

**RFQ Document**

**TOWN OF ANTIGONISH  
VOLUNTEER FIRE DEPARTMENT  
2024 PUMPER/TANKER TENDER**

**Set No:** \_\_\_\_\_

September 2024

Request for Quotes  
Town of Antigonish 2024  
Pumper/Tanker RFQ

Sealed quotes addressed to “Town of Antigonish, 274 Main Street, Antigonish, N. S.”, will be received up to 1:00 pm Friday, October 4, 2024 for the “Town of Antigonish 2024 Pumper Fire Fighting Apparatus RFQ”. There is no document fee.

The work can be generally described to include: The supply of one (1) pumper/tanker to the standards and specifications noted in the RFQ, with optional additional warranty.

All questions can be addressed to Kate MacInnis, Director of Community Development, email [kate.macinnis@townofantigonish.ca](mailto:kate.macinnis@townofantigonish.ca). Questions will be received up until 1 p.m. on Monday, October 1, 2024.

The Town reserves the right to waive any informalities or to reject any or all quotes based on changes to the approach to the work, organizational and perceived liability considerations, the financial suitability of proceeding with the execution of the work, individual tenderer's level of experience, available personnel and equipment, the Owner's perception of the impact of performance on similar projects, or potential performance problems in keeping schedule targets. The Town reserves the right to omit portions of the work should it be deemed necessary for overall financial reasons.

Prepared by:

Kate MacInnis  
Director of Community Development  
Town of Antigonish



**RFQ FORM**  
**2024 Pumper/Tanker**  
**Closing 1:00 p.m. October 4, 2024**

1. SALUTATION:

- .1 Town of Antigonish  
274 Main Street  
Antigonish, NS B2G 2C4
- .2 Bid Proposal: **1 x Pumper/Tanker**
- .3 Closing Date: 1:00 p.m., October 4, 2024
- .4 Bid Submission/ Location:  
In a sealed envelope, clearly marked as to contents from the supplier.  
Results will be posted to the Town website 2 business days after opening.  
Attn: Kate MacInnis, Director of Community Development  
Community Development Department, Town Hall  
Town of Antigonish, 274 Main St., Antigonish, NS B2G 2C4
- .5 From: \_\_\_\_\_  
\_\_\_\_\_

2. PROPOSER DECLARES:

- .1 That this Proposal is made without collusion or fraud.
- .2 That he/she has carefully examined the Contract Documents and Addenda (if any) and take all the foregoing into consideration in preparation of his/her proposal.

3. PROPOSER AGREES:

- .1 To enter into a contract to supply one (1) Pumper/Tanker, as required by the Town of Antigonish, as described and specified herein for the unit price stated on Page 2 hereunder, Schedule of Unit Prices.
- .2 That the total proposed price shall be the unit prices in Page 2 hereunder.
- .3 That this Proposal is valid for acceptance for 30 days from the time of Proposal Closing.
- .4 That payment for items awarded by the Town of Antigonish, listed in Page 2, be paid by the Town of Antigonish within 30 days of supply to the Town of Antigonish of the vehicle in good working order to the satisfaction of the Town of Antigonish Volunteer Fire Department Fire Chief.

.5 That the Contract Documents include:

- .1 Invitation for Quotes
- .2 Form for Bid Proposal
- .3 Terms and Conditions
- .4 Qualifications
- .5 Requirements
- .6 Specifications for Truck

.6 The Town reserves to not necessarily accept the lowest quote submission, reserves the right to waive any informalities or to reject any or all quotes based on: required bid submissions, organizational and perceived liability considerations, the financial suitability of proceeding with the purchase, individual tenderer's level of experience, or potential performance problems in keeping schedule targets. The Town reserves the right to omit tendered items should it be deemed necessary for overall financial reasons, and to accept or reject any offer as considered by the Town to be in its best interest.

**4. SCHEDULE OF UNIT PRICES;**

**1. 1 x Pumper/Tanker Apparatus**

The following items #1 through #6 pertain to the vehicle description in the Bid Proposal.

- 1. Prices shall be f.o.b. Antigonish and include all charges including shipping and handling, applicable taxes, accessory installation, etc.
- 2. Percentage of the purchase price required with Bid award.
- 3. A delivery date must be included in the Bid Proposal.
- 4. Prices proposed shall be for straight sale.
- 5. Complete manufacturer's data must be included with the Bid Proposal and vehicle manuals shall be supplied at time of vehicle delivery.
- 6. Warranty information shall be supplied for consideration as an option.
- 7. Evaluation of tender submissions will be based on the following:
  - .1 Bid Price within budget
  - .2 Equipment features/ specifications and servicing capability
  - .3 Warranty
  - .4 Delivery

Carried forward Pricing from Specification pages:

**Truck #1 Base Price** \$ \_\_\_\_\_

**HST:** \$ \_\_\_\_\_

**Bid Total for Base Prices:** \$ \_\_\_\_\_

**Payment Required for Order:** \$ \_\_\_\_\_

Standard Warranty details included: \_\_\_\_\_ Yes \_\_\_\_\_ No

PROVISIONAL ITEM (May not be selected):

Extended Warranty of Truck

Truck \_\_\_\_\_ Months at \$ \_\_\_\_\_

Provide Details of Warranty for each Truck:

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.2 Please return:

“Specifications” Pages indicating the vehicle’s compliance with identified specifications and noted pricing breakdown. Bidders shall reply to the specifications on the forms supplied. All items in the specifications must be answered indicating compliance or noncompliance. Bidders shall state ‘Yes’ for compliance or state the deviation in the notes section. Information relating to the deviation may accompany this document include a separate cover letter and shall state the page and section for ease of reference. The specifications shall be answered on the forms provided or the bid will be disqualified. Each bidder shall submit a set of specifications outlining the exact vehicle proposed. Other bid forms or submission of alternates, not detailed in the specifications, shall be cause for disqualification. It is the intent that the specifications clearly identify the furnishings and delivery of a complete Pumper Fire Fighting Apparatus as specified.

In addition, the following items are requested to be submitted along with the Form of Tender and Specifications:

- Insurance Certification for \$25,000,000.00
- Business Credit Report Available Upon Request
- ISO Certificate
- Length of Time in Business/No Prototypes
- Professional Engineering Certificate of 1 Staff Member
- C.W.B. Welding Certificates
- Fire Apparatus Manufacture Association Certificate
- 24 Hour Warranty Policy/Service within 150 Miles
- Body Paint and Warranty Certificates

.3. Please note:

Bid submissions will be reviewed and evaluated based on qualifications, bonding, quality programs, irregularities, delivery and price. The Town of Antigonish reserves the right to waive informalities, accept or reject any/all bid proposals and/or accept any bid proposal it feels is in its best interest.

5. COMPLETION TIME:

.1 Proposer agrees to supply vehicle requested 540 to 600 calendar days after the acceptance of the order dependent on the chassis delivery.

6. EVALUATION

.1 This RFQ will be evaluated on a points system based on the documents submitted. Failure to submit requested documents may result in your tender being rejected or 0 points being assigned. Evaluation of points being received in each section is at the discretion of the Town of Antigonish Volunteer Fire Department.

- 1) Insurance Certificate for \$25,000,000.00 – 25 Points
  - 2) Business Credit Report Available Upon Request – 10 Points
  - 3) ISO Certificate – 10 Points
  - 4) Length of Time in Business/No Prototypes – 10 Points
  - 5) Professional Engineering Certificate of Staff Member – 15 Points
  - 6) C.W.B. Welding Certificates – 10 Points
  - 7) Fire Apparatus Manufacture Association Certificate – 10 Points
  - 8) 24 Hour Warranty Policy/Service within 150 Miles – 10 Points
  - 9) RFQ Meets Specifications – 35 Points
  - 10) Body Paint and Warranty Certificates – 25 Points
  - 11) Price – 10 Points
- Total: 170 Points

7. DEMONSTRATION

An authorized representative of the manufacturer shall provide demonstration of the completed vehicle. One (1) day of orientation shall be provided and performed by a qualified representative of the manufacturer.

8. TERMS AND CONDITIONS OF PAYMENT

The chassis shall be paid in full when it is received at the apparatus manufacturer's facilities. The balance of payment shall be paid upon completion and delivery acceptance.

9. QUALIFICATIONS SHEET

All bidders must fill out this form completely. Bids not returned with this form completely filled out will be disqualified. Any blank spaces or non compliance to Mandatory Requirements could result in bids being disqualified.

10. PRECONSTRUCTION MEETING

One preconstruction meeting with the awarded bidder will be held on site at the Antigonish Fire Department at the bidders expense.

11. FINAL INSPECTION

Inspection visits to bidders manufacturing facility unlimited at the purchasers expense.

12. REQUIREMENTS

Details	Yes	No	Exceptions/Notes
The bidder must have been manufacturing fire apparatus continuously, without interruption for a minimum of Twenty (20) years. <b>(Mandatory Requirement)</b>			
The bidder shall have a documented and certified ISO 9001 quality program in place. A copy of the certifications must be included with the bid submittal. The apparatus manufacturer shall provide the name of the ISO provider, as well as the ISO providers contact information including phone number. <b>(Mandatory Requirement)</b>			
The bidder shall have a quality manual available for inspection by the purchaser. <b>(Mandatory Requirement)</b>			
The bidder must indicate that they are the prime contractor for this bid, and that all non-purchased components are not subcontracted.			
All welding on the apparatus body and plumbing systems must be performed by certified welders. The certificates must be certified in a minimum of Division 2. Copies of the certification must be attached with the bid submittal. <b>(Mandatory Requirement)</b>			
The apparatus manufacturer must be a current member of the Fire Apparatus Manufacturers Association (FAMA). A copy of the current year certificate must be attached with the bid submittal.			
The apparatus manufacturer must provide documentation of having a certified engineer on staff with the bid submittal. <b>Subcontracted Engineers Shall Not Be Acceptable And Shall Disqualify The Bid (Mandatory Requirement)</b>			
The manufacturer of the apparatus must supply a Certificate of Insurance proving that they carry a minimum of \$25,000,000.00 CDN in product liability insurance. Bids not meeting this requirement will not be accepted. A copy of the certificate shall be included with the bid submittal. <b>(Mandatory Requirement).</b>			
The manufacturer of the apparatus must be registered with Transport Canada to the National Safety Mark Standards. Bids not meeting this requirement will not be accepted. Copies or registration must be attached with the bid submittal. A copy of the certificate must be attached with the bid submittal. <b>(Mandatory Requirement)</b>			
The manufacturer of the apparatus must be certified and in good standing with the Workers Compensation Board. Proof of certification must be supplied with the bid. A manufacturer that is not certified in Factory Manufacturing or not in good standing with their local Workers Compensation Board shall be disqualified <b>(Mandatory Requirement)</b>			

13. REQUIREMENTS OF THE APPARATUS MANUFACTURER

The manufacturer of the apparatus must be fully owned and managed by a Parent Company, Corporation, Partnership, or that is a company 100% held in North America.

All chassis, pumps and major components must be manufactured in North America and must be able to supply parts for an emergency vehicle within 48 hours.

Proposals from any manufacturer that is fully or partially owned and/or operated by a Foreign Company, Corporation, Partnership, or that is a company under any type of ownership partnership, or any similar type of agreement will be rejected immediately, and their bid disqualified. **(Mandatory Requirement)**

#### 14. SERVICE REQUIREMENTS

The bidder shall provide a "24 Hour", "7-Day Per Week" emergency parts and service toll free telephone number. This phone number must be listed on a separate statement included in the bid package, along with the contact's name, business name, address, and phone number of the local service agency, which will service the vehicle after being placed into service. (Mandatory Requirement)

The service agency shall be capable to perform all required service work and shall also have at their disposal the ability to have any required subcontracting work, such as engine, transmission, etc. work performed on behalf of the apparatus manufacturer.

#### 15. ENGINEERING DRAWINGS

Engineering drawings shall be submitted to the purchaser prior to commencement of the manufacturing process.

This drawing shall show at a minimum the front, left, right and rear views of the vehicle, as it will look at the time of completion.

A copy of this drawing shall be signed and returned to the apparatus manufacturer and become part of the vehicle contract.

#### 16. BODY MANUAL – ELECTRONIC

Two (2) digitized manual(s) shall be provided for the operation of the complete apparatus. The manual(s) shall include a troubleshooting guide complete with recommended daily, weekly, and annual maintenance procedures.

#### 17. WEIGHT AND BALANCE CALCULATION

The apparatus, prior to acceptance will be required to meet the vehicle stability of the applicable NFPA or ULC automotive fire apparatus standard.

A calculated center of gravity calculation shall be provided as part of the line drawing supplied with the quote request to ensure the apparatus meets these requirements. The calculated center of gravity shall be no higher than 80 percent of the rear track axle width.

#### 18. TESTING AND CERTIFICATION

The completed vehicle shall be tested and labeled to CAN/ULC-S515-13. An independent third party certification will also be acceptable.

The third party organization shall be accredited for testing systems on fire apparatus in accordance with ISO/IEC 17020 or ISO/IEC Guide 65.

The certification organization shall not be owned or controlled by manufacturers or vendors of the apparatus being tested.

The certification organization shall be primarily engaged in certification work and shall not have a monetary interest in the product's ultimate profitability.



The certification organization shall witness all test and shall refuse to certify any test result for a system if the components do not pass the testing required by this system.

There shall be no conditional, temporary, or partial certification of test results.  
Appropriate forms of data sheets shall be provided and used during testing.

Manufacturer's certification **is not** acceptable. **(Mandatory Requirement)**

The manufacturer shall be certified to ISO 9001

The completed vehicle shall undergo, prior to delivery, a two (2) hour road test with all applicable emergency equipment activated. A certification shall be provided to the purchaser outlining the results of this road test.

#### 19. CARRYING CAPACITY PLATE

A warning label shall be provided in the cab within sight of the driver stating the seating capacity of the cab/crew cab.

Another warning label shall be provided in the cab within sight of the driver that the occupants must be seated and belted.

#### 20. VEHICLE DIMENSION PLATE

A warning label shall be provided in the cab within sight of the driver stating the following apparatus dimensions:

Height and length in standard and metric measurements.

Gross vehicle weight rating in pounds and kilograms.

#### 21. DIELECTRIC VOLTAGE TESTING

The wiring and permanently connected devices and equipment shall be subject to a dielectric voltage withstand test of 900 volts for one minute. The testing shall be performed after all body work has been completed. The electric polarity of all permanently wired equipment, cord reels, and receptacles shall be tested to verify that wiring connections have been properly made.

#### 22. FLUID CAPACITY AND TYPE LABEL

A permanent label shall be provided and shall state the type and quantity of the following fluids used in the vehicle:

Engine Oil

Engine Coolant

Chassis Transmission Fluid

Drive Axle Fluid

Pump Gear Case

Primer Lubricant (If Applicable)

23. SIGNATURE

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2024.

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NAME OF FIRM QUOTING

(SEAL)

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ADDRESS

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TELEPHONE

---

SIGNATURE

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NAME AND TITLE (PRINTED)

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SIGNATURE

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NAME AND TITLE (PRINTED)

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WITNESS

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NAME AND TITLE (PRINTED)

**PLEASE NOTE: Proposals submitted by or on behalf of any Corporation must be signed in the name of such Corporation by a duly authorized officer or agent who shall also subscribe his/her own name and office. Affix seal.**

**PUMPER/TANKER SPECIFICATIONS**

**A Freightliner two door chassis shall be supplied as per the Specifications listed below:**

Details	Yes	No	Exceptions/Notes
M2 106 PLUS CONVENTIONAL CHASSIS 2026 MODEL YEAR SPECIFIED SET BACK AXLE – TRUCK STRAIGHT TRUCK PROVISION, NON-TOWING LH PRIMARY STEERING LOCATION			
TRUCK CONFIGURATION DOMICILED, CANADA (OTHER THAN QUEBEC) EPA EMISSIONS CERTIFICATION FOR 50 STATE REGISTRATION - CARB EXEMPT, FIRE, EMERGENCY AND MILITARY VEHICLES ONLY (INCLUDES 6X4 INCH LABEL SHIPPED LOOSE) NONE FIXED CANADIAN EXCHANGE FIRE SERVICE EMERGENCY VEHICLES BUSINESS SEGMENT LIQUID BULK COMMODITY TERRAIN/DUTY: 100% (ALL) OF THE TIME, IN TRANSIT, IS SPENT ON PAVED ROADS MAXIMUM 8% EXPECTED GRADE SMOOTH CONCRETE OR ASPHALT PAVEMENT – MOST SEVERE IN-TRANIST (BETWEEN SITES) ROAD SURFACE MEDIUM TRUCK WARRANTY EXPECTED FRONT AXLE(S) LOAD: 16,000 LBS EXPECTED REAR DRIVE AXLE(S) LOAD: 31,000 LBS EXPECTED GROSS VEHICLE WEIGHT CAPACITY: 47,000 LBS			
FIRE TANK – NO MAIN DRIVELINE DRIVEN SPLIT SHAFT PTO/PUMP  EXPECTED BODY/PAYLOAD CG HEIGHT ABOVE FRAME “XX” INCHES: 32.0 IN			
DD8 7.7L CYL DUAL STAGE 375 HP @ 2200RPM, 2600 GOV RPM, 1050 LB-FT@1200 RPM			
75 MPH ROAD SPEED LIMIT CRUISE CONTROL SPEED LIMIT SAME AS ROAD SPEED LIMIT FLEET MANAGEMENT – DAILY ENGINE USEAGE ENABLED PTO RPM CONTROL WITH STEERING WHEEL SWITCHES FUEL DOSING OF AFTERTREATMENT ENABLED IN PTO MODE-CLEANS HYDROCARBONS AT HIGH TEMPERATURES ONLY ONE DASH PTO SPEED SWITCH, WITH ONE TEM PTO SPEED			

<p>PTO MINIMUM RPM – 600          ENABLE AUTO ENGINE RPM          ELEVATE FOR EXTENDED IDLE          PTO 1, NO SWITCH, TEM SUPPLIED REQUEST AND INTERLOCK, WITH PTO CONNECTIONS, NO INTERLOCKS          PTO 2, NO SWITCH, TEM SUPPLIED REQUEST AND INTERLOCKS, WITH PRO CONNECTION, NO FACTORY INTERLOCKS</p>			
<p>ENGINE AFTERTREATMENT DEVICE, AUTOMATIC OVER THE ROAD ACTIVE REGENERATION AND VIRUTAL REGENERATION REQUEST SWITCH IN CLUSTER AND DASH MOUNTED INHIBIT SWITCH          STANDARD EXHAUST SYSTEM LENGTH          RH HORIZONAL TAILPIPE, EXIST FRWARD OF REAR TIRES          6 GALLON DIESEL EXHAUST FLUID FILL          LH MEDIUM DUTY STANDARD DIESEL EXHAUST FLUID TANK LOCATION          STANDARD DIESEL EXHAUST FLUID PUMP MOUNTING          STANDARD DIESEL EXHAUST FLUID TANK CAP          NO MUFFLER/TAILPIPE SHIELD ELECTRONICALLY CONTROLLED VARIBALE SPEED          VISCOUS FAN DRIVE AUTOMATIC FAN CONTROL WITH DASH SWITCH AND INDICATOR LIGHT, NON ENGINE MOUNTED          DETROIT ENGINE MOUNTED FUEL/WATER SEPARATOR WITH WATER-IN-FUEL SENSOR AND HAND PRIMER          FULL FLOW OIL FILTER          NO COOLANT FILTER          1100 SQUARE INCH ALUMINUM RADIATOR          ANTIFREEZE TO -60F, OAT (NITRATE AND SILCATE FREE)          EXTENDED LIFE COOLANT          GATES BLUE STRIPE COOLANT HOSES OR EQUIVALENT          CONSTANT TENSION HOSE CLAMPS FOR COOLANT HOSES          RADIATOR DRAIN VALVE          LOWER RADIATOR GUARD          PHILLIPS-TEMRO 750 WATT/115 VOLT BLOCK HEATER          CHROME ENGINE HEATER          RECEPTACLE MOUNTED UNDER LH DOOR          ALUMINUM FLYWHEEL HOUSING          DELCO 12V 31MT STARTER WITH INTEGRATED MAGNETIC SWITCH</p>			
<p>ALLISON 3000 EVS AUTOMATIC TRANSMISSION WITH PTO PROVISION</p>			
<p>ALLISON VOCATIONAL PACKAGE 198 – AVAILABLE</p>			

<p>ON 3000/4000 PRODUCT FAMILIES WITH VOCATION MODELS EVS        ALLISION VOCATION RATING FOR FIRE TRUCK/EMERGENCY VEHICLE APPLICATIONS AVAILABLE WITH ALL PRODUCT FAMILIES        PRIMARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY        SECONDARY MODE GEARS, LOWEST GEAR 1, START GEAR 1, HIGHEST GEAR 6, AVAILABLE FOR 3000/4000 PRODUCT FAMILIES ONLY        PRIMARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISION, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE        SECONDARY SHIFT SCHEDULE RECOMMENDED BY DTNA AND ALLISION, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE        PRIMARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISION, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE        SECONDARY SHIFT SPEED RECOMMENDED BY DTNA AND ALLISION, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE        ENGINE BRAKE RANGE PRESELECT RECOMMENDED BY DTNA AND ALLISION, THIS DEFINE BY ENGINE AND VOCATIONAL USAGE        ENGINE BRAKE RANGE ALTERNATE PRESELECT RECOMMENDED BY DTNA AND ALLISION, THIS DEFINED BY ENGINE AND VOCATIONAL USAGE        FUEL SENSE 2.0 DISABLED – PERFORMANCE – TABLE BASED DRIVER SWITCH INPUT -DEFAULT 0        SWITCHES DIRECTION CHANGE ENABLED WITH MULTIPLEXED SERVICE BRAKES – ALLISION 5<sup>TH</sup> GEN TRANSMISSIONS        PUMP MODE INPUT ENABLED 3<sup>RD</sup>/4<sup>TH</sup> LOCKUP WIRED ON TCM INPUT AJ/BQ – ALLISIONS 5<sup>TH</sup> GEN TRANSMISSIONS        QUICKFIT BODY LIGHTING CONNECTOR AT END OF FRAME, WITH CAP ELECTRONIC TRANSMISSION WIRING TO CUSTOMER        INTERFACE CONNECTOR (2) CUSTOMER INSTALLED CHELSEA 280 SERIES PTO'S        PTO MOUNTING, LH AND RH SIDES OF MAIN TRANSMISSION        MAGNETIC PLUGS, ENGINE DRAIN, TRANSMISSION DRAIN, AXLE(S) FILL AND DRAIN        HEAVY DUTY ELECTRONIC TRANSMISSION SHIFT CONTROL,        COLUMN MOUNTED TRANSMISSION PROGNOSTICS – ENABLED 2013 WATER TO OIL TRANSMISSION COOLER, IN RADIATOR END TANK        TRANSMISSION OIL CHECK AND FILL WITH ELECTRONIC OIL LEVEL CHECK        SYNTHETIC TRANSMISSION FLUID (TES-295 COMPLIANT)</p>			
<p>DETROIT DA-F-16.0-5 16,000# FL1</p>			

<p>71.0 KPI/3.74 DROP SINGLE FRONT AXLE          MERITOR 16.5X6 Q+CAST          SPIDER CAM FRONT BRAKES          DOUBLE ANCHOR, FABRICATED SHOES          DIRE AND EMERGENCY SEVERE SERVICE, NON-          ABESTOS FRONT LINING          CAST IRON OUTBOARD FRONT BRAKE DRUMS          FRONT BRAKE DUST SHEILDS          FRONT OIL SEALS          VENTED FRONT HUB CAPS WITH WINDOW, CENTER          AND SIDE PLUGS – OIL STANDARD SPINDLE NUTS          FOR ALL AXLES          MERITOR AUTOMATIC FRONT SLACK ADJUSTERS          TRW TAS-85 POWER STEERING          POWER STEERING PUMP          2 QUART SEE THROUGH POWER STEERING          RESERVOIR          CURRENT AVAILABLE SYNTHETIC 75-W-90 FRONT          AXLE LUBE</p>			
<p>16,000# TAPERLEAF FRONT SUSPENSION          MAINTENANCE FREE RUBBER BUSHINGS- FRONT          SUSPENSION FRONT SUSPENSION WITH LEFT HAND          OFFSET SHACKLE BRACKET          FRONT SHOCK ABSORBERS</p>			
<p>CUMMINS-MERITOR RS-30-185          31,000# U-SERIES          FIRE/EMERGENCY SERVICE          SINGLE REAR AXLE          5.38 REAR AXLE RATIO          IRON REAR AXLE CARRIER WITH STANDARD AXLE          HOUSING          JACKSHAFT, TEMPORARY DRIVELINE FOR          CUSTOMER FURNISHED FIRE PUMP, TEMPORARY          INSTALLED FOR SHIPPING TO CUSTOMER/TEM          MXL 17T MERITOR EXTENDED LUBE MAIN DRIVELINE          WITH HALFROND YOKES          DRIVER CONTROLLED TRACTION DIFFERENTIAL –          SINGLE REAR AXLE (1) DRIVER CONTROLLED          DIFFERENTIAL LOCK REAR VALVE FOR SINGLE DRIVE          AXLE INDICATOR LIGHT FOR EACH DIFFERENTIAL          LOCKOUT SWITCH          MERITOR 16.5X7 P CAST SPIDER          CAM REAR BRAKES, DOUBLE ANCHOR CAST SHOES          FIRE AND EMERGENCY SEVERE SERVICE NON-          ASBESTOS REAR BRAKE LINING          BRAKE CAMS AND CHAMBERS ON FORWARD SIDE          OF DRIVE AXLE(S)          WEBB CAST IRON REAR BRAKE DRUMS          REAR BRAKE DUST SHIELDS          REAR OIL SEALS          WABCO TRISTOP D          LONGSTROKE 1-DRIVE AXLE          SPRING PARKING CHAMBERS          HALDEX AUTOMATIC REAR SLACK ADJUSTERS</p>			

CURRENT AVAILABLE SYNTHETIC 75-W-90 REAR AXLE LUBE			
31,000# FLAT LEAF SPRING REAR SUSPENSION WITH HELPER AND RADIUS ROD FOR FIRE/EMERGENCY SERVICE SPRING SUSPENSION – NO AXLE SPACERS STANDARD AXLE SEATS IN AXLE CLAMP GROUP FORE/AFT CONTROL RODS			
NO PUSHER/TAG BRAKE DUST SHIELDS			
AIR BRAKE PACKAGE WABCO 4S/4M ABS WITH TRACTION CONTROL REINFORCED NYLON, FABRIC BRAID AND WIRE BRAID CHASSIS AIR LINES FIBER BRAID PARKING BRAKE HOSE STANDARD BRAKE SYSTEM VALVES STANDARD AIR SYSTEM PRESSURE PROTECTION SYSTEM STD U.S. FRONT BRAKE VALVE RELAY VALVE WITH 5-8 PSI BRAKE PRESSURE, NO REAR PROPORTIONING VALVE BW AD-9SI BRAKE LINE AIR DRYER MOUNTED INBOARD ON LH RAIL STEEL AIR BRAKES RESERVOIRS PULL CABLES ON ALL AIR RESERVOIR(S)			
NO TRAILER AIR HOSE NO AIR HOSE HANGER (1)QUICKFIT PROGRAMMABLE SOLENOID W/STATE RETENTION PLUMBED TO BACK OF CAB NO TRAILER ELECTRICAL CABLE			
5150MM (203 INCH) WHEELBASE 11/32X3-1/2X10-15/16 INCH STEEL FRAME (8.73MMX277.8MM/0.344X10.94 INCH) 120KSI 1100MM (43 INCH) REAR FRAME OVERHANG FRAME OVERHANG RANGE: 41 INCH TO 50 INCH CALC'D BACK OF CAB TO REAR SUSP C/L (CA) : 137.2 in CALCULATED EFFECTIVE BACK OF CAB TO REAR SUSPENSION C/L (CA) : 134.2 in CALC'D FRAME LENGTH - OVERALL : 275.45 in CALCULATED FRAME SPACE LH SIDE : 102.49 in CALCULATED FRAME SPACE RH SIDE : 104.58 in CALC'D SPACE AVAILABLE FOR DECKPLATE : 0.0 in SQUARE END OF FRAME REAR TOW HOOKS FRONT CLOSING CROSSMEMBER LIGHTWEIGHT HEAVY DUTY ALUMINUM ENGINE CROSSMEMBER STANDARD CROSSMEMBER BACK OF TRANSMISSION STANDARD MIDSHIP #1 CROSSMEMBER(S) STANDARD REARMOST			

CROSSMEMBER STANDARD SUSPENSION CROSSMEMBER			
THREE-PIECE 14 INCH CHROME STEEL BUMPER WITH COLLAPSIBLE ENDS AND LH WING CUTOUT FOR FEDERAL MS100/ES100/ES100C SPEAKER FRONT TOW HOOKS – FRAME MOUNTED SINGLE LICENSE PLATE BUMPER MOUNTING ON LH SIDE NO MUDFLAP BRACKETS NO REAR MUDFLAPS FENDER AND FRONT OF HOOD MOUNTED FRONT MUDFLAPS GRADE 8 THREADED HEX HEADED FRAME FASTENERS EXTERIOR HARNESSSES WRAPPED IN ABRASION TAPE FACTORY INSTALLED BENDIX NEXT GEN SMARTIRE TIRE PRESSURE MONITORING SYSTEM WITH WHEEL RIM MOUNTED NEXT GEN SENSORS AND INTEGRATED IN DASH LEVEL FRAME RAILS (+/- 1%) WHEN CHASSIS IS LOADED TO FRONT AND REAR SUSPENSION RATINGS 3D PARASOLID VEHICLE MODEL TANK BODY 0 TO 1500 GALLONS CLEAR FRAME RAILS FROM BACK OF CAB TO FRONT REAR SUSPENSION BRACKET, BOTH RAILS OUTBOARD			
NO FIFTH WHEEL			
50 GALLON/189 LITER SHORT RECTANGULAR ALUMINUM FUEL TANK – LH PLAIN ALUMINUM/PAINTED STEEL FUEL/HYDRAULIC TANK(S) WITH PAINTED BANDS FUEL TANK(S) FORWARD POLISHED STAINLESS STEEL STEP FINISH FUEL TANK CAP(S) DETROIT FUEL/WATER SEPARATOR WITH BYPASS AND 12 VOLT PREHEATER EQUIFLO INBOARD FUEL SYSTEM AUXILIARY FUEL SUPPLY AND RETURN PORTS LOCATED ON LH FUEL TANK HIGH TEMPERATURE REINFORCED NYLON FUEL LINE INSULATION FOR FUEL LINES			
MICHELIN XZY-3 385/65R22.5 18 PLY RADIAL FRONT TIRES MICHELIN XDN2 GRIP 315/80R22.5 20 PLY RADIAL REAR TIRES			



<p>CONMET PRESET PLUS          PREMIUM IRON FRONT HUBS          WEBB IRON REAR HUBS</p>			
<p>ALCOA LVL ONE 82462X          22.5X12.25 10-HUB PILOT 4.68          INSET 10-HAND ALUMINUM          DISC FRONT WHEELS          ALCOA ULTRA ONE 89U64X          22.5X9.00 10-HUB PILOT 5.99          INSET ALUMINUM REAR WHEELS          POLISHED DISC SIDE FRONT          WHEELS WITH DURA-BRIGHT FINISH          POLISHED OUTER (DISHED SIDE)          REAR WHEELS WITH OUTER          ONLY DURA-BRIGHT FINISH          BENDIX SMARTIRE TIRE          PRESSURE MONITORING          SYSTEM WHEEL/RIM MOUNTED          SENSORS, ALL AXLES          FRONT WHEEL MOUNTING NUTS          REAR WHEEL MOUNTING NUTS          NYLON WHEEL GUARDS FRONT          AND REAR ALL INTERFACES</p>			
<p>106 INCH BBC FLAT ROOF          ALUMINUM CONVENTIONAL CAB          AIR CAB MOUNTING          NONREMOVABLE BUGSCREEN          MOUNTED BEHIND GRILLE          2-1/2 INCH FENDER EXTENSIONS          LH AND RH EXTERIOR GRAB          HANDLES WITH SINGLE RUBBER INSERT          HOOD MOUNTED CHROMED          PLASTIC GRILLE          CHROME HOOD MOUNTED AIR INTAKE GRILLE          FIBERGLASS HOOD          HOOD LINER, ADDED FIREWALL AND FLOOR HEAT          INSULATION          DUAL 25 INCH ROUND STUTTER          TONE HOOD MOUNTED AIR HORNS WITH DUAL          LANYARDS          DUAL ELECTRIC HORNS          DUAL HORN SHIELDS          REAR LICENSE PLATE MOUNT END OF FRAME          LED HEADLIGHT ASSEMBLY AND INCANDESCENT          MARKER/TURN LAMP WITH CHROME BEZEL LED          AERODYNAMIC MARKER LIGHTS DAYTIME RUNNING          LIGHTS          INTEGRAL STOP/TAIL/BACKUP          LIGHTS WITH 7 EXTRA FEET OF WIRE MOUNTED AT          END OF FRAME          STANDARD FRONT TURN SIGNAL LAMPS          AUTOMATIC ON/OFF, ENGINE COMPARTMENT,          HOOD</p>			

<p>ACTIVATED WORK LIGHT WITH          MANUAL OVERRIDE DUAL WEST COAST BRIGHT          FINISH HEATED MIRRORS WITH LED LIGHTS AND LH          AND RH REMOTE          DOOR MOUNTED MIRRORS 102 INCH EQUIPMENT          WIDTH LH AND RH 8 INCH BRIGHT FINISH CONVEX          MIRRORS          MOUNTED UNDER PRIMARY MIRRORS          STANDARD SIDE/REAR REFLECTORS          RH AFTERTREATMENT SYSTEM          CAB ACCESS WITH POLISHED          DIAMOND PLATE COVER          COMPOSITE EXTERIOR SUN VISOR          NO REAR WINDOW          TINTED DOOR GLASS LH AND RH WITH TINTED NON-          OPERATING WING WINDOWS          RH AND LH ELECTRIC POWERED WINDOWS          1-PIECE SOLAR GREEN GLASS WINDSHIELD          2 GALLON WINDSHIELD WASHER RESERVOIR          WITHOUT FLUID LEVEL INDICATOR, FRAME          MOUNTED</p>			
<p>RUGGED TRIM PACKAGE          GRAY &amp; CARBON VINYL          INTERIOR "RUGGED" CARBON WITH PREMIUM          GUNMETAL ACCENT (RUGGED)          MOLDED PLASTIC DOOR PANEL          MOLDED PLASTIC DOOR PANEL          BLACK MATS WITH SINGLE INSULATION          (1)DASH MOUNTED 12V POWER OUTLET, (1)DASH          MOUNTED          DUAL USB-C OUTLET FORWARD ROOF MOUNTED          CONSOLE          LH AND RH KICKPLATES          DIGITAL ALARM CLOCK IN DRIVER DISPLAY          (2) CUP HOLDERS LH AND RH DASH          M2/SD DASH HEATER, DEFROSTER AND AIR          CONDITIONER STANDARD HVAC DUCTING MAIN          HVAC CONTROLS WITH RECIRCULATION SWITCH          STANDARD HEATER PLUMBING VALEO HEAVY DUTY          A/C REFRIGERANT COMPRESSOR BINARY CONTROL,          R-134A PREMIUM INSULATION SOLID-STATE          CIRCUIT PROTECTION AND FUSES 12V NEGATIVE          GROUND ELECTRICAL SYSTEM PREMIUM LED CAB          LIGHTING NO SECURITY DEVICE          ALL UNIT(S) KEYED ALIKE WITH          CUSTOMER SPECIFIED KEY          NUMBER FT1013          KEY QUANTITY OF 8          LH AND RH ELECTRIC DOOR LOCKS          NO MATTRESS          SEATS INC 911 UNIVERSAL SERIES HIGH BACK AIR          SUSPENSION DRIVER SEAT WITH          NFPA 1901-2009/2016 COMPLIANT SEAT SENSOR          SEATS INC 911 UNIVERSAL SERIES HIGH BACK AIR          SUSPENSION PASSENGER SEAT WITH NFPA 1901-</p>			

<p>2009/2016 COMPLIANT SEAT SENSOR LH AND RH          INTEGRAL DOOR PANEL ARMRESTS BLACK VINYL          DRIVER SEAT COVER          BLACK VINYL PASSENGER SEAT COVER          NFPA 1901-2009 HIGH VISIBILITY ORANGE SEAT          BELTS ADJUSTABLE TILT AND TELESCOPING          STEERING COLUMN          4-SPOKE 18 INCH (450MM) BLACK STEERING WHEEL          WITH SWITCHES          DRIVER AND PASSENGER INTERIOR SUN VISORS          INTERFACE CONNECTORS AND WIRING FOR          CUSTOMER PROVIDED LED STEP LIGHTING</p>			
<p>2 EXTRA PROGRAMMABLE SWITCHES/INDICATORS          ELECTRONIC ACCELERATOR CONTROL          NO INSTRUMENT PANEL- DRIVER          INTEGRATED UPPER &amp; LOWER STORAGE PANELS          BRIGHT ARGENT FINISH GAUGE BEZELS          LOW AIR PRESSURE INDICATOR          LIGHT AND AUDIBLE ALARM          DUAL NEEDLE PRIMARY AND SECONDARY AIR          PRESSURE GAUGE          DASH MOUNTED AIR RESTRICTION INDICATOR WITH          GRADUATIONS          97 DB BACKUP ALARM ELECTRONIC CRUISE          CONTROL WITH CONTROLS ON STEERING WHEEL          SPOKES          KEY OPERATED IGNITION          SWITCH AND INTEGRAL START          POSITION; 4 POSITION          OFF/RUN/START/ACCESSORY          PREMIUM INSTRUMENT          CLUSTER WITH 5.0 INCH TFT COLOR DISPLAY          PANEL LAMP DIMMER SWITCH IN SWITCH PANEL          HEAVY DUTY ONBOARD DIAGNOSTICS INTERFACE          CONNECTOR LOCATED BELOW LH DASH          2 INCH ELECTRIC FUEL GAUGE          ENGINE REMOTE INTERFACE          FOR REMOTE THROTTLE          QUICKFIT POWERTRAIN          INTERFACE CONNECTOR UNDER CAB WITH CAPS          10 EXTRA PROGRAMMABLE SWITCHES/INDICATORS</p> <p>QUICKFIT PROGRAMMABLE          INTERFACE CONNECTOR 1          UNDER CAB, CONNECTOR 2          BETWEEN SEATS, BOTH W/CAPS          ENGINE REMOTE INTERFACE          CONNECTOR AT POWERTRAIN          INTERFACE CONNECTOR ELECTRICAL ENGINE          COOLANT          TEMPERATURE GAUGE          DIGITAL ENGINE OIL          TEMPERATURE IN DRIVER DISPLAY          2 INCH TRANSMISSION OIL          TEMPERATURE GAUGE</p>			

<p>ELECTRONIC OUTSIDE          TEMPERATURE SENSOR          DISPLAY IN DRIVER MESSAGE CENTER          ENGINE AND TRIP HOUR METERS INTEGRAL WITHIN          DRIVER DISPLAY          PTO CONTROLS FOR ENHANCED VEHICLE          ELECTRIC/ELECTRONIC ARCHITECTURE          NO OBSTACLE DETECTION SYSTEM          NO DR ASSIST SYSTEM          ELECTRONIC STABILITY          CONTROL,4X2 W/SAFETY MIN          BODY WEIGHT EXCEEDS 4,000LBS REQ          NO LANE DEPARTURE WARNING SYSTEM          ELECTRIC ENGINE OIL PRESSURE GAUGE          NO OVERHEAD INSTRUMENT PANEL          2 QUIKFIT PROGRAMABLE MODULES (QPM/XMC)          NFPA VEHICLE DATA          RECORDER AND SEATBELT DISPLAY          TOP OF DASH RAM MOUNT          WITHOUT POWER OR GROUND, FOR CUSTOMER          FURNISHED DEVICE          NO RADIO AM/FM ANTENNA MOUNTED ON          FORWARD LH ROOF          POWER AND GROUND STUDS          TOP OF DASH PLUS POWER AND GROUND WIRING          PROVISION IN OVERHEAD CONSOLE          ROOF/OVERHEAD CONSOLE AND TOP OF DASH          WITH PLATE AND STRAPS PROVISIONS FOR CB          RADIO          NO MULTIBAND ANTENNA          NO DIGITAL SATELLITE AUDIO RECEIVER ANTENNA          STANDARD RADIO WIRING WITH STEERING WHEEL          CONTROLS          ELECTRONIC KPH SPEEDOMETER WITH          SECONDARY MPH SCALE, WITHOUT ODOMETER          STANDARD VEHICLE SPEED SENSOR          ELECTRONIC 3000 RPM TACHOMETER          DETROIT CONNECT PLATFORM HARDWARE          3 YEARS DETROIT CONNECT          BASE PACKAGE(FEATURES VARY BY MODEL)          DETROIT CONNECT PLATFORM TMC RP1226          ACCESSORY CONNECTOR LOCATED BEHIND          PASSENGER SIDE REMOVEABLE DASH PANEL          IGNITION SWITCH CONTROLLED          ENGINE STOP          12 SWITCH SLOTS, DRIVER OVERHEAD CONSOLE          PRE-TRIP INSPECTION FEATURE          FOR EXTERIOR LAMPS AND SERVICE BRAKES          (2) OVERHEAD MOUNTED LANYARD CONTROLS: (1)          OFFICER AIR HORN AND (1) DRIVER AIR HORN          NO TRAILER HAND CONTROL BRAKE VALVE          DIGITAL VOLTAGE DISPLAY          INTEGRAL WITH DRIVER DISPLAY          SINGLE ELECTRIC WINDSHIELD          WIPER MOTOR WITH DELAY AND ARCTIC TYPE          BLADES</p>			
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ROTARY HEADLAMP SWITCH, MARKER LIGHTS/HEADLIGHTS SWITCH WITH PULL OUT FOR OPTIONAL FOG/ROAD LAMPS ALTERNATING FLASHING HEADLAMP SYSTEM WITH DASH SWITCH AND NO PARK BRAKE INTERLOCK ONE VALVE PARKING BRAKE SYSTEM WITH DASH VALVE CONTROL AUTONEUTRAL AND WARNING INDICATOR SELF CANCELING TURN SIGNAL SWITCH WITH DIMMER, HEADLAMP FLASH, WASH/WIPE/INTERMITTENT INTEGRAL ELECTRONIC TURN SIGNAL FLASHER WITH 40 AMP (20 AMP PER SIDE) TRAILER LAMP CAPACITY			
PAIN: TWO TONE COLOR			
CAB COLOR A: L0753EY RED ELITE EY COLOR B: WHITE BLACK, HIGH SOLIDS POLYURETHANE CHASSIS PAINT SUNVISOR PAINTED SAME AS CAB COLOR A STANDARD E COAT/UNDERCOATING			
CANADA CMVSS CERTIFICATION, EXCEPT SALES CABS AND GLIDER KITS			

**PUMPER/TANKER APPARATUS SPECIFICATIONS Continued**

Details	Yes	No	Exceptions/Notes
<b>REMOTE AIR TANK LANYARDS</b>  Provisions shall be made for remote air tank drain lines mounted on the roadside of the apparatus.  The lanyard end shall be a finger loop type.			
<b>CONSOLE - PAINTED</b>  There shall be a console installed in the chassis cab with an angled design making it easier to access vital emergency controls. The top of the console shall be easily removable for maintenance and service. The console shall have a storage bin.  One (1) dividers shall be installed in the console bin.  There shall be a hinged lid provided on top of the storage bin.			
<b>110 VOLT CAB/CREW CAB RECEPTACLE(S)</b>  One (1) 110 volt three prong, duplex straight blade receptacle(s) shall be provided in the cab/crew cab area and connected directly to the shoreline receptacle.			
<b>CAB INTERIOR RECEPTACLE TIED TO CAB EXTERIOR</b>			

<p><b>RECEPTACLE</b></p> <p>The 110 volt receptacle in the cab shall be tied to an existing cab exterior receptacle as specified by the Fire Department.</p>			
<p><b>CHASSIS WHEELS</b></p> <p>The chassis wheels shall be an aluminum polished finish from the chassis supplier.</p>			
<p><b>CHROME HUB AND LUG NUT COVERS</b></p> <p>The front wheels shall be fitted with chrome baby moon type hub covers.</p> <p>The rear wheels shall be fitted with chromed "Top Hat" type hub covers.</p> <p>All front and rear wheel lug nuts shall have chrome lug nut covers installed.</p>			
<p><b>CHASSIS SUPPLIED ANTI ROLL SYSTEM CALIBRATION</b></p> <p>The chassis supplied Anti Roll system shall be calibrated after the apparatus body has been installed on the chassis.</p>			
<p><b>CHASSIS PREPARATION</b></p> <p>The chassis shall be carefully inspected for compliance to the required specifications and to assure that it is ready for apparatus construction.</p> <p>Any components that require relocation or modification shall be done at this time.</p>			
<p><b>CHASSIS EXHAUST MODIFICATIONS</b></p> <p>To maintain chassis engine performance, the chassis exhaust shall be modified minimally after any exhaust treatment devices and shall meet the chassis supplier's recommendations. The exhaust shall exit at the curbside of the apparatus before the rear axles and shall be a straight exhaust pipe design.</p>			
<p><b>EXHAUST SYSTEM HEAT SHIELD</b></p> <p>Where the chassis exhaust piping passes under or near a body compartment, the exhaust piping shall be shielded utilizing a heat shield manufactured from 1/8" 3003-H22 aluminum checker plate to prevent compartment exposure to radiant heat.</p> <p>The heat shield shall be mounted to the tail pipe with suitably sized muffler clamps.</p>			
<p><b>FRONT AND REAR MUD FLAPS</b></p> <p>Four (4) heavy duty rubber rear mud flaps shall be provided and installed on the apparatus. The mud flaps shall be installed behind the front and rear wheels.</p>			
<p><b>CHAINED IGNITION KEY</b></p> <p>The key utilized for the ignition shall be securely chained to either the steering column or the cab dash to prevent</p>			

loss or removal of the ignition key.			
<p><b>ALUMINUM CHECKER PLATE COVERS</b>          There shall be .125" aluminum checker plate trim installed at the chassis steps. The checker plate shall be easily removable for ease of service and maintenance if required.</p>			
<p><b>40 AMP - BATTERY CHARGER / CHASSIS AIR BRAKE PROTECTION PACKAGE</b>          The following components shall be installed:</p> <p><b>BATTERY CHARGER SYSTEM TESTING</b>          The low voltage battery charger shall be tested as per the requirements of NFPA to determine that the conditioner shall maintain an output of at least 12.54 V and shall maintain at least 80 percent of the rated output current for the duration of the test.</p>			
<p><b>Battery Charger - Kussmaul - Smart Charger 40 Amp (OR EQUIVALENT)</b>          There shall be a Kussmaul 091-28 auto-eject air inlet shoreline installed at the left cab door area and connected into the chassis air brake system. When the vehicle is started the Air Eject automatically disconnects the airline thus preventing the vehicle from being driven away with the line connected. The Air Eject is supplied with the mating airline connector and check valve. A Kussmaul 091-28AK weatherproof adapter kit shall be installed to protect the air eject from the elements.</p>			
<p><b>Shoreline Inlet - Kussmaul Super Auto Eject - 20 Amp (OR EQUIVALENT)</b>          A Kussmaul Super Auto Eject Model #091-55-20-120, 20 amp 120 volt shore power assembly, cover, solenoid input wire, power cord, and plug shall be installed. The 12 volt solenoid shall eject the shore power cord away from vehicle path upon sensing engine start; after ejection, the weatherproof cover snaps into position over inlet. The unit shall sequence energizing of an Auto Eject, eliminating terminal arcing when connecting and disconnecting power cord.</p> <p>The unit shall have a waterproof back enclosure with watertight cable fittings, which protect mechanism from road contamination. A pre-wired 3 foot AC electrical cord and starting sense wire (side wired) shall be installed.</p> <p>The assembly shall have the following dimensions: 6.17" high x 4.08" wide x 2.8" deep with 4 lb. weight.</p> <p>Cover color to be yellow.</p> <p>Other colors available, please specify if otherwise: red, blue, white, gray, black.</p>			
<p><b>Battery Charger Remote Digital Display (OR EQUIVALENT)</b>          The charger shall include a Model #091-266-RCP remote digital display.</p>			
<p><b>TRANSPORTATION ROAD SAFETY KIT</b></p>			

<p>The following Transportation Road Safety Kit shall be supplied.</p> <p>One (1) 2.5 lb. ABC vehicle type fire extinguisher, with mounting bracket.</p> <p>One (1) standard First Aid Kit shall be provided.</p> <p>One (1) set of three (3) D.O.T. approved reflective warning road safety triangles shall be supplied with the apparatus.</p>			
<p><b>CAB STEP LIGHTING</b>          The cab step lighting shall be chassis supplied and as per the chassis specifications.</p>			
<p><b>CHASSIS CAB DOOR LETTERING (OR EQUIVALENT)</b>          Single color lettering with a background outline shading shall be provided on the cab doors as directed by the Fire Department.</p> <p>There shall be a four inch wide reflective stripe applied to the front of the apparatus. The reflective stripe shall be a 3M Scotchlite product.</p> <p>There shall be reflective striping applied to the interior chassis cab doors of the apparatus. The reflective stripe shall be a 3M Scotchlite product.</p>			
<p><b>SPEAKER WITH VOLUME CONTROL AND MICROPHONE (OR EQUIVALENT)</b>          A Telex Model US600EL low impedance handheld microphone with a push to talk switch shall be mounted on the pump operator panel as per the fire departments specifications.</p> <p>The microphone shall be a dynamic omnidirectional handheld type with uniform frequency response from 100 to 7,000 Hz. The case shall be molded of high impact plastic with a black textured finish.</p> <p>A Newark Model 88F5550 10 Watt flush mounted 5 1/2" diameter speaker shall be provided on the pump panel with wiring to the communications equipment. The speaker shall be designed for exposure to all weather conditions. The speaker shall come with a rotary volume control dial.</p> <p>A mounting bracket is supplied to provide convenient hang-up when the microphone is not in use.</p> <p>Speaker w/ volume control</p> <p>Microphone</p>			
<p><b>CANOPY</b>          The canopy shall fully enclose the pump house and carries a complement of up to three (3) seated firefighters.</p> <p>There shall be a full 80" of headroom at the pump</p>			



<p>operator's panel standing position.</p> <p>The canopy shall be constructed of heavy duty 2" x 2" x .188", 2" x 2" x .25", 3" x 2" x .188", and 3" x 3" x .25" (6061-T6 / 6063-T6) heavy-duty structural aluminum extrusions which shall provide maximum strength and durability.</p> <p>The canopy exterior panels shall be a minimum 5000 grade aluminum sheeting</p> <p>To minimize canopy vibration and stress on the structure, the canopy shall be mounted to the chassis frame rails utilizing a rubber cone inserted into a 1/4" painted mild steel plate fastened to the chassis frame rails with a minimum of four (4) 5/8" grade 8 bolts. The canopy structure shall sit on the rubber cone. Metal to metal installation of the enclosure canopy is not allowed.</p> <p><b>(Mandatory Requirement)</b></p>			
<p><b>ECE-R29 STATIC ROOF CRUSH TEST</b></p> <p>The manufacturer's pump house enclosure design must have performed and passed the ECE-R29 Roof Crush Test as witnessed by a third party testing organization. Documentation of this test must be available for the fire departments review prior to entering into a purchase contract. <b>(Mandatory Requirement)</b></p>			
<p><b>PUMP HOUSE</b></p> <p>The pump house shall be integral to the canopy structure and manufactured as a single unit.</p> <p>The pump house shall be a full frame module constructed from 2" x 2" x .188" and 3" x 2" x .188", and 3" x 3" x .25" (6061-T6 / 6063-T6) heavy-duty structural aluminum extrusions which shall provide maximum strength and durability.</p> <p>The canopy / pump house enclosure shall be manufactured separately from the apparatus body to allow for movement and flexibility. To minimize pump house structure vibration and stress the mounting shall be to the chassis frame rails utilizing a rubber cone inserted into a 1/4" painted mild steel plate fastened to the chassis frame rails with a minimum of four (4) 5/8" grade 8 bolts. The pump house structure shall sit on the rubber cones. Metal to metal installation of the pump house section is not allowed.</p>			
<p><b>STONE GUARD</b></p> <p>There shall be a stone guard mounted on the front bottom corners of the crown to prevent road chips debris from chipping the paint. The stone guard shall be approximately 18.5" high and be manufactured from 1/8" 3003 hi shine aluminum checker plate.</p>			
<p><b>PAINT POLISH - PUMP HOUSE - A.C.T. STANDARDS #3</b></p> <p>The paint finish on the pump house shall meet the ACT test panel #3 level for orange peel visual standard. Test sample swatches shall be made available on request for</p>			

<p>paint finish comparison.  <b>(Mandatory Requirement)</b></p>			
<p><b>CANOPY DOORS</b>          There shall be Two (2) full height doors, one (1) on the left side, and one (1) on the right side. Each door shall be a minimum of 31"W x 99"H.</p> <p>Each door shall be a double pan flush mount construction. The outer pan shall be manufactured from 1/8" minimum 5000 grade aluminum. The inner pan shall be manufactured from a minimum of 12 gauge 5052-H321 aluminum.</p> <p>All interior crew and driving compartments door handles shall be designed and installed to protect against accidental or inadvertent opening.</p> <p>The door handles shall be a fail safe type, so the sleeve of the coat does not inadvertently catch a handle and open a door.</p> <p>Each door exterior shall have stainless steel D-Ring handles. The interior of each door shall come with a chrome handle. The two point rotary latches and stop bolt must be compliant with CMVSS and FMVSS standards.</p> <p>A gas strut shock shall be utilized at the top of each door to maintain an open position and assist closing of each canopy door. A cloth belt shall be installed to keep the door from inadvertently opening too wide and damaging the gas strut.</p> <p>There shall be a diagonally installed, 1 1/4" diameter, knurled aluminum grab bar located on the inside of each canopy door.</p>			
<p><b>CAB/TME COMMUNICATIONS OPENING</b>          There shall be a pass through opening installed in the back wall of the canopy allowing for visibility and communications between the chassis cab and the canopy enclosure occupants.</p> <p>There shall be a rubber boot installed between the chassis cab rear wall and the canopy enclosure which shall encompass the complete window opening to keep road dust, noise, and any possible outside elements from entering the canopy enclosure. <b>(Mandatory Requirement)</b></p>			
<p><b>CANOPY INTERIOR TRIM</b>          The lower portion of the side wall adjacent to the seat base, and left side corner and right side corner shall be covered in a minimum of 5052 - H321 .125" aluminum with a sanded finish.</p> <p>The forward portion of the seat base shall be trimmed with a minimum of 3/16" 3003 H22 .125" aluminum hi shine</p>			

<p>checker plate.</p> <p>The pump operator panel base on the left side and right side, and the pump operator panel left side corner and right side corner shall be covered in a minimum of 3003 H22 .125" aluminum hi shine checker plate.</p>			
<p><b>ENTRANCE STEP</b></p> <p>The steps leading to the pump operator panel and seating positions shall be aluminum grip strut steps. The side walls and kick plate of the entrance step area shall be trimmed with 1/8" 3003 aluminum checker plate.</p>			
<p><b>WALKWAY</b></p> <p>The walkway shall be from 2" x 2" x .188" and 3" x 3" x .25" (6061-T6 / 6063-T6) heavy-duty structural aluminum extrusions which shall provide maximum strength and durability.</p> <p>The walkway framework shall be primed and painted prior to final installation onto the chassis frame rails.</p> <p>NFPA rated slip resistant high shine 3/16" aluminum checker plate (3003-H22) shall be fastened to the framework with stainless steel bolts.</p>			
<p><b>PUMP INSPECTION DOOR</b></p> <p>The pump house interior shall be accessible by a large 35" high by 48" wide .125" hi shine aluminum checker plate inspection door at the walkway / pump operator panel. This door shall have six (6) cast aluminum paddle latch assemblies for door installation and removal.</p> <p>This door shall be easily removable by unlatching, lifting, and removing. This door shall be removable to provide easy access to the pump for repair and maintenance without removal of the pump.</p>			
<p><b>CONTROL PANEL - SIDE</b></p> <p>The left and right side pump panels shall be constructed from 14 gauge stainless steel with a #4 finish. Both the right side and left side pump panels shall be attached to the pump house with pre tapped stainless steel fasteners for ease of removal.</p>			
<p><b>PRIMARY OCCUPANT SEATING</b></p> <p>Each designated seating position in the enclosure shall meet the requirements of NFPA as a Primary Seating Position.</p>			
<p><b>CREW SEATING - BOSTROM SECUREALL™ (OR EQUIVALENT)</b></p> <p>Three (3) seating positions shall be provided with Bostrom Tanker 400 CT ABTS seats with SecureAll SCBA brackets. The SecureAll™ is a single bracket that safely stores all U.S. and international SCBA brands and sizes while fire trucks are in transit. The patented auto-lock system holds the SCBA in place for a secure fit in all directions. The integrated one-touch release handle is located in the seat cushion for a quick and easy exit. The crew seating shall be covered with long wearing heavy-duty Durawear material and shall also be fitted with automotive</p>			

approved three point seat belts.			
<b>CREW SEATING EMBROIDERY</b>  The crew area seating shall come with the manufacturer's logo embroidered on the top headrest.			
<b>SEAT BELT SENSOR HOOKUP / PUMP HOUSE ENCLOSURE</b>  The pump house enclosure seating positions shall be tied to the seat belt indicator mounted in the chassis cab.			
<b>ADDITIONAL SCBA HOLDER</b>  Within the TME area there will be mounting capability for one (1) additional set of SCBA without a seating area for the same.			
<b>HELMET HOLDERS (OR EQUIVALENT)</b>  The five (5) helmet holders shall be Ziamatic Universal Helmet Holders, model UHH-1.			
<b>CANOPY WINDOWS</b>  The window glass shall be tinted, automotive grade laminated safety glass. For maximum operator visibility the following window coverage sizes shall be installed and shall add up to a total of 53.9 square feet of actual visible window area. <b>(Mandatory Requirement)</b>  <b>Front Upper Canopy Area:</b> One (1) full length window in the upper forward facing section above the crew seating area, measuring 12.25"H x 67.25"W.  <b>Side / Front Sloped Canopy Area:</b> Two (2) 9.875" W x 34.25"H windows. One (1) each side <u>Exception:</u> One or both of these windows are to be deleted if push up, pole scene lights are to be installed in these locations.  <b>Side / In Front Of Canopy Doors:</b> Two (2) 13.25"W x 48"H windows. One (1) each side.  <b>Canopy Doors:</b> Each Canopy Door shall have two (2) 17"W. x 38 7/8" H. windows. One upper and one lower.  <b>Side / Behind Canopy Doors:</b> Two (2) triangular shaped windows with a maximum height of 14.35"W x 30.15"H. One (1) each side.  <b>Rear / Upper Above Operator Panel Area:</b> Two (2) 24"H x 43.875"W windows.  <b>Rear / Lower / Side Pump Panel Viewing Windows:</b> Two (2) 6.25"W x 20.25"L windows. One (1) each side shall be installed to allow the pump operator to view each side pump panel.			

<p><b>CANOPY DOOR WINDOWS WITH SLIDING WINDOW</b></p> <p>The canopy door window glass shall be tinted, automotive grade laminated safety glass. <b>(Mandatory Requirement)</b></p> <p>Each canopy door shall have two (2) 17"W. x 38 7/8" H. windows. One upper and one lower.</p> <p>Each upper canopy door windows, shall come with two (2) vertical sliding windows. Each vertically sliding window shall have an integral bug screen.</p>			
<p><b>SUNROOF PACKAGE</b></p> <p>There shall be a fixed glass sunroof installed in the center of the canopy roof panel.</p>			
<p><b>HEAT PANS</b></p> <p>The bottom of the canopy and pump house shall be fitted with a removable heat pan. The heat pan shall enclose all sides, front, and rear bottom of the canopy and pump house. The heat pans shall be manufactured from 1/8" saltwater grade aluminum. The canopy and pump house heat pans shall come with two removable aluminum panels. <b>(Mandatory Requirement)</b></p>			
<p><b>RADIO RECHARGE SHELF</b></p> <p>An Aluminum radio recharge shelf shall be installed in the interior of the enclosed pump house directly above the crew SCBA seat. The shelf will be manufactured from 1/8" 5000 grade aluminum with the approximate dimensions of 51" wide x 8" high x 8" deep with a 4" lip. The sides of the tray shall be enclosed. The shelf shall not interfere with the seated crew member. The shelf shall have gray finish matching the interior of the enclosed pump house.</p>			
<p><b>120 VOLT CAB/CREW CAB RECEPTACLE(S)</b></p> <p>One (1) 120 volt three prong, duplex straight blade receptacle(s) shall be provided in the cab/crew cab area and connected directly to the shoreline receptacle.</p>			
<p><b>120 VOLT CAB/CREW 6 OUTLET POWER BAR</b></p> <p>One (1) 6 outlet power bar(s) shall be installed in the chassis cab as per the fire departments specifications. The outlet shall be CSA approved. The power bar(s) shall be tied to an existing 120 volt cab interior receptacle.</p>			
<p><b>CAB INTERIOR RECEPTACLE TIED TO CAB EXTERIOR RECEPTACLE</b></p> <p>The 120 volt receptacle in the cab shall be tied to an existing cab exterior receptacle as specified by the Fire Department.</p>			
<p><b>CONTROL PANEL - TRANSVERSE ENCLOSED</b></p> <p>The pump operator's panel shall be constructed from #4 finish, 14 gauge stainless steel.</p>			

<p>The top tier (portion) of the panel shall be bottom hinged with a stainless steel piano hinge and shall have two (2) lift and turn twist lock latches located at the top of the panel.</p> <p>The bottom/lower tier (portion) shall be screwed into place and can be removed using a Phillips head screwdriver. The lower level contains all SAM controls, additional shelving and storage in this area will be considered an asset.</p>			
<p><b>MASTER GAUGE TEST PORTS (OR EQUIVALENT)</b></p> <p>The pump operator panel shall come with Class 1 P/N 121384 vacuum and pressure testing port.</p>			
<p><b>PUMP BYPASS CONTROL (OR EQUIVALENT)</b></p> <p>A Class 1 P/N 105120 brass assembly with chrome plated zinc handle petcock control valve shall be mounted at the pump operator panel to allow tank water to recirculate thru the pump. The port size and plumbing shall be 1/4"</p>			
<p><b>AUXILIARY HEAT EXCHANGER (OR EQUIVALENT)</b></p> <p>There shall be an auxiliary heat exchanger mounted on the chassis. The heat exchanger will allow tank water to cool the chassis engine.</p> <p>The heat exchanger shall be operated by a Class 1 P/N 105120 brass assemble with chrome plated zinc handle petcock control valve. This valve shall be mounted at the pump operator panel. The plumbing to the auxiliary heat exchanger control valve shall be 1/4".</p>			
<p><b>SPEED LAY HOSE BEDS</b></p> <p>Two (2) speed lay hose beds shall be provided and installed transversely at the front of the pump house. The speed lay beds shall be slotted to allow for drainage of the hoses.</p> <p>Two (2) removable trays shall be included in the speed lay hose beds. The trays shall be manufactured from a minimum of 5000 grade aluminum. The trays shall have slots cut for handholds on each side of the trays. The trays shall be removable from either side of the apparatus.</p>			
<p><b>SPEED LAY PLUMBING - 1.5" DISCHARGE</b></p> <p>The plumbing on the 1.5" discharge(s) shall be heavy duty piping with Victaulic and Class 1 SBR synthetic rubber hose with stainless steel couplings.</p> <p>Each discharge shall be equipped with a 90-degree swivel to allow them to be used from either side of the apparatus.</p>			
<p><b>THREAD TYPE - DISCHARGE 1.5"</b></p>			

<p>All 1.5" thread types shall be NPSH.</p>			
<p><b>Akron Electric Valve - Style 8620 Swing-Out™ (OR EQUIVALENT)</b>          The electric valve(s) shall be an Akron Brass Style 8620 Swing-Out™ Valve. The valve(s) shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a specially designed flow optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to corrosion. The valve shall not require lubrication of seats or any other internal waterway parts, and must be capable of swinging out of the waterway for maintenance by the removal of six bolts. The electric actuator shall have a 16:1 gear ratio, which actuates from fully open to fully closed in 5 seconds, a clutch less motor, and utilize an electric controller with current limiting design. Product must carry a 10 year manufacturer's warranty.</p>			
<p><b>AKRON 9327 ELECTRIC VALVE CONTROLLER (OR EQUIVALENT)</b>          An Akron Brass Style 9327 Navigator Pro Mini Valve Controller shall be provided. The electric controls must be of true position feedback design, requiring no clutches in the motor or current limiting. The unit must be completely sealed with momentary open and close buttons. One additional button shall be available to be used for preset activation. The unit must be capable of being used in conjunction with at least two additional displays to control one valve. The unit must provide position indication through a series of 5 ultra-bright LEDs. It shall have manual adjustment of the brightness in the menus. The unit must carry a five year warranty.</p>			
<p><b><u>Discharge Gauge - Dual Scale</u></b>          A 2.5" discharge gauges shall be mounted adjacent to the discharge valve control handle. A removable bright metal or color coded trim ring shall be supplied.          The gauge shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation.          To prevent internal freezing and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem (no exceptions).          The gauges shall be in dual scale and measure in increments of 0-400 psi and 0-2800 kPa.</p>			
<p><b><u>Drain Valves</u></b>          A drain shall be installed at the pump panel. The drain shall have 3/4" Synflex drain lines tied to a 1/4 turn drain</p>			

valve with high pressure brass fittings.			
<p><b>SPEED LAY DOORS</b></p> <p>Hinged stainless steel doors with D-Ring latches shall be provided on each side of the speed lay compartments. The stainless steel doors shall be a minimum of 14 gauge thick. The doors shall come with a push pin door ajar switch tied to the chassis cab door ajar light.</p>			
<p><b>TME PUMP HOUSE STORAGE COMPARTMENTS</b></p> <p>There shall be Two (2) storage compartments below the speed lay hose bins. Each compartment interior shall be manufactured from a minimum of 5000 grade aluminum. The interior of the compartment shall be sealed and caulked and have a textured finish of light gray urethane paint.</p> <p>The storage compartment doors shall be manufactured from 14 gauge brushed finish stainless steel. Each door shall receive a stainless steel piano hinge and come with a flush mount chrome lift and turn grip latch.</p>			
<p><b>PUMP HOUSE RUBBER SEAL</b></p> <p>There shall be a rubber foam cell permanently mounted between the pump house and the body for maximum pump house heat retention. The seal shall be mounted vertically down the height of the pump house, one each side.</p>			
<p><b>RUB RAILS - PUMP HOUSE RUNNING BOARDS - NON-SLIP</b></p> <p>Three inch "C" channel aluminum rub rails shall be bolted into place with nylon spacers on the lower framework on the pump house running boards. The rub rail will extend to the outside edges of the running boards for protection from impact damage.</p> <p>The top surface of the rub rail shall have a non-slip surface meeting the requirements of NFPA for nonslip walking surfaces.</p>			
<p><b>CANOPY / PUMP HOUSE ENCLOSURE HEATERS (OR EQUIVALENT)</b></p> <p>Four (4) DTAC 210-12 16,000 BTU forced air coolant heaters shall be installed.</p> <p>Two (2) heaters shall be installed at the lower section of the canopy enclosure, one (1) at each side at the step area.</p> <p>Two (2) heaters shall be installed at the front lower section of the pump house enclosure, one (1) each side.</p> <p>The heaters shall be installed via a custom copper manifold to evenly distribute heat from the chassis coolant. The coolant hoses shall be wrapped in</p>			



<p>insulation.</p> <p>Two (2) on/off illuminated rocker switches shall be mounted on the pump panel for operation of the heaters, one for the pump house and one for the step area.</p>			
<p><b>INTERIOR PUMP PANEL LIGHTS – WHITE (OR EQUIVALENT)</b></p> <p>The pump operator panel on the interior of the pump house enclosure shall be illuminated by One (1) Amdor Lumabar 62" LED strip light.</p> <p>There shall be a switch mounted on the pump operator panel to activate the lights.</p>			
<p><b>INTERIOR PUMP PANEL LIGHTS – RED (OR EQUIVALENT)</b></p> <p>The pump operator panel on the interior of the pump house enclosure shall be illuminated by One (1) Amdor Lumabar 62" LED strip light with red LED lights.</p> <p>There shall be a switch mounted on the pump operator panel to activate the lights.</p>			
<p><b>PUMP PANEL LIGHTS - LED - SIDE PANEL (OR EQUIVALENT)</b></p> <p>There shall be a total of four (4) 6.5" x 3" Tecniq E10 clear LED dome lights, (two (2) each side) to adequately illuminate the side pump panels. The lights shall be mounted under a protective hood of the same material as the side pump panels. The lights shall be activated by a switch at the pump operator panel.</p>			
<p><b>PUMP HOUSE INTERIOR LIGHTING- LED (OR EQUIVALENT)</b></p> <p>The interior of the pump house shall be illuminated by a total of two (2) 6.5" x 3" Tecniq E10 clear LED dome lights, one (1) each side. The lights shall be activated by a switch at the pump operator panel.</p>			
<p><b>PUMP HOUSE INTERIOR WALKWAY LIGHTING- LED (OR EQUIVALENT)</b></p> <p>The interior of the pump house shall be illuminated by a total of two (2), 4" diameter, clear LED dome lights, one (1) each side. Each light shall come with a rubber grommet.</p> <p>The lights shall be activated by a switch at the pump operator panel.</p>			
<p><b>PRESSURE GOVERNOR - HALE SAM SYSTEM INCLUDING REMOTE TABLET</b></p> <p>The apparatus pressure governor system shall be a Scene Apparatus Manager (SAM) system by Hale. This shall control all pump, plumbing and foam applications for this apparatus. Included with the 1 fixed control screen at the pump panel will be the remote tablet device for</p>			

controlling all these same features.			
<p><b>WATER LEVEL GAUGE - CLASS1 ITL RED - OPERATOR PANEL (OR EQUIVALENT)</b></p> <p>The apparatus shall be equipped with a <b>Class1</b> "ITL-40" Tank Level Gauge for indicating water level. The Tank Level Gauge shall indicate the liquid level or volume on an easy to read LED display and show increments of 1/8 of a tank. Each tank level gauge system shall include:</p> <ol style="list-style-type: none"> <li>1) A pressure transducer that is mounted on the outside of the tank in an easily accessible area. Sealed foam tanks will require zero pressure vacuum vents.</li> <li>2) A super bright LED display viewable from 180 degrees with a visual indication at nine accurate levels.</li> <li>3) A set of weather resistant connectors to connect to the digital display, to the pressure transducer and to the apparatus power. Additional (slave) displays (if requested) are to be easily integrated and will receive data from the same source as the Master Display. No additional transducers shall be required.</li> <li>4) The system shall include the ability to display "text messages"</li> <li>5) The system shall include built-in diagnostic capabilities.</li> </ol>			
<p><b>CHASSIS AIR HORN BUTTON</b></p> <p>A weatherproof momentary push button switch shall be mounted at the pump operator panel for actuation of the chassis air horns.</p> <p>A pressure protection check valve, rated at 85 PSI, shall be installed in the chassis air system to avoid depleting the chassis air system.</p>			
<p><b>CANOPY FANS - PUMP OPERATOR POSITION</b></p> <p>There shall be two (2) defogger fans provided on the operator panel. The fans shall be installed above each side of the pump operator's panel.</p> <p>There shall be a switch for each fan mounted on the pump operator panel.</p>			
<p><b>CANOPY AIR CONDITIONING MODIFICATION</b></p> <p>The canopy area shall be fully air conditioned.</p> <p>This air conditioning system shall be connected into the chassis air condition system with an evaporator installed in the canopy area and suspended from the canopy ceiling.</p> <p><b>Air Conditioning Unit (OR EQUIVALENT)</b></p> <p>The Air Conditioner unit shall be a DTAC P/N 315-12C 12</p>			

<p>Volt system.</p> <p>The air conditioner shall be rated for 35,000 BTU.</p> <p>The unit shall be controlled by a three speed fan switch and come with an adjustable thermostat.</p> <p>The air filter shall be removable and washable.</p> <p>The evaporator shall have a drain line installed to remove excess water. This drain line shall drain through the lower portion of the canopy structure and empty to the ground.</p> <p><b><u>Air Conditioning Unit Installation</u></b></p> <p>The A/C unit shall be installed by a certified professional Air Conditioner installation expert.</p>											
<p><b>HALE QMAX SINGLE STAGE 1500 PUMP</b></p> <p>The pump shall be a Hale Pump, Model QMAX 1500.</p> <p>The pump shall be rated at:</p> <table border="0" style="margin-left: 40px;"> <tr> <td style="padding-right: 20px;">6000 Liters per minute</td> <td></td> </tr> <tr> <td>at 150 PSI</td> <td>1250 Imperial Gallons</td> </tr> <tr> <td>per minute at 150 PSI</td> <td>1500 U.S. Gallons per</td> </tr> <tr> <td>minute at 150 PSI</td> <td></td> </tr> </table> <p>The pump shall be the class "A" type and shall deliver the percentage of rated discharge at pressures indicated below.</p> <ul style="list-style-type: none"> <li>100% of rated capacities at 150 PSI net pump pressure.</li> <li>100% of rated capacities at 165 PSI net pump pressure.</li> <li>70% of rated capacities at 200 PSI net pump pressure.</li> <li>50% of rated capacities at 250 PSI net pump pressure.</li> </ul> <p>Pump when dry shall be capable of taking suction and discharging water with a lift of 10 feet in not more than 45 seconds through 20 feet of suction hose of the appropriate size. An additional 15 seconds shall be allowed when the system includes an auxiliary 4" or larger front or rear intake pipe.</p> <p>A drive line shall drive the pump from the truck transmission. The engine shall provide sufficient horsepower and rpm to enable pump to meet and exceed its rated performance.</p> <p>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 the performance requirements as outlined by the latest NFPA Pamphlet 1901. Pump shall be free from objectionable pulsation and vibration.</p>	6000 Liters per minute		at 150 PSI	1250 Imperial Gallons	per minute at 150 PSI	1500 U.S. Gallons per	minute at 150 PSI				
6000 Liters per minute											
at 150 PSI	1250 Imperial Gallons										
per minute at 150 PSI	1500 U.S. Gallons per										
minute at 150 PSI											

<p>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. Pump utilizing castings made of lower tensile strength cast iron is not acceptable.</p> <p>Pump body shall be horizontally split, on a single plane, in two (2) sections, for easy removal of the entire impeller assembly including wear rings and bearings from beneath the pump without disturbing the piping or the mounting of the pump in the chassis.</p> <p>The pump shall have one (1) double suction impeller.</p> <p>Pump shaft shall be rigidly supported by three (3) bearings for minimum deflection. One (1) high lead bronze sleeve bearing shall be located immediately adjacent to the impeller (on side opposite of the drive unit). The sleeve bearing shall be lubricated by a force fed, automatic oil lubricated design, pressure balanced to exclude foreign material. The remaining bearings shall be heavy-duty, deep groove ball bearings in the gearbox and they shall be splash lubricated.</p> <p>Mechanical seal only required on the inboard side of the pump. The mechanical seal must be two (2) inches in diameter and shall be spring-loaded, maintenance-free and self-adjusting. Mechanical seal construction shall be a carbon sealing ring, stainless steel coil spring, Viton rubber cup, and a tungsten carbide seat.</p> <p>Pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machined, hand ground and individually balanced. The vanes of the impeller intake eyes shall be hand ground and polished to a sharp edge, and be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.</p> <p>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.</p> <p>The pump shaft shall be heat-treated, electric furnace, corrosion resistant, stainless steel, to be super-finished under packing with galvanic corrosion (zinc 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 the drive unit.</p>			
<p><b>DRIVE UNIT</b></p> <p>The drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory.</p> <p>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</p>			

<p>pump operating conditions. The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.</p> <p>The gear-box drive shafts shall be of heat-treated chrome nickel steel and at least 2-3/4" 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.</p> <p>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, crown-shaved 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.</p> <p>The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.</p>			
<p><b>MASTER DRAIN VALVE</b></p> <p>A Hale #DV-5 master drain valve shall be provided and plumbed at the lowest point of the plumbing.</p>			
<p><b>PUMP OPERATION WARNING LABEL</b></p> <p>There shall be a warning label mounted on the pump operator's panel that states the following:</p> <p><b>Warning: Death or serious injury might occur if proper operating procedures are not followed. The pump operator as well as individuals connecting supply or discharge hoses to the apparatus must be familiar with water hydraulics hazards and component limitations.</b></p>			
<p><b>HALE PUMP PAINT FINISH</b></p> <p>The Hale Pump shall have the standard black paint finish.</p>			
<p><b>PUMP MAIN SUCTION INLETS</b></p> <p>Two (2) steel 6" pump manifold inlet(s) shall be provided on the vehicle with high pressure, long handle chrome plated caps. The suction manifold shall be supplied by Hale.</p>			
<p><b>MAIN SUCTION INLET CHROME CAPS</b></p> <p>Each inlet shall come with a chrome plated long handled cap.</p>			
<p><b>HALE ELECTRIC BUTTERFLY MAIN SUCTION INTAKE VALVE - Left Side</b></p> <p>The inlet valve shall be a full flow butterfly type valve designed to mount on the fire pump between the suction tube extension and suction tube behind the pump compartment panel. The valve shall not interfere with other suction or discharge openings on the fire pump or with pump operating controls when properly mounted.</p>			

The entire valve shall be manufactured and tested at the pump manufacturers factory.

When the valve is installed in the fire pump suction the fire pump shall be capable of achieving an NFPA / UL test rating of 1500 GPM through a single 6 inch NST suction hose. When two valves are installed on the fire pump, the pump shall be capable of achieving an NFPA/UL test rating of 2000 GPM using dual 6 inch NST suction hoses.

The valve body and related components that are in contact with water shall be manufactured of fine grained corrosion resistant bronze.

The butterfly disc shall be manufactured from 80,000 PSI minimum yield strength heat treated cast steel then coated with a durable nitrile rubber to provide a positive seal when the valve is closed.

Testing and rating of the valve shall be accomplished at the valve manufacturers factory. The valve, less relief valve, shall be hydrostatically tested to 600 PSI. The valve shall then be vacuum tested to 26 inches Hg.

A pressure relief valve shall be provided that is factory set to 125 PSI and field adjustable from 75 to 250 PSI. The pressure relief valve shall provide overpressure protection for the suction hose even when the intake valve is closed. An integral relief valve mounting pad shall be provided on the valve body. This mounting pad shall provide a Hale type 115 4-3/8 inch bolt circle flange for normal installation. The mounting pad shall have 2-1/2 inch female NPT threads to permit remote mounting of the relief valve without special adapters. The outlet of the pressure relief valve shall have 2-1/2 inch NPT threads to allow directing the discharge flow away from the pump operator position.

The inlet valve(s) shall be operated by a 12 VDC electric motor with remote capabilities or by a manual hand wheel located next to the suction tube.

Each valve shall be provided with panel placards indicating control operation. The placards shall have status lights to indicate whether the valve is open, closed or traversing from one position to another.

Each valve shall be provided with a gear actuator that will cycle the valve from OPEN to CLOSED position in no less than 3 seconds. The gear actuators shall be sealed units designed to provide reliable service in the harsh pump compartment environment. The ratio of the gear actuator shall be such that the hand wheel will close the valve in no more than 10 complete turns.

<p>The 12 VDC motor on the electric operated valve shall be provided with an automatic resetting, thermally compensated, over current protection circuit breaker to protect the 12 VDC motor and apparatus electrical system.</p> <p>The electrical wiring for the valve shall be minimum 14 AWG, type SXL or GXL (SAE J1128) and shall be protected using 257 F minimum flame retardant, moisture resistant loom or braid. All electrical connections shall use sealed Packard Weather Pack connectors to provide extra protection from the harsh pump compartment environment to ensure long life and reliable operation.</p> <p>The valve body shall have a 3/4 inch female NPT threaded port on the top to allow installation of an NFPA compliant large diameter hose air bleeder valve. The air bleeder valve shall be mounted on the operator panel and be controllable by the pump operator. Air bleeder valve connections shall have a restriction no larger than 3/4 inch to prevent water hammer when filling hose.</p> <p>The valve body shall have a 1/4 inch female NPT threaded port on the bottom to permit connection of an individual water drain valve.</p> <p>A suction tube extension 7-1/4 inches wide shall be used to allow for the additional length of the inlet valve. The shorter suction tube extension, along with a 4, 6 or 9 inch suction tube, will keep the suction tube threads within the apparatus running boards while maintaining clearance for adapters.</p> <p>A panel mounted manual override shall be provided to permit operation of the electric remote control valve in the event of abnormal operating conditions. The manual override shall be designed to permit operation of the valve without the use of special tools or disassembly of the pump compartment panel or valve.</p> <p>The valve shall be equipped with O-ring seals for the mounting flanges. The O-ring seal groove shall be sized for proper squeeze of the O-ring for pressures in excess of 600 PSI.</p>			
<p><b>HALE PUMP SHAFT SEAL - MECHANICAL SEAL</b></p> <p>The pump shall have the Hale mechanical shaft seal.</p>			
<p><b>MID SHIP PUMP SHIFT ACTUATION WITH NFPA PUMP SHIFT INTERLOCK</b></p> <p>The mid ship pump engagement operations shall be controlled and monitored by a solid state controller with IP67 rated dust and water protection. The electronic controller shall have the ability to communicate with the</p>			

<p>chassis J1939 communication port in order to meet the requirements of NFPA for pump shift interlock to prevent the pump from being shifted from pump mode to road mode unless the apparatus is in neutral. This will ensure the apparatus will not be accidentally put into road mode during operation, creating a runaway condition.</p> <p>The electronic shift module shall create an internal delay to allow the driveshaft to stop in order to minimize a situation of gear grinding during pump actuation. Also, the module will prevent pump actuation while the chassis transmission is in drive gear.</p> <p>The electronic module will activate a pump house mounted three (3) way air solenoid valve. The solenoid valve and electronic module shall be mounted in the pump house to allow for easy accessibility and weather protection. The electronic control module shall have built in diagnostic LED lights to allow for efficient maintenance.</p> <p>Pump shift actuation shall be completed through a cab mounted control panel. The control panel shall be back lit illuminated and come with a locking switch that indicates either "ROAD" or "PUMP" mode. The control panel shall have two green indicator lights, One, shall indicate when the pump has been engaged and shall be labelled "PUMP ENGAGED". The second shall indicate when the pump transmission has fully engaged and shall be labelled "OK TO PUMP".</p> <p>All wiring shall be GXL grade wire, with wire function labelled every 6 inches onto wire. All connections shall have IP67 rated dust and waterproof protection.</p>			
<p><b>Hale ESP Oilless Primer</b></p> <p>The priming pump shall be a positive displacement, vane type and electrically driven. This primer shall be a Hale #ESP electric oil-less priming system. One (1) priming control shall both open the priming valve and start the priming motor.</p> <p>The primer valve shall be connected to the top of both pump volutes making it possible to prime the pump no matter if the pump is in pressure or volume modes. If a front suction is supplied and additional line shall be connected to the highest point or points between the pump and the inlet thus insuring a complete prime.</p>			
<p><b>PRIMING SYSTEM LABEL</b></p> <p>The priming system shall be marked with a label to indicate proper operation.</p>			
<p><b>AUXILIARY SUCTION - ROAD SIDE</b></p> <p>One (1) 2-1/2" gated inlet(s) shall be provided at the left side pump panel. The inlet(s) shall come complete with a</p>			



<p>chrome female swivel threaded adaptor. There shall be a chrome cap with the inlet(s) and the cap shall come with a chain that is attached to the pump operator panel.</p> <p>The plumbing shall be schedule 10 stainless steel.</p> <p>A rubber grommet shall enclose the plumbing coming out of the pump panel for maximum heat retention in the pump house. <b>(Mandatory Requirement)</b></p>			
<p><b>Akron Electric Valve - Style 8625 Swing-Out™ (OR EQUIVALENT)</b></p> <p>The electric valve(s) shall be an Akron Brass Style 8625 Swing-Out™ Valve. The valve(s) shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a specially designed flow optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to corrosion. The valve shall not require lubrication of seats or any other internal waterway parts, and must be capable of swinging out of the waterway for maintenance by the removal of six bolts. The electric actuator shall have a 16:1 gear ratio, which actuates from fully open to fully closed in 5 seconds, a clutch less motor, and utilize an electric controller with current limiting design. Product must carry a 10 year manufacturer’s warranty.</p>			
<p><b>Drain Valves</b></p> <p>A drain shall be installed at the pump panel. The drain shall have 3/4" Synflex drain lines tied to a 1/4 turn drain valve with high pressure brass fittings.</p>			
<p><b>INTAKE RELIEF VALVE – HALE</b></p> <p>A 2-1/2" Hale flange mounted adjustable suction relief valve shall be provided and installed in the suction side of the pump. The discharge side of the valve shall be plumbed to the area below the running board, away from the pump operator. The relief valve shall have an adjustable working range of 75 PSI to 250 PSI and be pre-set at 125 PSI.</p>			
<p><b>TANK FILL LINE - PUMP TO TANK</b></p> <p>There shall be a 2" discharge provided at the pump operator panel for a pump to tank line.</p>			
<p><b>Akron Electric Valve - Style 8620 Swing-Out™ (OR EQUIVALENT)</b></p> <p>The electric valve(s) shall be an Akron Brass Style 8620 Swing-Out™ Valve. The valve(s) shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a specially designed flow optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to</p>			

<p>corrosion. The valve shall not require lubrication of seats or any other internal waterway parts, and must be capable of swinging out of the waterway for maintenance by the removal of six bolts. The electric actuator shall have a 16:1 gear ratio, which actuates from fully open to fully closed in 5 seconds, a clutch less motor, and utilize an electric controller with current limiting design. Product must carry a 10 year manufacturer's warranty.</p>			
<p><b>DISCHARGE MANIFOLD - STAINLESS STEEL</b></p> <p>All plumbing for the discharge manifold and discharge plumbing shall be schedule 10 stainless steel with schedule 40 threaded fittings. In some cases, heavy duty, high pressure, wire reinforced flexible hose with stainless steel couplings shall be utilized for plumbing connections.</p> <p>Victaulic couplings shall be used on the plumbing lines to take tension off piping and to permit flexing and movement without damage to the pump and its components.</p> <p>Heavy duty U-bolt clamps and bracing shall be used on all plumbing lines and connections where required for firm vibration free installation.</p>			
<p><b>TANK SUPPLY LINE</b></p> <p>A 4" tank supply line shall be installed from the tank to the pump. A 3" check valve shall be installed in the pump to eliminate the possibility of pressure expanding and damaging the tank.</p>			
<p><b>Akron Electric Valve - Style 8630 Swing-Out™ (OR EQUIVALENT)</b></p> <p>The electric valve(s) shall be an Akron Brass Style 8630 Swing-Out™ Valve. The valve(s) shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a specially designed flow optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to corrosion. The valve shall not require lubrication of seats or any other internal waterway parts, and must be capable of swinging out of the waterway for maintenance by the removal of six bolts. The electric actuator shall have a 16:1 gear ratio, which actuates from fully open to fully closed in 5 seconds, a clutch less motor, and utilize an electric controller with current limiting design. Product must carry a 10 year manufacturer's warranty.</p>			
<p><b>2.5" DISCHARGE - LEFT SIDE</b></p> <p>Two (2) 2.5" gated discharge shall be provided at the left side pump panel.</p> <p>This discharge shall be equipped with a chrome 30-degree</p>			

<p>adapter, chrome plated rocker lug cap, and retaining chain that is attached to the pump panel.</p> <p>A rubber grommet shall enclose the plumbing coming out of the pump panel for maximum heat retention in the pump house. <b>(Mandatory Requirement)</b></p>			
<p><b>Akron Electric Valve - Style 8625 Swing-Out™ (OR EQUIVALENT)</b></p> <p>The electric valve(s) shall be an Akron Brass Style 8625 Swing-Out™ Valve. The valve(s) shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a specially designed flow optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to corrosion. The valve shall not require lubrication of seats or any other internal waterway parts, and must be capable of swinging out of the waterway for maintenance by the removal of six bolts. The electric actuator shall have a 16:1 gear ratio, which actuates from fully open to fully closed in 5 seconds, a clutch less motor, and utilize an electric controller with current limiting design. Product must carry a 10 year manufacturer's warranty.</p>			
<p><b>Drain Valves</b></p> <p>A drain shall be installed at the pump panel. The drain shall have 3/4" Synflex drain lines tied to a 1/4 turn drain valve with high pressure brass fittings.</p>			
<p><b>2.5" DISCHARGE - CURBSIDE</b></p> <p>One (1) 2.5" gated discharge shall be provided at the curbside pump panel.</p> <p>This discharge shall be equipped with a chrome 30-degree adapter, chrome plated rocker lug cap, and retaining chain that is attached to the pump panel.</p> <p>A rubber grommet shall enclose the plumbing coming out of the pump panel for maximum heat retention in the pump house. <b>(Mandatory Requirement)</b></p>			
<p><b>Akron Electric Valve - Style 8625 Swing-Out™ (OR EQUIVALENT)</b></p> <p>The electric valve(s) shall be an Akron Brass Style 8625 Swing-Out™ Valve. The valve(s) shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a specially designed flow optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to corrosion. The valve shall not require lubrication of seats or any other internal waterway parts, and must be capable of swinging out of the waterway for maintenance by the removal of six bolts. The electric actuator shall have a 16:1 gear ratio, which actuates from fully open to fully</p>			

<p>closed in 5 seconds, a clutch less motor, and utilize an electric controller with current limiting design. Product must carry a 10 year manufacturer's warranty.</p>			
<p><b>Drain Valves</b></p> <p>A drain shall be installed at the pump panel. The drain shall have 3/4" Synflex drain lines tied to a 1/4 turn drain valve with high pressure brass fittings.</p>			
<p><b>3" DELUGE GUN DISCHARGE (12V)</b></p> <p>A 3" deluge gun discharge shall be provided and installed above the pump house. The plumbing leading to the monitor standpipe shall be schedule 40 stainless steel with schedule 40 threaded fittings. A threaded cap shall come with the monitor standpipe if no monitor is ordered.</p>			
<p><b>Akron Electric Valve - Style 8630 Swing-Out™ (OR EQUIVALENT)</b></p> <p>The electric valve(s) shall be an Akron Brass Style 8630 Swing-Out™ Valve. The valve(s) shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a specially designed flow optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to corrosion. The valve shall not require lubrication of seats or any other internal waterway parts, and must be capable of swinging out of the waterway for maintenance by the removal of six bolts. The electric actuator shall have a 16:1 gear ratio, which actuates from fully open to fully closed in 5 seconds, a clutch less motor, and utilize an electric controller with current limiting design. Product must carry a 10 year manufacturer's warranty.</p>			
<p><b>Drain Valves</b></p> <p>A drain shall be installed at the pump panel. The drain shall have 3/4" Synflex drain lines tied to a 1/4 turn drain valve with high pressure brass fittings.</p>			
<p><b>MONITOR - DECKMASTER™ ELECTRIC REMOTE CONTROLLED - 12V (OR EQUIVALENT)</b></p> <p>The 1250 GPM rated monitor is to be an all electric single waterway monitor with automated elevating capability, 3" 150 pound flange inlet, cast-in turning vanes in each elbow, constructed of lightweight Pyrolite. The monitor shall have fully enclosed 12 volt motor and gears with manual override for horizontal, vertical and elevation rotation. Each manual override will have a non-captive crank with a clip bracket on the monitor for storage. The monitor is not to exceed 17" high, waterway will elevate to a height of 24" above the base of the flange. The outlet shall have a vertical rotation of 45° below horizontal to 90° above horizontal and 344° of horizontal rotation will be achievable with adjustable stops. The logic box shall include coated, solid state components to resist water corrosion and include a set of DIP switches for built in operations. Each control box shall control the vertical and</p>			

<p>horizontal position of the monitor, along with the pattern of the nozzle. The control box will have a toggle switch with guard to move the monitor into the stowed or deployed position. The control panel will have a light to indicate when the monitor is out of the stowed position and diagnostic for trouble shooting with provisions for a second light in the vehicle cab. The stow and deploy position can be easily changed by the end user.</p>			
<p><b>ELECTRIC MONITOR RISER (OR EQUIVALENT)</b></p> <p>An Akron 3406 12 Volt electric monitor riser shall be installed in the deluge gun waterway. The monitor riser will allow the electric monitor to rise 12” in the fully extended position. The riser shall be controlled at the pump operator panel via a switch located on the monitor control pad.</p>			
<p><b>ELECTRIC MONITOR CONTROL BOX PLUS 30' HANDHELD TETHER (OR EQUIVALENT)</b></p> <p>The control for the Akron Deckmaster Monitor shall be a panel mounted control that is flush mounted to the pump operator panel.</p> <p>In addition, there shall be a 30' handheld tether controller mounted at the pump operator panel as a back up controller.</p> <p>The controls shall allow for Auto Stow and monitor control as well as fog or stream nozzle control.</p> <p>An Akron SaberMaster™ electric operated Pyrolite monitor nozzle (#1578) shall be supplied with the monitor. The monitor nozzle shall have a built in stream shaper and be capable of remotely switching between solid bore and fog streams. The nozzle shall have the capacity to flow 1250gpm of water.</p>			
<p><b>THREAD TYPE - DISCHARGE 2.5"</b></p> <p>The threads that shall be provided for the 2.5" Discharges and 2.5" Suction Inlets shall be Nova Scotia style.</p>			
<p><b>2.5" DISCHARGE - REAR</b></p> <p>One (1) 2.5" gated discharge shall be provided at the rear of the apparatus.</p> <p>The plumbing leading to the discharge shall be schedule 10 stainless steel with schedule 40 threaded fittings.</p> <p>This discharge shall be equipped with a chrome 30 degree adapter, chrome plated rocker lug cap, and retaining chain that is attached to the apparatus body.</p>			
<p><b>Akron Electric Valve - Style 8625 Swing-Out™ (OR EQUIVALENT)</b></p> <p>The electric valve(s) shall be an Akron Brass Style 8625 Swing-Out™ Valve. The valve(s) shall have an all brass</p>			

<p>body with flow optimizing stainless steel ball and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a specially designed flow optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to corrosion. The valve shall not require lubrication of seats or any other internal waterway parts, and must be capable of swinging out of the waterway for maintenance by the removal of six bolts. The electric actuator shall have a 16:1 gear ratio, which actuates from fully open to fully closed in 5 seconds, a clutch less motor, and utilize an electric controller with current limiting design. Product must carry a 10 year manufacturer's warranty.</p>			
<p><b>Drain Valves</b></p> <p>A drain shall be installed at the pump panel. The drain shall have 3/4" Synflex drain lines tied to a 1/4 turn drain valve with high pressure brass fittings.</p>			
<p><b>STORZ DISCHARGE WITH SLO CLOZ- SIDE</b></p> <p>One (1) gated Storz discharge(s) shall be provided at the curbside pump panel. The plumbing shall be 3" diameter stainless steel plumbing.</p> <p>The inlet(s) shall be equipped with a 4" Storz 30 degree adapter, Storz cap, and retaining chain that is attached to the apparatus body.</p>			
<p><b>Akron Electric Valve - Style 8630 Swing-Out™ (OR EQUIVALENT)</b></p> <p>The electric valve(s) shall be an Akron Brass Style 8630 Swing-Out™ Valve. The valve(s) shall have an all brass body with flow optimizing stainless steel ball and dual polymer seats. The valve shall be capable of dual directional flow while incorporating a specially designed flow optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to corrosion. The valve shall not require lubrication of seats or any other internal waterway parts, and must be capable of swinging out of the waterway for maintenance by the removal of six bolts. The electric actuator shall have a 16:1 gear ratio, which actuates from fully open to fully closed in 5 seconds, a clutch less motor, and utilize an electric controller with current limiting design. Product must carry a 10 year manufacturer's warranty.</p>			
<p><b>Drain Valves</b></p> <p>A drain shall be installed at the pump panel. The drain shall have 3/4" Synflex drain lines tied to a 1/4 turn drain valve with high pressure brass fittings.</p>			
<p><b>FOAM SYSTEM -2.1A SMART FOAM</b></p> <p>The foam system for this apparatus will be the 2.1A Smart Foam that will be integrated and controlled by the SAM</p>			

<p>pressure governor system at the pump panel and remote tablet.</p>			
<p><b>SINGLE TANK FLUSH KIT - MANUAL</b></p> <p>The ability to flush out the foam system shall be included with the apparatus. The actuator for the flush kit shall be at the pump operator panel and consist of a manual push / pull handle.</p>			
<p><b>FOAM SYSTEM DISCHARGE MANIFOLD</b></p> <p>A stainless steel foam discharge manifold shall be provided for the foam system.</p> <p>This foam manifold shall have two (2) outlets for connection into the apparatus plumbing system.</p>			
<p><b>INTEGRAL FOAM TANK</b></p> <p>The integral foam tank shall have the following capacities:</p> <p><b>25 Imperial gallons</b>  <b>114 liters</b></p> <p>The foam tank shall be provided as an integral part of the booster tank and piped to the foam system. The tank shall have a separate fill tower with cover labeled ("FOAM FILL ONLY") for filling the foam tank.</p>			
<p><b>FOAM LEVEL GAUGE - CLASS1 ITLF-40R - OPERATOR PANEL - A FOAM (OR EQUIVALENT)</b></p> <p>A Class 1 ITLF-40R foam level gauge shall be installed on the pump operator panel for the A foam tank.</p> <p>The Class 1 ITL-40 Tank Level Indicator accurately displays liquid volume for both water and foam tanks. Each ITL-40 has a super bright LED display easily viewable from 180 degrees with a visual indicator at nine precise levels.</p>			
<p><b>INTEGRAL FOAM TANK WATER ALLOWANCE</b></p> <p>The integral foam cell will deduct water from the specified water tank volume.</p>			
<p><b>FIREMAN'S FRIEND - 4" EXTERNAL TANK FILL - REAR RIGHT (OR EQUIVALENT)</b></p> <p>There shall be a 4" external tank fill with a Storz fitting provided at the rear right of the apparatus body.</p> <p>The internally mounted check-type fill valve shall be capable of flowing at a rate in excess of 1,000 gallons per minute. The internal valve shall be self deflecting, requiring no additional diffusion device. The check valve shall be stainless steel and a spring actuated piston-type sealing mechanism to minimize seal wear and provide positive sealing of valve after shutting off at feed source. Valve seal designed to be self-cleaning, utilizing EPDM rubber.</p>			

<p>The valve body shall have a mounting plate and the TTMA 6-bolt attachment pattern (2 1/2" to 3" valve body) positioned on outside of and attached directly to tank wall. All valve components constructed of highly corrosive resistant stainless steel. External attachment fitting corrosion resistant aluminum. Available with connections from 2 1/2" to 5" fittings. <i>There will also be an exterior manual pressure relief on valve.</i></p>			
<p><b>BOOSTER TANK</b></p> <p>The booster tank shall have the following capacities:</p> <p><b>1000 Imperial gallons</b>  <b>4546 Liter</b></p> <p>The tank shall be provided with a lifetime tank manufacturer warranty.</p> <p>The transverse and longitudinal swash partitions shall be manufactured of Polypropylene Copolymer material. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow and meet NFPA rules. All swash partitions interlock with one another and are welded to each other as well as to the walls and floor of the tank.</p> <p>The tank shall have a combination vent and fill tower. The fill tower shall be constructed of .5" thick Polypropylene Copolymer and shall be a minimum dimension of 8"x 8" outer perimeter. The tower shall be located in the left front corner of the tank unless otherwise specified by the purchaser. The tower shall have a .25" thick removable Polypropylene Copolymer screen and a Polypropylene Copolymer hinged-type cover. Inside the fill tower, there shall be a combination vent overflow pipe. The vent overflow shall be a minimum of schedule 40 pipe with a minimum I.D of 4", unless a dump chute is included in the design in which case the I.D shall be 6". Both shall be of a design to run through the tank. The tank overflow shall be piped behind the rear wheels.</p> <p>The tank cover shall be constructed of recessed .5" thick Polypropylene Copolymer, stress relieved, U.V. stabilized material. A minimum of two lifting dowels shall be drilled and tapped .5" x 2" to accommodate the lifting eyes.</p> <p>There shall be one (1) sump standard per tank. The sump shall be constructed of .5" Polypropylene Copolymer and be located in the left front corner of the tank and shall meet the requirements of NFPA.</p> <p>There will be two (2) standard tank outlets: one for tank to sump suction line and one for a tank fill line. All tank fill couplings shall be backed with flow deflectors to break up</p>			



<p>the stream of water entering the tank, and be capable of withstanding sustained fill rates of up to 1,000 G.P.M.</p> <p>The tank shall rest on the body cross members in conjunction with such additional cross members, spaced at a distance that would not allow for more than 530 square inches of unsupported area under the tank floor. In cases where overall height of the tank exceeds 40 inches, cross member spacing must be decreased to allow for not more than 400 square inches of unsupported area.</p> <p>The tank must be isolated from the cross members through the use of hard rubber strips with a minimum thickness and width dimension of .25" x 2" and a minimum Rockwell hardness of 60 durometers. Additionally, the tank must be supported around the entire bottom outside perimeter and capture both front and rear as well as side to side to prevent tank from shifting during vehicle operation.</p> <p>The tank shall be mounted in the apparatus body in a manner that the total outside bottom perimeter of the tank shall be supported. The bottom of the tank shall be completely isolated from the frame by heavy-duty .25" thick rubber strips. There shall be a picture frame type cradle mount system utilized for the purpose of capturing the tank. There shall be a support system across the top of the tank to prevent excessive bouncing when the tank is empty.</p> <p>Although the tank is designed as a free-floating suspension unit, it is required that the tank has adequate hold down restraints to minimize movement during vehicle operation. If proper retention has not been incorporated into the apparatus hose floor structure, an optional mounting restraint system shall be located on the top of the tank, halfway between the front and rear on each side of the tank.</p> <p>The tank shall be completely removable without disturbing or dismantling the apparatus structure.</p>			
<p><b>LIMITED LIFETIME POLY TANK WARRANTY</b></p> <p>The water tank shall carry a tank manufacturer lifetime warranty against defects and workmanship. The apparatus manufacturer must be authorized for installation and alterations on poly tanks to not void any written warranties. <b>(Mandatory Requirement)</b></p>			
<p><b>TANK DRAIN</b></p> <p>The tank shall have a 1.5" tank drain installed in the bottom of the tank and accessible from the ground.</p>			
<p><b>VERTICAL TOOL BOARD ON SLIDE OUT TRAY</b></p>			

<p><b>One (1)</b> vertical tool boards(s) shall be installed on the slide out tray in L2. The vertical tool boards shall be manufactured from perforated 3/16" 5000 grade aluminum.</p>			
<p><b>SWING OUT TOOL BOARD</b></p> <p>One (1) heavy duty swing out tool board shall be provided.</p> <p>The tool board shall be made from perforated aluminum with a rigid tubing edge around the complete board. The tool board shall pivot outward of the compartment and be rated to hold 1000 lbs.</p>			
<p><b>SCBA AIR BOTTLE STORAGE COMPARTMENT(S)</b></p> <p>There shall be four (4) double air bottle storage compartment(s) installed in the rear fenders.</p> <p>The double air bottle storage compartment(s) shall have a sealed weatherproof stainless steel access door with two black compression latch opening devices. The door shall be secured with a stainless steel hinge.</p> <p>The bottle storage tubes shall be manufactured from aluminum and come with rubber matting to protect the bottles. A nylon strap shall secure the air bottle in the tube in case of accidental door opening while in transit.</p> <p>The door shall be tied to the door ajar warning light in the chassis cab.</p>			
<p><b>HOSE BED ACCESS STEP</b></p> <p>A hose bed access step shall be installed below the hose bed.</p> <p>The step shall be manufactured from 3/16" 3003-H22 embossed checker plate aluminum and shall meet the requirements of NFPA 1901 latest edition for slip resistance, depth, and weight load. A .125" thick grip strut aluminum safety channel insert shall be welded along the inside perimeter of the checker plate aluminum.</p> <p>The step dimensions shall be approximately 44.5 wide on the front and approximately 47" on the rear. These dimensions may be adjusted due to optional equipment clearance or compartment widths and the final sign off drawing will have the actual dimensions.</p> <p>The step shall be fastened to the apparatus rear face utilizing stainless steel screws.</p>			
<p><b>APPARATUS BODY</b></p> <p>The body shall be fabricated with the highest quality components available, and acceptable to the fire service industry. Only new components shall be in the</p>			

<p>manufacturing process.</p> <p>The body shall be engineered and designed to provide a low center of gravity and carry a correct load distribution.</p> <p>The entire body superstructure and sub frame shall be constructed of heavy-duty tubular aluminum and channels to provide a full frame body design.</p> <p>The use of tubular aluminum and channels shall provide for extreme strength, maximum durability, and maximum resistance to buckling and failure.</p> <p>The full frame body construction method shall provide for greater strength and integrity. Formed body construction shall not be acceptable.</p> <p>All compartments shall be fabricated with aluminum panels that are a minimum grade of 5000 grade aluminum, which are inserted into the body framework. The framework allows for reinforcement to the compartment, for installation of heavy equipment. The aluminum panels shall provide extreme strength, rust corrosion resistance, and maximum durability.</p> <p>Skilled craftsmen shall perform all welding operations on the body. All welding shall be electronically with the highest quality components.</p> <p>Certified welders shall perform all welding. Proof of welder certification shall be provided with the completed vehicle.</p>			
<p><b>BODY SUBFRAME</b></p> <p>The body framework shall be assembled on a jig and shall be clamped together and squared. The framework shall be electronically welded with digital pulse welders forming the integral superstructure.</p> <p>The body frame rails shall be constructed of 6061T6/6063-T6, 3" x 3" aluminum extrusions, with a wall thickness of 1/4".</p> <p>The front cross member shall be a heavy duty 3" x 2" x 1/4" aluminum extrusions providing maximum strength and durability.</p> <p>The two middle cross members shall be heavy duty 3" x 3" x 1/4" aluminum extrusions providing maximum strength and durability at the main section of the body.</p> <p>The rear cross members shall be heavy duty 3" x 2" x 1/4" aluminum extrusions providing maximum strength and durability at the rear section of the body.</p> <p>The two middle cross members shall extend the full width</p>			

<p>of the body. The cross members shall provide support for the body side compartments section.</p> <p>The body sub frame and the chassis frame shall be insulated and separated by a rubberized belt.</p> <p>There shall be rear drop sub frame bolted to chassis frame made from formed heavy steel rails.</p> <p>The body shall be mounted to the chassis frame rails with two double flex mounts at the front, two steel channels in the middle, bolted to the chassis frame at the rear end of chassis frame and four single flex mounts at the drop frame. This shall provide for maximum mounting strength and flexibility.</p>			
<p><b>CORROSION PROTECTION</b></p> <p>All body components or attachments made from dissimilar metals shall be fastened to the body utilizing an UHMW/Polyethylene material to prevent metal-to-metal contact preventing dielectric corrosion.</p> <p>All fasteners used in attaching or fastening of aluminum panels shall be installed with stainless steel hardware. <u>Rivets shall not be acceptable.</u> <b>(Mandatory Requirement)</b></p> <p>All fasteners shall be installed in a manner, which shall involve drilling, tapping, and application of non-corrosive grease before the stainless steel bolts are installed. <u>Self-tapping screws or screws without threads shall not be acceptable.</u> <b>(Mandatory Requirement)</b></p>			
<p><b>BODY COMPARTMENTS</b></p> <p>The body compartments shall be fabricated with a minimum of 5000 grade aluminum panels. These panels shall be non-corrosive, durable, and add strength and integrity to the body construction.</p> <p>The interior compartment seams shall be sealed and caulked with a permanent, pliable automotive type sealer.</p> <p>All compartments shall have a 1" drop on the lower edge of the door opening to accommodate the door seal, and to stop moisture from entering the compartment. <b>(Mandatory Requirement)</b></p> <p>All compartments shall have "TRUE" sweep out floors.</p> <p>All compartments shall be weatherproof.</p>			
<p><b>SUB STRUCTURE WARRANTY - 20 YEARS NON-PRORATED</b></p> <p>The substructure shall be warranted for a period of twenty (20) years <i>non-prorated</i> on the apparatus sub structure for corrosion perforation. <b>(Mandatory Requirement)</b></p>			

<p><b>BODY WARRANTY - 20 YEARS NON-PRORATED</b></p> <p>The apparatus body warranty shall cover the entire body against manufacturer defects for a period of twenty 20 years <b><i>non-prorated</i></b> on aluminum and stainless steel full framed bodies. <b>(Mandatory Requirement)</b></p>			
<p><b>HOSE BED</b></p> <p>The main hose bed shall be located above the booster tank and be sized to meet the requirements for a Pumper Fire Apparatus as specified in NFPA and ULC S515 (Latest Edition).</p> <p>The inner sides of the hose bed shall be natural finish aluminum smooth plate free of protrusions and obstructions.</p> <p>There shall be three (3) aluminum unistrut tracks for the optional hose bed divider(s), two (2) at the forward section of the hose bed, and one (1) at the rear.</p> <p>The rear track shall have come with 10' of snap cover to prevent the hose couplings from catching the track. The snap cover shall be shipped loose for customer installation after the hose bed dividers have been set up.</p>			
<p><b>HOSE BED MATTING</b></p> <p>The hose bed flooring shall be fitted with vinyl type matting to allow for air movement under the hose.</p>			
<p><b>HOSE BED DIVIDER - ADJUSTABLE</b></p> <p>There shall be two (2) adjustable hose bed dividers provided.</p> <p>The dividers shall be easily adjustable in the hose bed slide tracks.</p> <p>Each divider shall be constructed from a minimum of 5000 grade aluminum which shall be welded into a custom aluminum extrusion base frame.</p> <p>Each hose bed divider shall have an oval handhold provided at the rear portion of the divider.</p>			
<p><b>HOSE BED TARP</b></p> <p>One (1) vinyl hose bed tarp shall be provided with shock cord fasteners or depending on hose bed obstructions, a combination of shock cord fasteners and nickel plated quarter turn fasteners for the main hose bed. The hose bed tarp shall have an end flap with Velcro fasteners provided to cover the rear of the hose bed. The tarp shall be red in color.</p>			
<p><b>REAR FENDERS</b></p> <p>The rear fenders of the apparatus shall be fully removable</p>			

<p>to allow for servicing of the apparatus suspension system.</p> <p>The rear fender outer skin shall be fabricated from a minimum of 5000 grade aluminum. The aluminum shall be painted to the same color and paint process as the body.</p> <p>The inner wheel well shall be fabricated from a minimum of 5000 grade aluminum. The fender shall be attached to the body using stainless steel screws. The screws shall be pre tapped before installation. <u>Self-tapping screws are not acceptable.</u></p> <p>All dissimilar metals shall receive a strip of UHMW isolation tape for corrosion resistance.</p>			
<p><b>REAR FENDER EXTENSIONS</b></p> <p>Each rear fender shall come with stainless steel fender extensions. For corrosion resistance, an EPDM molding shall be utilized to seal the fender extension and isolate it from the apparatus body. The fender extensions and EPDM molding shall be secured using stainless steel fasteners.</p>			
<p><b>REAR BODY SECTION - NATURAL FINISH ALUMINUM</b></p> <p>The rear section of the apparatus body shall be finished with a minimum of 5000 grade aluminum plate panels. The panels shall have a natural finish for installation of Chevron. The panels shall be fastened to the rear body framework with stainless steel fasteners. The stainless steel fasteners are drill tapped. <u>Sheet metal screws or self-tapping screws are not acceptable.</u> <b>(Mandatory Requirement)</b></p>			
<p><b>HOSE BED ACCESS LADDER - STAINLESS STEEL - REAR</b></p> <p>There shall be a 12" wide folding ladder on the roadside rear of the apparatus for access to the main hose bed. The ladder shall be manufactured from 11 Gauge 304 - 2B stainless steel. Each rung of the ladder shall be 9 1/2" wide and shall be manufactured as an integral component of the side rails for maximum strength and rigidity. Each rung shall have a slip resistant dimpled surface.</p> <p>The ladder shall come with two (2) gas struts to assist in unfolding the ladder or for folding the ladder for storage while not in use.</p> <p>The hose bed access ladder shall have a weight rating of 500 lbs.</p> <p>Two (2) 30" 1 1/4" diameter aluminum knurled handrails shall be vertically attached on each side of the hose bed access ladder.</p> <p>A single minimum 12" handrail shall be supplied as an additional hand hold.</p>			

<p><b>HOSE BED ACCESS LADDER STEP LIGHT (OR EQUIVALENT)</b></p> <p>The hose bed access ladder steps area shall be illuminated by one (1) Whelen PEL2C LED light.</p>			
<p><b>TAIL BOARD</b></p> <p>A heavy-duty 12" deep tail board shall be provided.</p> <p>The tail board shall be covered with slip resistant 3/16" embossed checker plate. The aluminum checker plate shall be bolted to the tail board sub frame with non-corrosive stainless steel bolts. The bolt on aluminum tread plate shall allow for easy removal for service.</p> <p>The forward section of the tail board shall be gapped to allow washing without dirt being trapped and for the drainage of accumulated water.</p>			
<p><b>BODY HANDRAILS</b></p> <p>The following handrails shall be installed on the apparatus body.</p> <p>One (1) 36" mounted vertically on the curbside rear.</p> <p>One (1) 48" mounted horizontally on the upper rear, below the hose bed area.</p> <p>The body handrail shall be 1 1/4" in diameter and shall be knurled aluminum for maximum grip and safety.</p> <p>The handrail shall be installed and supported with chrome plated polished cast brackets.</p> <p>The handrail brackets shall be provided with an isolation gasket and held in place with stainless steel screws.</p>			
<p><b>CAST STEPS - CURBSIDE REAR</b></p> <p>One (1) cast aluminum fixed cast steps shall be installed on the curbside rear of the apparatus. Each step shall come with a hand hold built into the step.</p> <p>The steps shall be mounted to a 3/8" plate with stainless steel screws. The plate shall be permanently welded to the apparatus body frame.</p>			
<p><b>STEP LIGHTS – LED (OR EQUIVALENT)</b></p> <p>All steps on the body shall have adequate light, per the requirements of NFPA and ULC, for illumination. The lights shall be Tecniq EON-Linear White 2.9"W lights for folding and cast step lighting or shall be already supplied with the manufacturer supplied steps.</p>			
<p><b>LICENSE PLATE ILLUMINATION</b></p> <p>A LED light shall illuminate the rear license plate mount. The light shall come with a chrome bezel.</p>			

<p><b>CHEVRON STRIPPING (OR EQUIVALENT)</b></p> <p>There shall be 6" chevron stripping decals applied to the rear face of the apparatus. The chevron decals shall be made of high visibility Reflexite™ material that is red / yellow in color and shaped to form an "A" style pattern. A minimum of 50% of the rear body shall be covered with Chevron.</p>			
<p><b>COMPARTMENT MATTING</b></p> <p>There shall be versatile PVC matting supplied on exposed body compartment floors. The matting shall be interlocking and 1" high to allow for air movement.</p>			
<p><b>LEFT SIDE BODY COMPARTMENTS – HIGH/SPLIT</b></p> <p>The following compartments shall be provided on the driver's side of the apparatus body.</p> <p>One (1) compartment forward of the rear wheel measuring 36"W x 69"H x 15"/27"D frame opening.</p> <p>One (1) compartment over the rear wheel measuring 44"W x 40"H x 15"D frame opening.</p> <p>One (1) compartment behind the rear wheel measuring 36"W x 69"H x 15"/27"D frame opening.</p>			
<p><b>RIGHT SIDE BODY COMPARTMENTS – HIGH/SPLIT</b></p> <p>The following compartments shall be provided on the curbside of the apparatus body.</p> <p>One (1) compartment forward of the rear wheel measuring 36"W x 69"H x 15"/27"D frame opening.</p> <p>One (1) compartment over the rear wheel measuring 44"W x 40"H x 15"D frame opening.</p> <p>One (1) compartment behind the rear wheel measuring 36"W x 69"H x 15"/27"D frame opening.</p>			
<p><b>LADDER RACK (OR EQUIVALENT)</b></p> <p>A Zico HLAS power overhead ladder rack shall be supplied and mounted on the curb side of the apparatus.</p> <p>The Horizontal Ladder Access System (HLAS) stores the ladders horizontally over the top of the apparatus, allowing for more compartment storage on the sides. When needed, the HLAS system lowers the ladders at the flick of a switch to a convenient height for safe &amp; easy retrieval. System lowers ladders away from the side body, so that access to side compartments is still possible.</p> <p>The ladder rack shall be powered by a heavy-duty, self-contained hydraulic actuator with a maximum load of 500</p>			



<p>lb.</p> <p>The ladder rack shall meet NFPA 1901-09 Standards. A Flashing Light Kit is provided.</p> <p>The ladder control switch shall be installed at the rear of the apparatus.</p> <p>There shall be an aluminum plate covering the ladder rack hydraulic operators. The plate shall be manufactured from 3/16" 5052 - H32 Aluminum and be of a two piece design that articulates with a stainless steel hinge. The plate shall be painted to match the apparatus.</p>			
<p><b>ATTIC LADDER BRACKET</b></p> <p>A custom aluminum channel attic ladder bracket, with retaining pin, shall be provided for storage of the attic ladder.</p>			
<p><b>FOLDING LADDER (OR EQUIVALENT)</b></p> <p>A Duo-Safety model 585-A, 10 foot folding ladder shall be provided.</p>			
<p><b>ROOF LADDER (OR EQUIVALENT)</b></p> <p>A Duo-Safety model 775-A, 14 foot roof ladder shall be provided.</p>			
<p><b>EXTENSION LADDER (OR EQUIVALENT)</b></p> <p>A Duo-Safety model 900-A, 24 foot, 2-section extension ladder shall be provided.</p>			
<p><b>POWER LADDER RACK OPTION - SUCTION HOSE STORAGE (OR EQUIVALENT)</b></p> <p>A Zico HLAS suction hose storage kit, P/N HLAS-HS-2KIT, shall be installed on the power over head ladder rack. The kit shall allow for the storage of two (2) hard suction hoses. The hoses shall be secured with Velcro straps.</p>			
<p><b>HARD SUCTION HOSE – KOCEK (OR EQUIVALENT)</b></p> <p>Two (2) ten foot section(s) of 6" Kocek PVC lightweight, flexible, hard suction hose shall be provided with lightweight male and long handle fem threaded couplings.</p>			
<p><b>BARREL STRAINER (OR EQUIVALENT)</b></p> <p>One (1) 6" Kocek BS60 barrel strainer shall be provided and shipped loose with the completed vehicle.</p>			
<p><b>REAR BODY COMPARTMENT</b></p> <p>The following compartments shall be provided on the rear of the apparatus body.</p> <p>One (1) compartment measuring 44"W x 54"H x 30"D frame opening.</p>			
<p><b>AMDOR ROLL UP DOORS (OR EQUIVALENT)</b></p> <p>The doors shall be Amdor Roll-Up type doors to include</p>			

double wall aluminum box section slats with integral hinge joint and recessed slat seal, reusable end shoes with snap-in securement, double wall aluminum reinforced bottom rail with either Stainless Steel Lift Bar door latching system, aluminum track with side frame, sill plate, and top gutter with non-marring top seal, side seals, bottom seal, with all wear component material to be Type 6 Nylon.

The slats shall have a true box section with a flat interior surface to prevent equipment hang-up. The slats shall have a face depth of 1.0 inches and a wall thickness of 0.045 inches. Each slat incorporates a recessed slat seal to weatherproof the compartment and reduce rattle between slats.

For every inch of height an integral continuous hinge joint spans the width of the door to provide superior strength.

The door glides on non-interlocked end shoes. Each end shoe is independent and positively secured by an exclusive snap-in device. Door slats can be easily removed and replaced when required.

The Stainless Steel Lift Bar system shall be provided to keep the door securely closed. This system complements the superior strength of the bottom rail with bottom seal and integral reinforcing flange.

Wear components are constructed of Type 6 Nylon to provide maximum strength and durability. Type 6 Nylon is a naturally lubricating material, which provides exceptional temperature characteristics.

Each door is equipped with slat, top, bottom and side seals to keep moisture and dirt on the outside. The non-marring top seal provides a seal without marking the door surface.

The compartment door at the L1 location shall be Amdor roll up style.

The compartment door at the L2 location shall be Amdor roll up style.

The compartment door at the L3 location shall be Amdor roll up style.

The compartment door at the R1 location shall be Amdor roll up style.

The compartment door at the R2 location shall be Amdor roll up style.

The compartment door at the R3 location shall be Amdor

<p>roll up style.</p> <p>The compartment door at the B1 location shall be Amdor roll up style.</p>			
<p><b>DOOR STRAPS (OR EQUIVALENT)</b></p> <p>All roll up doors that exceed comfortable open reach height of the 5th percentile adult female specified in the Canadian Motor Vehicle Safety Regulations shall receive an Amdor Flex HD pull strap. The strap shall be installed so as to not obstruct the closing of the roll up door.</p> <p>Pan doors, if applicable, that exceed comfortable open reach door height of the 5th percentile adult female specified in the Canadian Motor Vehicle Safety Standards shall receive a nylon strap to assist in door closure.</p>			
<p><b>COMPARTMENT SHELVING - ADJUSTABLE</b></p> <p>Seven (7) adjustable 3/16" aluminum compartment shelves with upturned edges shall be provided. Each shelf shall be provided with plastic matting.</p>			
<p><b>ADJUSTABLE SHELVING UNI-STRUT SIDE TRACKS</b></p> <p>Seven (7) set(s) of four (4) aluminum Unistrut side tracks shall be provided for installation of adjustable shelves.</p>			
<p><b>RUB RAILS - APPARATUS BODY - NON SLIP</b></p> <p>Three inch "C" channel aluminum rub rails shall be bolted into place with nylon spacers on the lower framework below the apparatus body compartments. The rub rail will extend to the outside edges of the apparatus body for protection of the body from impact damage.</p> <p>The top surface of the rub rail shall have a nonslip surface meeting the requirements of NFPA 1901 for non slip walking surfaces.</p>			
<p><b>REAR TOW HOOKS - PAINTED</b></p> <p>Two (2) heavy duty steel painted tow hooks shall be bolted directly to the rear frame rails.</p> <p>The tow hooks shall be easily accessible from the rear of the apparatus body thru a removable panel. The panel shall have lift and turn paddle latches. The door shall be manufactured from a minimum 5000 grade aluminum.</p>			
<p><b>COMPARTMENT LIGHTS - LED</b></p> <p>All body compartments shall have LED lights activated by a switch. The LED compartment lights shall be flush mount and provide a consistent 120 degree wide beam pattern. There shall be a minimum of two strip lights installed in each compartment.</p>			
<p><b>NEWTON DUMP VALVE - ELECTRIC ACTUATED - STAINLESS STEEL (OR EQUIVALENT)</b></p> <p>One (1) stainless steel Newton "Quick - Dump" with</p>			

<p>electric valve shall be provided at the rear of the apparatus. This valve shall be a A.H. Stock P/N 6012SW-34 dump chute valve that is electrically actuated by an A.H. Stock 1030-34 valve actuator. The telescopic dump chute shall have a dimension of 8"H x 12.5"W to allow for a maximum dump rate. A Newton stainless steel manually operated 36" telescoping extension chute shall be provided for the dump valve. Each dump shall be actuated by one (1) of two (2) super switches mounted on each side of the apparatus rear, adjacent to the dump valve.</p>			
<p><b>TRAFFIC CONTROL DIRECTIONAL LIGHT – LED (OR EQUIVALENT)</b></p> <p>One (1) Whelen model TAL85 LED directional light shall be mounted on the rear of the vehicle as high as possible for best visibility.</p> <p>The light shall have a manufacturer 5 year warranty.</p>			
<p><b>TRAFFIC CONTROL DIRECTIONAL LIGHT- RECESSED MOUNTED</b></p> <p>The traffic control directional light shall be recessed mounted flush with the rear of the apparatus body.</p>			
<p><b>REAR FENDER PARKING LIGHTS – LED (OR EQUIVALENT)</b></p> <p>Two (2) Tecniq model E60-WS00-1 stainless steel "Parking Lights" shall be mounted, one each side, into the rear fenders. These lights shall be tied into the back up light circuit and shall activate when the vehicle transmission is placed into reverse. Each light shall have 2000 lumens.</p>			
<p><b>RECEPTACLE(S) - INTERIOR</b></p> <p>Four (4) 120 volt / 15 amp duplex straight blade receptacle(s) shall be provided and installed on the interior of the fire apparatus body. Location shall be at the Fire Departments discretion.</p>			

<p><b>LED TELESCOPIC SCENE LIGHT (OR EQUIVALENT)</b></p> <p>Four (4) Fire Research Spectra LED Scene Light model SPA530-Q28 top mount push up telescopic light(s) shall be installed. The light pole shall be anodized aluminum and have a knurled twist lock mechanism to secure the extension pole in position. The extension pole shall extend 4' and rotate 360 degrees. A 3 1/2" round mounting flange shall be provided. Wiring shall extend from the pole bottom with a 4' retractile cord.</p> <p>The lamp head shall have 84 ultra-bright white LEDs, 72 for flood lighting and 12 to provide a spotlight beam pattern. It shall operate at 12/24 volts DC, draw 19.2/9.6 amps, and generate 28,000 lumens of light. The lamp head shall have a unique lens that directs flood lighting onto the work area and focuses the spotlight beam into the distance. The lamp head angle of elevation shall be adjustable at a pivot in the mounting arm and the position locked with a round knurled locking knob. The lamp head shall be no more than 5 3/8" high by 14" wide by 3 3/4" deep and have a heat resistant handle. The lamp head and mounting arm shall be powder coated. The LED scene light shall be for fire service use.</p> <p><b>Location of light shall be: TBD</b></p>			
<p><b>GUIDE RAILS FOR TELELIGHTS</b></p> <p>Two (2) FRC "No Scratch" guide rails shall be installed in conjunction with the side mount raised telescopic lights. The guide rails shall consist of a guide collar, guide rail assembly and a steady rest bracket to prevent scratching and denting of the apparatus body surfaces.</p> <p>Electrical wiring shall be provided in between each 12V light and the main 12v electrical distribution box to ensure a proper and safe connection.</p> <p>Two (2) on/off toggle switches shall be provided for 12 Volt Lamps and shall be located as per the fire departments specifications.</p>			
<p><b>HAZARD LIGHT SWITCH</b></p> <p>Fire Research Spectra –SW530 option raised pole hazard light switch shall be installed. A magnetic switch shall close when the pole is raised to activate a door ajar light in the chassis cab.</p>			
<p><b>REARVIEW CAMERA/MONITOR SYSTEM_(OR EQUIVALENT)</b></p> <p>A Renegade Fleet Safety heated back up camera shall be mounted on the rear of the apparatus. A 7" color LCD monitor shall be mounted securely in the cab.</p>			
<p><b>ELECTRICAL SYSTEM - MULTIPLEXED</b></p>			

<p>The manufacturer shall design the wiring system for the apparatus in accordance with the SAE, Society of Automobile Engineers.</p> <p>The manufacturer shall determine the circuit loads and design the system to accommodate these loads with appropriate circuit routings and relays.</p> <p>All wiring harnesses shall be properly secured and routed. All passages required for routing shall be grommeted and sealed as required.</p> <p>All wiring shall be easily accessible for servicing.</p> <p>All wiring shall be SAE J1128 and SAE J1292 GXL type wire, as per fire industry standards.</p> <p>All exposed wiring shall be crimped, and heat shrunk for added protection.</p> <p>The wiring harnesses shall be pre-engineered for correct circuit loading and shall be custom made. The harnesses shall be function, number, and color coded and shall be fitted inside automotive high temperature loom. All connections to the main panel box must be made with waterproof automotive style guided pin locking connectors.</p> <p>An enclosed main electrical distribution panel that provides protection against dirt, dust, oil, and water shall be installed in the upper section of the pump house.</p> <p>All electrical connections to the panel shall be made through positive locking environmentally sealed connectors. The panel features a solid state power distribution board(s) with visual diagnostics.</p> <p>All circuits are protected by automatic resetting circuit breakers. All breakers shall be properly sized to the circuit load and are direct plug in sockets.</p> <p>All wiring shall have a strain pull test on wiring connections of 40 pounds.</p>			
<p><b>BATTERY MASTER SWITCH</b></p> <p>The battery master switch shall be supplied by the chassis manufacturer.</p>			
<p><b>ZONE A UPPER EMERGENCY LIGHTING (OR EQUIVALENT)</b></p> <p>The zone A upper emergency lighting zone shall have the following:</p> <p>A Whelen Freedom IV 60" light bar (<b>Model: F4N0QLED</b>) warning system shall be furnished and mounted to the</p>			

<p>chassis using a Whelen Stainless steel mount. The mount shall allow for adjustment of the lightbar angle.</p> <p>The light bar shall have a manufacturer 5 Year Warranty.</p>			
<p><b>ZONE A LOWER EMERGENCY LIGHTING (OR EQUIVALENT)</b></p> <p>The zone A lower emergency lighting zone shall have the following lights and shall be mounted to the chassis grill:</p> <p>Two (2) Whelen M6 Series Model # M6RC warning lights.</p> <p>These lights shall have a clear lens, red LED's and come with a chrome bezel.</p> <p>The light shall have a manufacturer Lifetime warranty.</p>			
<p><b>ZONE B UPPER EMERGENCY LIGHTING (OR EQUIVALENT)</b></p> <p>The zone B upper emergency lighting zone shall have the following:</p> <p>Two (2) Whelen M9 Series Model # M9V2 combination scene/ warning lights.</p> <p>These lights shall have a clear lens, red LED's and come with a chrome bezel.</p> <p>The light shall have a manufacturer Lifetime warranty.</p>			
<p><b>ZONE B LOWER EMERGENCY LIGHTING (OR EQUIVALENT)</b></p> <p>The zone B lower emergency lighting zone shall have the following:</p> <p>Two (2) Whelen M6 Series Model # M6RC warning lights.</p> <p>These lights shall have a clear lens, red LED's and come with a chrome bezel.</p> <p>The light shall have a manufacturer Lifetime warranty.</p>			
<p><b>ZONE C UPPER EMERGENCY LIGHTING (OR EQUIVALENT)</b></p> <p>The zone C upper emergency lighting zone shall have the following:</p> <p>Two (2) Whelen M9 Series Model # M9V2 combination scene/ warning lights.</p> <p>These lights shall have a clear lens, red LED's and come with a chrome bezel.</p> <p>The light shall have a manufacturer Lifetime warranty.</p> <p>These rear scene lights shall also be connected to reverse lights.</p>			
<p><b>ZONE C LOWER EMERGENCY LIGHTING (OR</b></p>			

<p><b>EQUIVALENT)</b></p> <p>The zone C lower emergency lighting zone shall have the following:</p> <p>Two (2) Whelen M6 Series Model # M6RC warning lights.</p> <p>These lights shall have a clear lens, red LED's and come with a chrome bezel.</p> <p>The light shall have a manufacturer Lifetime warranty.</p>			
<p><b>ZONE D UPPER EMERGENCY LIGHTING (OR EQUIVALENT)</b></p> <p>The zone D upper emergency lighting zone shall have the following:</p> <p>Two (2) Whelen M9 Series Model # M9V2 combination scene/ warning lights.</p> <p>These lights shall have a clear lens, red LED's and come with a chrome bezel.</p> <p>The light shall have a manufacturer Lifetime warranty.</p>			
<p><b>ZONE D LOWER ZONE (OR EQUIVALENT)</b></p> <p>The zone D lower emergency lighting zone shall have the following:</p> <p>Two (2) Whelen M6 Series Model # M6RC warning lights.</p> <p>These lights shall have a clear lens, red LED's and come with a chrome bezel.</p> <p>The light shall have a manufacturer Lifetime warranty.</p>			
<p><b>HEADLIGHT WIG WAG FLASHER</b></p> <p>The chassis high beam headlights shall be equipped with an alternating flashing, wig wag headlight system. An electronic flasher shall be used to control the lights. A control switch panel shall activate the flashing system.</p>			
<p><b>ELECTRONIC SIREN (OR EQUIVALENT)</b></p> <p>Whelen Siren Amplifier model # 295HFS2 shall be provided. The 295HFS2 shall incorporate a 12V/200W remote siren amplifier on an aluminum alloy chassis covered by an aluminum alloy housing with a powder coated black top for maximum protection. The 295HFS2 shall be furnished with a flush mount black polycarbonate powder coated control head. The 295HFS2 shall have the ability for either 100 or 200 watt output. The front overlay of the control head shall be made of a black polycarbonate and powder coated. The lettering and artwork on the overlay shall be illuminated with adjustable backlighting of soft LED non-glaring green. The control head operating controls will consist of a power switch, manual button, and a function rotary switch. The</p>			



<p>control head shall include a 20A/32V fuse. The microphone shall be hardwired to the 295HFS2. The 295HFS2 PC board shall have input polarity protection, output short circuit protection. The solid state siren speaker amplifier shall be vibration resistant.</p> <p>The 295HFS2 shall have four Scan-Lock™ siren tones with two manual functions for additional siren tones. The siren amplifier shall have the ability to customize the placement of each siren tone with the rotary switch. The siren amplifier shall have a “Siren in Use” icon driver and adjustable preset repeat radio volume. The PTT (push to talk) switch on the microphone shall override all siren functions. The 295HFS2 shall have a combination On/Off and horn ring transfer switch with Bi-polarity horn/ring activation control. The 295HFS2 shall have SI Test® capability to perform a complete diagnostic silent test of amplifier and speaker(s). The siren amplifier shall have a quick disconnect plug. The 295HFS2 shall have the ability to activate siren tones with “Aux Enable” input either with a slide switch, power controls, or relay-to-ground connector. The 295HFS2 shall meet Class A requirement for SAE, AMECA, KKK1822, and California Title XII. The siren amplifier shall include stainless steel hardware for installation. The 295HFS2 is covered by a five year factory warranty.</p>			
<p><b>ELECTRONIC SIREN SPEAKER (OR EQUIVALENT)</b></p> <p>There shall be a Whelen model # SA315P, 123db / 100 watt electronic siren speaker provided at the front bumper and connected into the electronic siren.</p> <p>The speaker shall have a manufacturer 2 Year warranty.</p>			
<p><b>SPEAKER COVER – BUMPER MOUNT</b></p> <p>The chassis bumper shall come with a cut out for mounting the siren speaker behind. The cut out shall come with a stainless steel cover that is slotted to allow sound to pass thru.</p> <p>The bumper shall be chromed after the cut out has been made <b>(Mandatory Requirement)</b></p>			
<p><b>REAR TAILLIGHT ASSEMBLY (OR EQUIVALENT)</b></p> <p>The rear taillight assembly shall consist of the following:</p> <p>There shall be a total of Two (2) Whelen Plast4VL chrome plated plastic brake / tail / turn light bezels installed on the rear of the apparatus. One each side. The bezels shall be attached with pre-tapped stainless steel fasteners.</p>			
<p><b>Brake Light Assembly – LED (OR EQUIVALENT)</b></p>			

<p>There shall be Two (2) Whelen 600 Series LED turn lights, model 604BTT, installed on the rear of the apparatus. These lights shall be installed in the taillight bezels on the rear of the apparatus and shall come with red lenses. The lights shall have a 5 year manufacturer warranty.</p>			
<p><b>Turn Light Assembly – LED (OR EQUIVALENT)</b></p> <p>There shall be Two (2) Whelen 600 Series amber LED turn lights, model 604T installed on the rear of the apparatus. The lights shall be programmed with a turn arrow chevron. These lights shall be installed in the taillight bezels on the rear of the apparatus. The lights shall have a 5 year manufacturer warranty.</p>			
<p><b>Backup Light Assembly – LED (OR EQUIVALENT)</b></p> <p>There shall be Two (2) Whelen 600 Series white LED backup lights, model 604BU, installed on the rear of the apparatus. These lights shall be installed in the taillight bezels on the rear of the apparatus. The lights shall have a 5 year manufacturer warranty.</p>			
<p><b>CAB SPOT LIGHT – REMOTE CONTROL (OR EQUIVALENT)</b></p> <p>One (1) GoLight(s) Model 2020 White (or Model 2021 Black) shall be fix mounted on the apparatus as per the fire departments specifications. The light shall be a 12V Halogen fixture with a candela power of 225,000. The light shall be capable of a rotation of 370 degrees and a tilt of 135 degrees. A fix mounted remote control shall be mounted on the cab dash or as per the fire departments specifications.</p>			
<p><b>HOSE BED FLOOD LIGHT(S) – LED (OR EQUIVALENT)</b></p> <p>There shall be two (2) DTI model DTI-LED-010WX6 12V light(s) provided for hose bed and area lighting. The LED lighting shall be rated for 2700 lumens. The mounting base shall be a stainless steel mount that swivels vertically and horizontally. The lights shall be controlled from the cab and shall come with a shut off switch at the light head.</p>			
<p><b>GROUND LIGHTS – LED (OR EQUIVALENT)</b></p> <p>There shall be six (6) LumaBar H2O 12” LED ground lights with outward facing angle brackets installed underneath the apparatus. The ground lights shall be activated by a switch installed in the chassis cab. Ground lights that are directly underneath a door opening will turn on automatically when the door is opened.</p>			
<p><b>ENGINE COMPARTMENT LIGHT – LED (OR EQUIVALENT)</b></p> <p>One (1) Tecniq EON P/N E03-W000-1 LED light(s) shall be installed in the engine compartment. The light shall come with a Tecniq stainless steel light bezel. A mercury switch shall activate the light when the hood is opened.</p>			
<p><b>DOOR AJAR SYSTEM</b></p>			

<p>A chassis supplied red flashing warning light for the door ajar system shall be provided in the cab. This light shall be activated when a compartment door on the apparatus body is open.</p> <p>A magnetic sensor shall be installed in all compartments with a roll up door.</p> <p>A On / Off depression style switch shall be supplied in all compartments with a pan door.</p>			
<p><b>CLEARANCE AND MARKER LIGHTS - LED</b></p> <p>All clearance / marker lights, reflectors shall comply with department of transport motor vehicle safety standards. The clearance / marker lights shall be LED (light emitting diode) type.</p> <p>A set of LED mid body turn signals shall be installed to comply with department of transport motor vehicle safety standards for vehicles over 30 feet in length.</p>			
<p><b>TWO WAY RADIO POWER SUPPLY</b></p> <p>There shall be two (2) dedicated 12V power supply line(s) coiled underneath the chassis dash for the future install of each customer supplied two way radio.</p>			
<p><b>ANTENNA MOUNT(S)</b></p> <p>Two (2) mount(s) for future antenna installation shall be installed on the chassis cab roof. The antenna leads shall be wired to the chassis cab dash area for future installation of a radio one for VHF and one for TMR.</p>			
<p><b>PROVISION FOR FUTURE DEPARTMENT RADIO INSTALLATION</b></p> <p>A location shall be provided for a future installation of a Fire Department supplied radio. The location provided shall receive a radio, model (specify radio model to be installed after delivery.</p>			
<p><b>RADIO FACEPLATE (OR EQUIVALENT)</b></p> <p>Each mounting location for a radio installation shall receive a Jotto face plate.</p>			
<p><b>PAINT COLOR - CHASSIS</b></p> <p>The chassis shall be painted a two tone color by the chassis manufacturer. The lower paint color shall be the color of the final apparatus body.</p>			
<p><b>FINISH AND PAINTING – PPG (OR EQUIVALENT)</b></p> <p>The painting shall be done in accordance with automotive practices using Delfleet® Evolution FBCH high solids polyurethane paint with the PPG painting process.</p> <p>All painting shall be baked at 160 degrees F. for a</p>			

<p>minimum 45 minutes to provide an automotive quality finish.</p> <p>After assembly, the body substructure shall be deburred and hand sanded.</p> <p>All ledges inside and outside shall be cleaned and sealed.</p> <p>The painting process consists of the following applications:</p> <ul style="list-style-type: none"> <li>a) Wash entire body with DX 440 wax and grease remover</li> <li>b) Etch primer, PPG F3963 (0.2 - 0.35 mils dry)</li> <li>c) Primer, PPG F3975 (3.0 - 6.0 mils dry)</li> <li>d) Wash entire body with DX 330 wax and grease remover</li> <li>e) Primer sealer, Epoxy PPG F399x (1.0 - 4.0 mils dry)</li> <li>f) Base coat, Delfleet® evolution PPG FBCH (1.0 - 3.0 mils dry)</li> <li>g) Clear coat, PPG F3906 clear (minimum of 2.0 mils)</li> </ul> <p>All outside seams that are not 100 percent welded shall be sealed and caulked inside and outside.</p> <p>Only after the entire painting process is completed shall the body structures be installed on the chassis.</p> <p>Only after the body is painted shall the components such as doors, aluminum inlay panels, mounting brackets, handrails, pump panels, and other accessories be installed.</p>			
<p><b>PAINT WARRANTY 10 YEARS NON-PRORATED</b></p> <p>The paint shall be warranted by PPG for a period of Ten (10) years and shall be <b><i>non prorated</i></b>. <b>(Mandatory Requirement)</b></p> <p>Items covered in the warranty shall include all body interior and exterior surfaces and painted pump houses and shall cover the following:</p> <p>Peeling or delaminating of the topcoat and other layers of paint.      Cracking or checking due to failure of the product.      Excessive loss of gloss caused by cracking, checking, or hazing.</p>			
<p><b>PAINT POLISH BODY - A.C.T. STANDARDS #3</b></p> <p>The paint finish on the body shall meet the ACT test panel #3 level for orange peel visual standard. Test sample swatches shall be made available on request for paint</p>			

finish comparison. <b>(Mandatory Requirement)</b>			
<b>COMPARTMENT FINISH</b>  The interior of all compartments of the body shall also be sealed and caulked. A textured finish of light gray urethane paint with a dark gray spatter finish shall be applied to all compartment interiors.			
<b>BODY UNDERCOATING - CORASHIELD® (OR EQUIVALENT)</b>  The whole frame / cross members / wheelwell area / and inner body of the apparatus body shall be thoroughly prepared and sprayed with Corashield® that will help prevent rust and corrosion. A minimum of 8-10 mils of Corashield® shall be sprayed. The bottom, sides and tops of the cross members shall be fully covered. The Corashield® is a sprayable latex coating designed for use on aluminum, fiber glass, cold rolled steel, galvanized steel, and most metal primers. Corashield® is formulated to give very good corrosion protection. This medium viscosity, sag resistant coating can be easily sprayed onto exposed underbody areas, and into restricted areas such as tubing and "hidden" areas accessible only with spray wands.  Corashield® dries quickly at ambient temperatures and will withstand urethane paint bakes after only 30 min drying at room temperature.  Corashield® provides better protection than any of the competitive products tested without the environmental and safety problems inherent in many of the undercoating available today.			
<b>KROWN RUST INHIBITOR (OR EQUIVALENT)</b>  There shall be an application of Krown rust inhibitor applied to the chassis and the apparatus body as per the supplier's recommendation for maximum rust protection prior to delivery of the apparatus.			
<b>4" REFLECTIVE BODY PRIMARY STRIPING (OR EQUIVALENT)</b>  There shall be a four inch wide reflective stripe applied to the left and right sides of the apparatus according to the requirements of NFPA 1901 latest edition. The reflective stripe shall be a 3M Scotchlite product.			
<b>Accent Stripe (OR EQUIVALENT)</b>  There shall be two (2) two inch wide reflective stripe(s) applied to the apparatus along with the primary reflective stripe. The reflective stripe shall be a 3M Scotchlite product.  The accent stripe shall be the same color as the main			

stripe.			
<b>PIKE POLE HOLDER BRACKET(S)</b>  Two (2) set(s) pike pole ring and tool holder brackets shall be provided and installed on the apparatus body.			
<b>PIKE POLE(S)</b>  One (1) 8' fiberglass pike pole(s) shall be provided.			
<b>PIKE POLE(S)</b>  One (1) 10' fiberglass pike pole(s) shall be provided.			
<b>FRAMED PORTABLE TANK (OR EQUIVALENT)</b>  One (1) Husky 2080 IG / 2500 USG collapsible portable tank made with 30 oz. vinyl and a full tubular aluminum frame shall be provided. The liner includes a 10" quick-drain tube which will empty the tank in seconds.  Open tank dimensions with liner: 12'3" x 12'3" x 29" Closed tank dimensions with liner: 7" x 12'3" x 29"  Weight: 135 lbs.  Available in available in red, yellow, orange and black Specify Color: _____			
<b>FIRE EXTINGUISHER(S) - ABC DRY CHEMICAL</b> One (1) 20lb. ABC dry chemical fire extinguisher(s) shall be provided.			
<b>EXTINGUISHER BRACKET(S)</b>  One (1) extinguisher mounting bracket(s) shall be provided and mounted on the apparatus.			
<b>HOOLIGAN TOOL(S)</b>  One (1) 24 oz. rubber mallet(s) complete with mounting bracket shall be provided and installed on the apparatus.			
<b>WHEEL CHOCKS &amp; BRACKETS (OR EQUIVALENT)</b>  Two (2) SAC-44 Zico folding wheel chocks shall be provided complete with mounting brackets. The brackets shall be installed forward of the rear wheels and underneath the main body.			
<b>SPANNER WRENCH SET (OR EQUIVALENT)</b>  Three (3) sets of Task Force Tips model #A3810 spanner wrench set shall be provided. The set shall include four (4) lightweight aluminum wrenches model # A3890 that fit virtually any 1" through 6" Storz, rocker lug or long handle fire hose couplings and a mounting bracket model # A3815. The wrench shall have an adjustable tab for releasing of Storz coupling locks. The unit shall be covered by a five-year warranty.  <b>Location of mounting bracket shall be: TBD</b>			

<p><b>PORTATANK RACK (OR EQUIVALENT)</b></p> <p>A Zico HLAS power overhead rack shall be supplied and mounted on the road side of the apparatus. The Horizontal Access System stores the portatank horizontally over the top of the apparatus, allowing for more compartment storage on the sides. When needed, the HLAS system lowers the rack at the flick of a switch to a convenient height for safe &amp; easy retrieval. System lowers portatank away from the side body, so that access to side compartments is still possible. The rack shall be powered by a heavy-duty, self-contained hydraulic actuator with a maximum load of 500 lb. The rack shall meet NFPA 1901-09 Standards. A Flashing Light Kit is provided. The control switch shall be installed at the rear of the apparatus.</p>			
<p><b>PORTABLE TANK RACK ENCLOSURE - ALUMINUM CHECKER PLATE</b></p> <p>There shall be an enclosure installed on the porta tank rack for storage of the porta tank. The enclosure shall be manufactured from aluminum checker plate.</p> <p>Tarp - Mesh - Porta Tank included</p>			
<p><b>Optional Suction Hose Storage - Porta Tank Rack Enclosure</b></p> <p>There shall be an enclosed storage pocket for one (1) length of hard suction hose located on the Porta Tank Rack enclosure. The hard suction hose shall be secured using 1/4" stainless steel Footman loops and 2" Velcro straps.</p>			
<p><b>HARD SUCTION HOSE – KOCHER (OR EQUIVALENT)</b></p> <p>One (1) ten foot section(s) of 6" Kocher PVC lightweight, flexible, hard suction hose shall be provided with lightweight male and long handle fem threaded couplings.</p>			