steps specified to comply with NFPA 1901.

PO00011563 - TWO (2) VERTICAL RAILS ON REAR

Two (2) vertical rails shall be mounted on the rear edge of the beavertails, one (1) each side.

PO00011564 - ONE (1) HANDRAIL, BELOW HOSE BED LEVEL

One (1) horizontal, full width handrail shall be installed on the rear, below the level of the hose bed.

***SPECIAL: SP00040982 - HANDRAIL ABOVE DRIVER'S PUMP PANEL

One (1) horizontal handrail shall be mounted above the driver's pump panel.

P000011570 - HANDRAIL FORWARD OF PUMP HOUSE, EACH SIDE - TOP MOUNT

Two (2) vertical handrails shall be mounted on each side of the forward pump house.

P000011511 - INNOVATIVE CONTROLS LIGHTED STEP(S), BODY FRONT, DRIVER SIDE

Innovative Controls large lighted folding step(s), with a textured chrome plate finish, shall be provided on driver side body front to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

P000011496 - INNOVATIVE CONTROLS LIGHTED FOLDING STEP(S), BODY REAR DRIVER SIDE

QTY: 1.00 Innovative Controls large lighted folding step(s), with a textured chrome plate finish, shall be provided on driver side body rear to provide NFPA compliant access (maximum 18" height between steps) to an upper horizontal walking surface (compartment cap, dunnage area, fabricated step, or upper body compartments).

PO00011502 - NO FOLDING STEP(S), BODY REAR, OFFICER SIDE

No folding steps shall be provided in this location.

PO00000317 - PAINTED REAR TOW EYES, BELOW BODY

Two (2) painted tow eyes shall be furnished on the rear of the vehicle. The tow eyes shall be made from plate steel and shall be bolted directly to the chassis frame rails with grade 8 bolts. The tow eyes will extend below the body. The tow eyes shall be smooth and free from sharp edges. They will have a minimum eyelet hole of 2-1/2". The tow eyes shall be painted.

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PO00000218 - STANDARD BED - WIDE STYLE BED (94" WIDE)

QTY: 1.00

The hose bed shall be located directly above the booster tank and be free from all sharp objects such as bolts, nuts, and so on, in avoidance of damage to the fire hose. For added strength, the hose bed side walls shall be approximately 3" thick, providing a mounting surface for devices such as warning and scene lights. The inner hose bed side walls shall be brushed aluminum panels, which will help prevent damage to painted surfaces when the hose is deployed. The front wall shall be flanged inward 2" with a 1" downward return, providing additional rigidity to the front wall.

PO00000227 - CUSTOMER SPECIFIED HOSEBED CAPACITY - 1,500' X 5"; 400' X 3"; 200' X 2.5"

QTY: 1.00 The hose bed shall be designed with enough storage capacity to carry the following customer specified hose load: Feet of 5" supply hose, Feet of 3" supply hose, and Feet of 2-1/2" attack hose.

PO00000228 - HOSEBED FLOORING - ALUMINUM SLATS

Flooring is to be constructed from extruded aluminum and have proper spaces for ventilation purposes. The flooring shall be smooth and free from sharp edges to avoid any hose damage. The hose bed floor shall be removable, providing access to the inner body framework.

PO00000233 - TWO (2) - 1/4" ADJUSTABLE HOSEBED PARTITIONS

Two (2) fully adjustable 1/4" aluminum hose bed partitions shall be provided. The partition shall be easily adjustable by channels, located at the front and rear of the hose bed. The partition shall be removable for access to the booster tank.

PO00000243 - HOSEBED COVER - VINYL WITH VELCRO

A hose bed cover shall be provided and installed. The cover shall be made from heavy-duty vinyl coated polyester fabric. The cover shall be sewn with ultraviolet resistant thread and have 2" wide nylon webbing sewn around the perimeter to provide additional strength. The cover shall be secured to the top front body flange with Velcro and quarter turn fasteners. The top side body flange should also be secured with Velcro. A weighted flap shall be furnished on the rear of the cover with two (2) bungee cords.

PO00000254 - VINYL MATERIAL COLOR - BLACK

The vinyl material shall be black in color.

PO00019805 - HOSE BED, CHALLENGER WB-FF-FS-10

The hose bed shall be located directly above the booster tank and shall be free from all sharp objects such as bolts, nuts, etc., to avoid damage to fire hose.

The hose bed will provide approximately 141 cubic feet of hose storage area for 2 $\frac{1}{2}$ " or larger fire hose, exceeding NFPA 1901 minimum pumper hose storage requirements. The hose bed depth shall be 16". The apparatus weight analysis will be based on 800' of 2 $\frac{1}{2}$ " hose unless otherwise specified. If the hose load to be carried exceeds this minimum, the purchaser must advise the manufacturer prior to contract so adequate chassis carrying capacity can be provided.

For added strength and rigidity, the hose bed side walls shall be (3) inches thick. The top edge of the front wall shall be flanged inward two (2) inches and downward one (1) inch.

PO00023910 - SIDE OF WATER TANK LADDER STORAGE (OFFICER SIDE)

The ground ladders (will/shall) be stored vertically next to the water tank, behind the side body compartments and on the officer side of the apparatus.

To secure the ground ladders, a hinged rear access door (will/shall) be provided and tied into the "Do Not Move Apparatus" warning system.

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QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00009012 - ALCO-LITE PEL-24 24' 2-SECTION EXTENSION LADDER (ALUMINUM)

Alco-Lite model PEL-24; 24', aluminum, two (2) section extension ladder shall be provided.

PO00000375 - ALCO-LITE PRL-14 14' ROOF LADDER W/FOLDING HOOKS (ALUMINUM)

Alco-Lite model PRL-14; 14', aluminum, straight roof ladder with folding hooks shall be provided.

PO00000381 - ALCO-LITE FL-10 10' FOLDING ATTIC LADDER (ALUMINUM)

Alco-Lite model FL-10; 10', folding, aluminum, attic ladder shall be provided.

PO00012508 - PIKE POLE TUBE(S) - PUMPERS

A pike pole tube(s) shall be provided.

Each holder shall be accessible from the rear of the apparatus.

Each pike pole holder shall be labeled to indicate the pike pole length.

PO00012516 - LOCATION PIKE POLE TUBE(S) - IN SUCTION HOSE COMPARTMENT

The pike pole tube(s) shall be mounted in the suction hose storage compartment.

PO00000415 - SUCTION HOSE STORAGE BUILT INTO BODY BEHIND ROLLUP DOOR

QTY: 1.00

QTY: 2.00

The suction hoses shall be located beneath the hose bed. There will be one (1) on the driver side and one (1) on the officer side. The hose storage area shall be accessed from the rear of the apparatus.

Note: On bodies with roll up style doors, the storage area shall be behind the roll of the door and will not affect usable compartment space. On bodies with hinged style doors, the storage area shall be in the top corner of the compartment.

A vertically hinged smooth aluminum, finish painted to match the body, access door with thumb type latches, shall be provided on the compartments. The door shall be provided with a door switch that ties into the "Do Not Move Apparatus" warning system.

PO00000466 - TWO (2) 10' SECTIONS OF 6" MAXI-FLEX LIGHTWEIGHT SUCTION HOSE

QTY: 1.00

Two (2) 10' sections of six (6) inch Maxi-Flex (PVC) suction hose with lightweight hard coat couplings shall be furnished. Couplings shall include a long handle with a female swivel on one end and a rocker lug male on the other. All threads shall be six (6) inch N.S.T.

PO00019830 - 1/2 DEPTH ADJUSTABLE SHELF DESCRIPTION - RESCUE

QTY: 1.00

QTY: 1.00

Compartment shelving shall be constructed of 3/16" brush finish aluminum with a 2" upward bend at front and rear, and side supports. Shelving shall be vertically adjustable with spring nuts in aluminum strut channel.

Half depth adjustable shelves shall be located as indicated at each compartment description.

PO00019871 - 1/2 DEPTH ADJUSTABLE SHELF(S) LOCATED R-1

Located in the right side compartment #1

PO00019872 - 1/2 DEPTH ADJUSTABLE SHELF(S) LOCATED R-2

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 2.00

GSO# 11694-95 Specification: QP Build Verification Contract Administrator: Jared Eickhoff				
Located in the right side compartment #2	QTY: 1.00			
PO00019873 - 1/2 DEPTH ADJUSTABLE SHELF(S) LOCATED R-3				
C Located in the right side compartment #3				
PO00019887 - ADJUSTABLE SHELF DESCRIPTION - RESCUE				
Compartment shelving shall be constructed of 3/16" brush finish aluminum with a 2" upward be and rear, and side supports. Shelving shall be vertically adjustable with spring nuts in aluminum channel.				
Adjustable shelves shall be located as indicated at each compartment description.				
PO00019921 - ADJUSTABLE SHELF(S) LOCATED L-1				
Located in the left side compartment #1	QTY: 2.00			
PO00019923 - ADJUSTABLE SHELF(S) LOCATED L-3				
Located in the left side compartment #3	QTY: 1.00			
PO00019997 - 250#, FLOOR MOUNTED, ROLLOUT TRAY				
QT ide out floor mount compartment shelving shall be constructed of 3/16" brush finish aluminum wit ward bend at front and rear, and side supports attached to #250 rated slides. Slide out floor mou elving shall have gas shocks to hold the tray in and out.				
Slide out floor mount shelving shall be as indicated at each compartment description.				
PO00020029 - ROLLOUT TRAY, LOCATED L-3				
Located in the left side compartment #3	QTY: 1.00			

PO00020036 - ROLLOUT TRAY, LOCATED R-3

Located in the right side compartment #3

PO00020176 - 600#, FLOOR MOUNTED, ROLLOUT TRAY 100%

QTY: 1.00 Floor mounted roll-out trays shall consist of heavy duty, roller bearing slide tracks with a load rating of 600 pounds, securely fastened to the compartment floor. The slide shall have a pull type latch to secure the slide in the desired position. The slide tracks shall have a 100% extension.

The tray shall be fabricated from 3/16" brushed aluminum with a minimum 2" high flange on each of the four sides to assist in retaining the equipment stored on each tray.

The 600 pound floor mounted roll out trays shall be as indicated at each compartment description.

PO00020209 - 600# SLIDEMASTER ROLLOUT TRAY, LOCATED REAR COMPARTMENT - 100% QTY: 1.00

Located in the rear compartment

PO00020419 - SWING OUT TOOL BOARD, 3/16" ALUMINUM - RESCUE

GSO# 11694-95

GSO# 11694-95 Specification: QP Build Verification Contract Administrator: Jared Eickhoff

QTY: 1.00 The tool boards shall be constructed of 3/16" smooth aluminum allowing mounting of equipment on the

interior and exterior of the tool board. The tool boards shall be installed with a Performance Advantage Company PM-1000 Swing-Out Module Kit. Aluminum angles shall attach the hinges to Unistrut tracking to allow depth adjustments. A heavy duty thumb latch shall be provided to secure the tool boards in the closed position.

Swing out tool boards shall be as indicated at each compartment description.

PO00020454 - SWING OUT TOOL BOARD(S) LOCATED L-2

in the left side compartment #2

PO00020533 - VERTICAL PULL OUT TOOL BOARD, 3/16" ALUMINUM, #250 CAPACITY - RESCUE

VERTICAL PULL OUT TOOL BOARDS

Vertical pull out tool boards shall be provided. Each tool board shall be constructed of 3/16" smooth aluminum allowing mounting of equipment on both sides of the tool boards. Each tool board shall be attached to #250 rated slides, one at the top and one at the bottom of the tool board. 3/16" aluminum angles shall attach the slides to tracking to allow horizontal adjustments. A gas shock shall be used to secure the tool board in the stored and deployed position.

Vertical pull out tool boards shall be as indicated at each compartment description.

PO00020569 - VERTICAL PULL OUT TOOL BOARD(S) LOCATED L-3

Located in the left side compartment #3

PO00020319 - FIXED VERTICAL DIVIDERS DESCRIPTION - RESCUE

Full height, fixed mounted, vertical compartment dividers shall be fabricated from 3/16" brushed aluminum material. The dividers shall extend the full depth of the specified compartment from the floor to the compartment ceiling.

Full height, vertical dividers shall be as indicated at each compartment description.

PO00020324 - FIXED VERTICAL DIVIDER, LOCATED L-3

Located in the left side compartment #3

PO00024164 - INSIDE/UNDERSIDE BODY - UNPAINTED

The inside and underside areas of the complete body assembly shall be cleaned and un-painted prior to the installation of the body on the chassis or torgue box.

PO00010847 - GENERAL PAINT DESCRIPTION

QTY: 1.00 The apparatus body shall be painted with Sikkens paint product. The paint process shall meet or exceed current state regulations concerning paint operations. Pollution control shall include measures to protect the atmosphere, water, and soil. Contractor shall, upon demand, provide evidence that the manufacturing facility is in compliance with State EPA rules and regulations.

The exterior shall have no mounted components prior to painting to assure full coverage of metal treatments and paint to the exterior surfaces of the body. Any vertically or horizontally hinged smoothplate compartment doors shall be painted separately to assure proper paint coverage on body, door jambs and door edges.

Paint process shall feature Sikkens high solid LV products and be performed in the following steps:

QTY: 2.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

- Corrosion Prevention all aluminum surfaces shall be pre-treated with the Alodine 5700 conversion coating to provide superior corrosion resistance and excellent adhesion of the base coat.
- Sikkens Sealer/Primer LV acrylic urethane sealer/primer shall be applied to guarantee excellent gloss hold-out, chip resistance and a uniform base color.
- Sikkens High Solid LVBT650 (Base coat) a lead-free, chromate-free high solid acrylic urethane base coat shall be applied, providing excellent coverage and durability. A minimum of two (2) coats shall be applied.
- Sikkens High Solid LVBT650 (Clear coat) high solid LV clear coat shall be applied as the final step in order to ensure full gloss and color retention and durability. A minimum of two (2) coats shall be applied.

Any location where the material is penetrated after painting, for the purpose of mounting steps, hand rails, doors, lights, or other specified components shall be treated at the point of penetration with a corrosion inhibiting pre-treatment (ECK Corrosion Control). The pre-treatment shall be applied to the aluminum sheet metal or aluminum extrusions in all locations where the aluminum has been penetrated. All hardware used in mounting steps, hand rails, doors, lights, or other specified components shall be individually treated with the corrosion inhibiting pre-treatment.

After the paint process is complete, the gloss rating of the unit shall be tested with a 20 degree gloss meter. Coating thickness shall be measured with a digital MIL gauge and the orange peel with a digital wave scan device.

PO00010848 - GENERAL PRIMER & PREP DESCRIPTION - PUMPER

QTY: 1.00

QTY: 1.00

All exposed welds shall be ground smooth for final finishing of areas to be painted.

The compartments and doors are totally degreased and phosphatized.

After final body work is completed, grinding (36 and 80 grit), and finish sanding shall be used in preparation for priming.

PO00010849 - GENERAL FINISH PAINT DESCRIPTION

The body shall be finish sanded and prepared for final paint.

Upon completion of final preparation, the body shall be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint.

Finish paint shall be applied in multiple coats to ensure proper paint coverage with a high gloss finish.

PO00023017 - COMMERCIAL CAB PAINT FINISH - OTHER

The chassis shall be painted and detailed as provided from the chassis OEM and shall meet their quality guidelines.

PO00010850 - BODY BUFFING & FINISH - PUMPER

The visable and exposed areas of the body shall be buffed and detailed.

PO00004548 - JOB COLOR COMPARTMENT INT W/SPATTER PAINT - PUMPER/TANKER

QTY: 1.00

QTY: 1.00

The interior of the compartments shall be finish painted job color with a scuff resistant webbing type paint of a contrasting color applied over the painted surfaces.

PO00022250 - PUMP PAINTED / UNPAINTED PLUMBING

The pump shall be painted per the pump manufacturer's standard. The stainless steel plumbing will remain unpainted. The pump area interior will match the body underside finish as described elsewhere in these specifications.

PO00004555 - SINGLE COLOR BODY PAINT SCHEME - PUMPER - TBD

The body paint finish shall be Sikkens paint system in a single color to match customer furnished paint codes and requirements.

PO00010855 - PINT OF TOUCH-UP PAINT

One (1) pint of each exterior color paint for touch-up purposes shall be supplied when the apparatus is delivered to the end user.

PO00010854 - FINALIZATION & DETAILING - PUMPER

Prior to delivery the vehicle, the interior and exterior be cleaned and detailed.

The finalization process detailing shall include installation of NFPA required labels, checking fluid levels, sealing and caulking required areas of the cab and body, rust proofing, paint touch-up, etc

PO00011790 - 4" SCOTCH-LITE STRIPE ON CAB AND BODY

A four (4) inch high "Scotch-Lite" stripe shall be provided.

The stripe shall be applied on a minimum of 60 percent of each side of the unit, 60 percent on the rear of the unit and 40 percent on the front of the unit.

The Scotch-Lite stripe layout shall be determined by the Fire Department.

PO00009525 - WHITE SCOTCH-LITE The Scotch-Lite shall be white in color.			
			PO00009536 - REAR CHEVRON STRIPING
EAR CHEVRON STRIPING			
PO00012449 - 50% VERTICAL SURFACE	OTV: 1 00		
least 50% of the rear facing vertical surface shall be covered with alternating strips of reflect iping.			

PO00009541 - 6" 50% REAR ORALITE CHEVRON STRIPING

The striping shall be 6" Oralite reflective striping.

PO00026372 - RED & FLOURESCENT YELLOW GREEN ORALITE V98

The Oralite V98 reflective tape shall be #12 red and #112 fluorescent yellow green in color.

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00026066 - MISCELLANEOUS EQUIPMENT

The following equipment shall be mounted as specified or as loose equipment provided with the completed apparatus at the time of delivery:

PO00011822 - ROAD SAFETY KITS

A road safety kit shall be furnished with the following equipment:

- 2 1/2 lb. B-C fire extinguisher
- Triangle safety reflectors.

PO00000521 - TWO (2) ZICO #SAC-44 FOLDING WHEEL CHOCKS, (2) MTD DRIVER SIDE

QTY: 1.00

Two (2) ZICO #SAC-44 folding wheel chocks shall be mounted forward of the rear wheels on the driver side below the side running board compartments.

PO00023664 - KME WARRANTY, STARTING ON IN-SERVICE DATE

QTY: 1.00 Warranty coverage by KME will begin when the customer places the unit in service. This date may not exceed 60 days from the date of delivery to the customer.

The Customer must email kmeservice@kmefire.com within 60 days of delivery, or the warranty start date will default to the original delivery date.

PO00026895 - GENERAL ONE (1) YEAR OR 24,000 MILES LIMITED WARRANTY

QTY: 1.00

Purchaser shall receive a General One (1) Year or 24,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0001. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

PO00026922 - REGULATED EMISSIONS SYSTEMS FIVE (5) YEARS OR CARB MILEAGE LIMITED WARRANTY

QTY: 1.00

Purchaser shall receive a Regulated Emissions Systems Five (5) Years or CARB Mileage limited warranty in accordance with, and subject to, warranty certificate RFW0140. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

PO00026923 - ELECTRICAL ONE (1) YEAR OR 18,000 MILES LIMITED WARRANTY

QTY: 1.00

Purchaser shall receive a Electrical One (1) Year or 18,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0201. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

PO00026956 - BODY STRUCTURE (ALUMINUM) TEN (10) YEARS OR 100,000 MILES LIMITED WARRANTY

QTY: 1.00

Purchaser shall receive a Body Structure (Aluminum) Ten (10) Years or 100,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0502. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

PO00026977 - PAINT AND FINISH (EXTERIOR CLEAR COATED) TEN (10) YEARS LIMITED WARRANTY

QTY: 1.00

GSO# 11694-95

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

PO00026981 - PLUMBING AND PIPING (STAINLESS STEEL) TEN (10) YEARS OR 100,000 MILES LIMITED WARRANTY

Purchaser shall receive a Plumbing and Piping (Stainless Steel) Ten (10) Years or 100,000 Miles limited warranty in accordance with, and subject to, warranty certificate RFW0800. The warranty certificate is incorporated by reference into this proposal, and included with this proposal or available upon request.

PO00022701 - PAINT FINISH WARRANTY, TEN (10) YEAR

The proposed paint finish will be warranted for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions are included in the specific warranty document.

PO00022702 - 5 YEAR LETTERING WARRANTY

The apparatus manufacturer will provide a five (5) year warranty against defects in material and workmanship for all graphics processes. Any valid claims must be made in writing within 15 days of the determination of any defects to the manufacturer's fire apparatus. The manufacturer will at its option make any necessary repairs either at a local authorized service center or at the factory if required. The manufacturer will make the final decision as to where the repairs are to be made and any transportation cost is the owner's responsibility. The manufacturer will at its option, repair or replace any verified defects in workmanship or materials at no cost to the owner provided all the requirements of this warranty have been met.

The manufacturer will not be liable to the original purchaser or anyone else for consequential, incidental, special or direct damages, including, but not limited to, any claims for loss of profits, downtime, loss of use or inconvenience. THE COMPANY MAKES NO OTHER WARRANTY, EXPRESSED OF IMPLIED, AND SPECIFICALLY, DISCLAIMS ANY IMPLIED WARRANTY INCLUDING THE WARRANTY OF MERCHANTABILITY.

The manufacturer continually strives to improve its products and therefore, reserves the right to make improvements or changes without incurring any obligations to make such changes or additions to equipment previously sold.

PO00022703 - 1 YEAR BRIGHTWORK WARRANTY

QTY: 1.00 KME Fire Apparatus (KME) warrants all bright finish components used in the construction of KME Fire Apparatus against defects and workmanship provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original user-purchaser for a period of one (1) year from the date of delivery/acceptance to the original user-purchaser, whichever occurs first.

The expressed warranty excludes corrosion or degradation of bright finished components caused by damage to the component.

PO00022981 - 10 YEAR STAINLESS STEEL PIPING WARRANTY

QTY: 1.00

The proposed stainless steel plumbing will be warranted for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions are included in the specific warranty document.

QTY: 1.00

QTY: 1.00

QTY: 1.00

PO00022973 - LIFETIME POLY TANK WARRANTY - ALL TANKS

The proposed water tank will be warranted by the water tank manufacturer for the "Lifetime" of the unit. A copy of the manufacturer's warranty will be supplied to define additional details of the warranty provisions.

PO00022734 - HALE FIRE PUMP LIMITED STANDARD WARRANTY

QTY: 1.00 Hale Products, Incorporated ("Hale") hereby warrants to the original buyer that products manufactured by Hale shall be free of defects in material and workmanship for a period of five (5) years from the date product is first placed into service or five and one-half (5 1/2) years from date of shipment by Hale, whichever period shall be first to expire. Within this warranty period, Hale will cover parts and labor for the first two (2) years and parts only for years three (3) through five (5).

PO00022989 - CLASS 1 - PRODUCT WARRANTY

QTY: 1.00 Class 1 warrants that any equipment of our own manufacture (or manufactured for us pursuant to our specifications) found to have defects in material or workmanship during normal use and service, will be repaired or replaced (at our opinion) free of charge, provided that written notice of such defect is received by us within two (2) years, (three 3 years on liquid filled gauges) after initial shipment.

PO00022988 - AKRON - 5 YEAR LIMITED WARRANTY

The limited warranty set forth here against defective materials or workmanship for a period of five (5) years will be given by Akron Brass Co. with respect to Akron Brass Co. products purchased and used in the United States and Canada respectively. All Akron valves are warranted for 10 years.

PO00022761 - AKRON HEAVY DUTY VALVE - 10 YEAR WARRANTY

Akron Brass warrants Heavy Duty Swing-Out Valves for a period of ten (10) years after purchase against defects in material or workmanship. Akron Brass shall repair or replace any Heavy Duty Swing Out Valve which fails to satisfy this warranty.

PO00022983 - CLASS 1 - ELECTRICAL PRODUCT WARRANTY - 2 YEAR

Class 1 warrants that any equipment of our own manufacture (or manufactured for us pursuant to our specifications) found to have defects in material or workmanship during normal use and service, will be repaired or replaced (at our option) free of charge, provided that written notice of such defect is received by us within two years (three for liquid-filled gauges) after initial shipment.

All equipment requiring repair or replacement under this warranty will be returned prepaid to Class 1. Such returned equipment will be examined by us and, if found to be defective as a result of materials failure or workmanship, will be repaired or replaced at no charge.

PO00010937 - CORROSION TREATMENT

Upon apparatus completion, underside of the apparatus, from the pump enclosure-back, shall have anti corrosion film applied to help inhibit rust and the corrosion process. The semi-firm wax film shall be applied by air spray method. The film shall be applied as a minimum to the following areas: body substructure, underside of all body compartments, running board supports and rear step supports. No film shall be applied directly to the exhaust system or wheel wells.

NOTE: The film shall remain semi-firm to promote self-sealing. The film may leave a light tinted color to those areas treated.

PO00024906 - ADDITIONAL ITEMS SHIPPED WITH VEHICLE

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

QTY: 1.00

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1 - Bag of assorted stainless steel nuts and bolts

PO00024715 - VEHICLE CLASS TIER 0

QTY: 1.00



October 10, 2022

Dealership: SAFE Industries Precon Letter RevA GSO# 11694-95

The following is a list of changes, additions, and clarifications discussed during the pre-construction meeting on October 10, 2022 held at KME headquarters in Nesquehoning, PA regarding GSO # 11694-95

In some cases the items contained within alter your original purchase specification and/or price. Please carefully review this list and return a signed copy of this letter by the date listed below. Delays beyond this timeframe may alter KME's ability to deliver your apparatus to contract requirements, may necessitate price increases to the options, or limit our ability to provide some or all of the changes.

Channa	Add/Dalata/			Contract Change	Channa
Item #	Clarification	Part #	Description	Receive)	<u>Change</u> Accepted?
	Subtotal			\$31,108	
1	Clarification	PO00011120	The inspection trips shall be removed from the spec.	\$0.00	Yes
2	Clarification		The paint code for the primary color shall be RED FLNA 32046 . A paint sample shall be sent to the customer for approval.	\$0.00	Yes
3	Clarification		The front tire size shall be changed to 385/65R22.5 X Multi HL Z tires.	\$360.00	Yes
4	Clarification		The tire pressure monitor LEDs shall be shipped loose.	\$0.00	Yes
5	Clarification		The front brakes shall be upgraded to EX-225 17" disc brakes.	\$770.00	Yes
6	Clarification		The wheelbase shall be updated to 207". *This is dependend on pumphouse size and may have to increase due to options below in this letter.	\$0.00	Yes
7	Clarification		The rear frame overhang measurement shall be updated to match the new configuration with options as agreed to in this letter.	\$0.00	Yes
8	Clarification		The front bumper extension shall be increased to 24".	\$415.00	Yes
9	Clarification		The front bumper center well shall have a treadplate cover.	\$615.00	Yes
10	Clarification		The front bumper center well shall have a notch on the officer's side to accommodate the 1.5" front discharge	\$530.00 -	No
11	Clarification		Provide a Q2B pedestal mounted on the driver side of the front bumper.	\$2,470.00	Yes
12	Clarification		The auxiliary manual cab jack shall be located within the pumphouse on the officer side.	\$0.00	Yes
13	Clarification		The FC-94 cab shall have power windows.	\$0.00	Yes
14	Clarification		The driver seat shall have an electric seat base. The seat shall be an H.O. Bostrom 400 Series Firefighter Sierra model seat. The seat shall feature eight-way electric positioning.	\$730.00	Yes
15	Clarification		Add two (2) Bostrom rear facing SCBA seats with Secure All SCBA brackets. The seats shall be ABTS.	\$2,375.00	Yes
16	Clarification		The exterior cab door handles shall be CHROME finished. (CAB DOOR HARDWARE - 1103-004)	\$695.00	Yes
17	Clarification		The alternator shall be upgraded to a 320Amp. The charging system shall include a 320 amp Leece-Neville 12 volt alternator. The alternator shall include a self-exciting integral regulator.	\$455.00	Yes



Change Item #	<u>Add/Delete/</u> <u>Clarification</u>	<u>Part #</u>	Description	Contract Change To Pay or (To <u>Receive)</u>	<u>Change</u> <u>Accepted?</u>
18	Clarification		A Kussmaul Pump 12V air compressor shall be supplied. The air compressor shall be installed under the dashboard on the right-hand side, forward of the officer's seating position. The air compressor shall be plumbed to the air brake system to maintain air pressure. The air compressor shall include an auto drain as an extra precaution to prevent moisture from entering the air system. The automatic moisture drain shall be plumbed into the system between the auxiliary air compressor pump and the air tanks.	\$570.00	Yes
19	Clarification		All C6 warning lights shall be changed to 600 series warning lights.	\$0.00	Yes
20	Clarification		The intersection warning lights shall be relocated to the sides of the chassis front bumper.	\$0.00	Yes
21	Clarification		A DEF fill door shall be provided through the driver side of the cab.	\$95.00	Yes
22	Clarification		The cab shall include a 12 volt cigarette lighter type receptacle in the cab dash to provide a power source for 12 volt electrical equipment. The cab shall also include one (1) Blue Sea dual universal serial bus (USB) charging receptacle in the cab dash switch panel to provide a power source for USB chargeable electrical equipment. The USB port shall be capable of a 5 Volt-4.8 amp total output. The receptacles shall be wired battery direct.	\$175.00	Yes
23	Clarification		The front of the cab shall include one (1) HiViz model FireTech FT-B-72 LED scene light installed on the brow of the cab. The housing shall be powder coated black There shall be controls for this front scene light provided on the dash.	\$5,445.00	Yes
24	Clarification		Provide lug and hub trim package for the front and rear wheels.	\$415.00	Yes
25	Clarification		A rear scene light switch will not be provided on the rear of the body.	\$0.00	Yes
26	Clarification		A hosebed worklight switch shall be provided in a recessed pocket on the driver side rear of the body.	\$0.00	Yes
27	Clarification		The rear cab scene lights and switching shall be deleted.	(\$990.00)	No
28	Clarification		Provide switches on the pump panel for driver side, officer side, and rear scene lighting. These shall be located adjacent to the already specified telescoping light control switches.	\$150.00	Yes
29	Clarification		All C6 warning lights shall be changed to 600 series lights. All C9 warning lights shall be changed to 900 series lights. All warning light lenses shall be clear.	\$0.00	Yes
30	Clarification		The blue sea fuse block specified for the R3 compartment shall be removed.	(\$345.00)	No
31	Clarification	PO00003419	Upgrade from single compartment lighting to dual compartment lighting.	\$2,130.00	Yes
32	Clarification		The Whelen C6 scene lights on the rear, driver, and officer sides of the body shall be changed to HiViz guardian scene lights.	\$1,045.00	Yes
33	Clarification		Provide two alloy pump anodes for the Hale QMAX pump.	\$575.00	Yes
34	Clarification		Both auxiliary inlets shall be provided rearward of the main pump inlet. Top mount controls shall be provided.	\$0.00	Yes
35	Clarification	PO00005093	The driver side #1 discharge shall be a top mount locking swing control. This valve control will NOT be electric.	(\$2,790.00)	Yes
36	Clarification		Provide a 3"x 5" Storz 30 degree elbow adapter on the officer side #1 discharge.	\$650.00	Yes
37	Clarification		Delete the cap from the driver side hosebed discharge.	(\$30.00)	Yes
38	Clarification		I he deck gun discharge shall terminate at the top of the pump panel gauge panel header, approximately centered as the plumbing configuration allows . This is to free up the dunnage area.	\$0.00	Yes



Change Item #	<u>Add/Delete/</u> Clarification	Part #	Description	Contract Change To Pay or (To Receive)	Change Accepted?
39	Clarification		References to push/pull control shall be changed to locking swing handle controls.	\$0.00	Yes
40	Clarification		The lower speedlay and upper speedlays shall be provided with poly trays for loading and unloading hose. Accepting this- option will increase the pumhouse width, wheelbase, and overall length of the apparatus.	\$ 2,010.00 -	No
41	Clarification		The specified 2.5" driver side discharge shall be changed to a 2.5" officer side discharge.	\$0.00	Yes
42	Clarification	PO00012123	The specified well discharge on the officer side shall be deleted.	(\$2,290.00)	Yes
43	Clarification		The booster reel shall be relocated to the officer side. A booster reel rewind switch shall be provided on both sides of the pump house.	\$0.00	Yes
44	Clarification		Delete the specified booster hose. The reel will be provided and the customer will furnish their own hose.	(\$1,065.00)	Yes
45	Clarification		The running board storage hose wells shall be changed to floating style hose wells.	\$0.00	Yes
46	Clarification		The running board storage velcro straps shall be upgraded to airline buckle straps.	\$130.00	Yes
47	Clarification	PO00000104	The driver and officer side pump panel sheets shall be painted BLACK Line-X. If this item is denied then the currently- specified stainless shall be provided	\$ 3,185.00 -	No
48	Clarification	PO0000098	The pump operators gauge panel shall be painted BLACK Line-X. If this item is denied then the currently specified stainless shall be provided.	\$2,075.00	Yes
49	Clarification		A 25 gallon foam tank shall be provided.	\$1,260.00	Yes
50	Clarification		An IC-SL ultra bright foam tank level gauge shall be provided on the pump operator gauge panel.	\$750.00	Yes
51	Clarification	SP00036743	The officer side pump panel water level gauge shall be deleted.	(\$505.00)	Yes
52	Clarification	PO00023606	The rear of body IC-SL water level gauge shall be deleted.	(\$402.00)	Yes
53	Clarification		Future dump provisions shall be provided in the water tank and switch wiring shall be provided within the rear step compartment. Wiring shall be provided in the cab dash and within the rear step compartment so that switches can be added in those locations.	\$655.00	Yes
54	Clarification	PO00012226	The direct tank fill shall be changed to a Akron 3" valve with 2.5" fitting. The direct tank fill will be located on the officer side rear of the body.	\$755.00	Yes
55	Clarification	PO00012226	Clean up the (will/shall) verbiage. Replace will/shall with shall.	\$0.00	Yes
56	Clarification		Provide fender storage compartments with painted doors. Driver side forward fender storage for triple cylinder, driver side rearward fender storage for double cylinder (separate from cast products fuel fill), officer side forward fender storage with slide-out dry hopper, and officer side rearward fender storage for triple cylinder.	\$6,020.00	Yes
57	Clarification	PO00022571	The rear body wheel well liners shall be RUBBER.	\$285.00	Yes
58	Clarification	PO00023896	The rear step shall be 12" long with an aggressive taper. This will increase the OAL of the apparatus.	\$0.00	Yes



Change Item #	Add/Delete/ Clarification	Part #	Description	Contract Change To Pay or (To Receive)	Change Accepted?
59	Clarification	PO00011563	The two (2) specified vertical handrails for the rear of the body shall be located as far outboard as possible.	\$0.00	Yes
60	Clarification		The pumphouse walkway entrance hand rails shall be provided on the outboard face of the pumphouse side sheets. This is so that the walkway width is not affected.	\$0.00	Yes
61	Clarification		Add folding steps to the officer side front of the body.	\$345.00	Yes
62	Clarification		The Alco-Lite ladder shall be changed to Duo-Safety ladders.	\$40.00	Yes
63	Clarification		A backboard slot shall be provided within the ladder storage compartment.	\$885.00	Yes
64	Clarification		The 14' roof ladder shall be provided with dual sided roof hooks.	\$0.00	Yes
65	Clarification		Compartment vents shall be provided for the hard suction storage compartments.	\$0.00	Yes
66	Clarification	PO00019872	Delete the one (1) specified half depth shelf from the R2 compartment.	(\$435.00)	Yes
67	Clarification		The vertical divider in the L3 compartment shall be provided 16" rearward of the forward clear door opening.	\$0.00	Yes
68	Clarification	PO00020029	Delete the 250lb roll-out tray from the floor of the L3 compartment.	(\$855.00)	Yes
69	Clarification		Provide two (2) adjustable shelves (adding one) located to the rear of the vertical dividier.	\$565.00	Yes
70	Clarification		The adjustable vertical pull out toolboard shall be located in the L3 compartment forward of the vertical divider.	\$0.00	Yes
71	Clarification		Delete the two (2) swing out tool boards from the L2 compartment.	(\$2,580.00)	Yes
72	Clarification		Provide one (1) roll-out drop down tray in the L2 compartment.	\$1,595.00	Yes
73	Clarification		Upgrade the 250# floor mounted roll-out tray in R3 to a 600# roll-out tray.	\$765.00	Yes
74	Clarification	PO00004548	The body compartment interior paint shall be changed to GRAY mulit-tone.	\$390.00	Yes
75	Clarification	PO00011790	The 4" Scotchlite stripe shall be increased to a 6" black Scotchlite stripe.	\$90.00	Yes
76	Clarification		1/2" silver leaf accent stripes shall be provided on the top and bottom of the black Scotchlite main stripe. No space will be provided between the main stripe and the silver leaf accent.	\$1,720.00	Yes
77	Clarification		The Scotchlite stripe shall have a Z affect on the L1 and R1 compartment doors.	\$315.00	Yes
/8			The specified Hale QMAX-150 shall be upgraded to a Hale QMAX-175 (1/50GPM) single stage pump.	\$4,800.00-	NO
79			speedlay, and lower speedlay.	\$3,285.00	Yes
	1	1			
				Customer Contract Change To Pay or (To Receive)	
Letter To	otals	1		\$31,108	
Delivery	days Commitme	ent from Contra	act Signing		


				Contract Change	
Change	Add/Delete/			To Pay or (To	Change
Item #	Clarification	<u>Part #</u>	Description	Receive)	Accepted?
Upon receipt of a signed copy of these documents, the below changes and clarifications will be amended to the build specification for your apparatus and a copy will be provided for your review and use for future inspections of the apparatus.					
# days added to delivery commitment for this pre-construction letter due to scope and/or quantity of modifications made on this letter.				-	
Total new contractual delivery days commitment					
Date sent to Customer/Dealer for Signature				10/10/2022	
Date Letter needs to be returned (10 days)				<u>10/20/2022</u>	
Customer S	ignature		Customer Name	Date	
Dealer Signature William Gray Dealer Name William Gray				Date <u>10-14-2022</u>	
KME Signature Jared Eickhoff				Date <u>3/6/2020</u>	