



City of Saint John

Request for Proposal

2024-235001P

FIRE APPARATUS – CUSTOM PUMPER

Sealed proposals, hand delivered or couriered, addressed to Mike Lewis, SCMP, 1st Floor, Municipal Operations Complex, 175 Rothesay Avenue, Saint John, N.B., E2J 2B4, and marked on the envelope:

“PROPOSAL 2024-235001P – FIRE APPARATUS – CUSTOM PUMPER”

will be received until 4:00 p.m., Wednesday February 7, 2024, for one (1) or more Rescue Pumper Fire Apparatus as per the enclosed specifications, terms and conditions.

Proposals will be opened publicly in the first-floor boardroom, Municipal Operations Complex, 175 Rothesay Avenue, immediately following the proposal closing time.

The lowest or any proposal not necessarily accepted.

Mike Lewis, SCMP
(506) 658-2930

Issue Date: Thursday, January 18th, 2024

**REQUEST FOR PROPOSAL
2024-235001P
FIRE APPARATUS – RESCUE PUMPER**

SECTION 1 – PROPOSAL REQUIREMENTS

1.0 TO: DEALERS BIDDING ON ENCLOSED SPECIFICATIONS

This letter is intended to clarify the intent of the City with regards to the proposed purchases.

1. This RFP contains 1 set of specifications; 287-23. This specification is for the supply of the vehicle as specified. The final determination for the configuration of this vehicle rests with the Chief of the Saint John Fire Department.
2. In addition to the specifications contained within this RFP an Options page has been added as well. The Saint John Fire Department wishes to consider a number of options to the minimum specifications and each of these are listed on the Options page with a reference to the minimum specification they refer to. Proponents are asked to quote on the Options page the corresponding cost.
3. Should Saint John Fire Department, upon review of the proposal submissions, choose to replace any item(s) contained in the minimum specification of each truck bid, with an item contained on the **Options** page, the proposed price will be adjusted accordingly.
4. It is the preference of the City of Saint John to purchase new or demo equipment, however, given that this is a "Proposal Call", all deviations from the minimum specifications will be considered and weighed to assess their effect on the performance of the unit as a whole. Final determination for the acceptance or rejection of deviations from the minimum specifications rests solely with the City of Saint John.
5. The term "standard" is defined as that equipment listed or shown as standard equipment at no extra cost in the manufacturer's publications on the proposed equipment.
6. All bids shall be on the "Proposal of Furnishing" form supplied by the City and shall be in accordance with policies on file in the City of Saint John's Purchasing Office.
7. Failure on the part of the vendor to supply the equipment awarded to him in accordance with the terms, conditions, and specifications of the proposal or by the date stated by him for delivery **is a serious matter which may result in the immediate cancellation of the order.**

Vendors who anticipate problems or delays are advised to communicate their concerns to the Purchasing Department. This information will assist the City in determining a course of action but may not mitigate the vendor's responsibility or financial obligations.

8. **PROPOSALS RECEIVED BY FAX WILL NOT BE ACCEPTED.**

2.0 WARRANTY/DELIVERY/REGISTRATION

1. Warranty

Proponents are to state specifically any and all warranties covering this/these vehicles. If manufacturer's extended warranties are available, please state extra cost, if any and provide details.

Complete unit to be serviced in Saint John during the warranty period without additional charges incurred by the City of Saint John for travel, parts or labour.

2. **Standard Equipment**

All items listed as Standard in the Manufacturer's Specifications to be included with the vehicle upon delivery.

3. **Manufacturer's Specifications**

Complete specifications and illustrated description shall be submitted with each bid. Insufficient descriptive information may be cause for rejection of the bid.

4. **Vehicle Delivery Inspection Sheet**

A Vehicle Delivery Inspection Sheet will be provided to the successful vendor with the issuance of a Purchase Order; this form must accompany the vehicle upon delivery.

5. **Delivery**

Vehicle(s) and/or attachment(s) are to be delivered as per instructions and in accordance with the requirements of the tender. Deliveries will be accepted by the Manager of Fleet Administration (or his designate) 175 Rothesay Avenue, Saint John, NB.

The successful proponent upon delivery must provide:

- Completed "City of Saint John Vehicle Delivery & Information Sheet" (supplied with Purchase Order)
- Copy of NVIS Card
- Electronic Service Manuals
- Keys
- Bill of Sale (Copy of Invoice)

The City of Saint John reserves the right at any time to inspect additions or modifications to the vehicle prior to its delivery.

6. **Motor Vehicle Inspection, Licensing and Registration**

Current and valid Province of New Brunswick Motor Vehicle Registration with license plates, inspection certificate and sticker where required by law are to be in place at time of vehicle/equipment delivery.

In the event that the successful bidder is either a distributor or a manufacturer, importing the vehicle/equipment from the United States (or any other country other than Canada), current and valid Province of New Brunswick Motor Vehicle Registration with license plates, inspection certificate and sticker where required by law are to be in place at time of vehicle/equipment delivery. If successful distributor/manufacturer is unable to comply with these requirements and is able to substantiate this inability to the City's satisfaction, the following documentation must accompany the vehicle/equipment at the time of delivery:

- 1) Certificate of Origin or Certificate of Title, both signed-off for transfer; and

- 2) Completed Vehicle Import Form – Form 1 from the Canada Border Services Agency (CBSA); and
- 3) Proof that 13% Harmonized Sales Tax (HST) has been paid (i.e. invoice, receipt, etc.).

7. **Tire Levy**

Any and all tire levy charges must be included in the bid price.

3.0 **EVALUATION CRITERIA**

4.1) **Quality and completeness – 5%**

Is the proposal presented in an organized and professional manner? Is it in the format required and does it address all of the items and concerns expressed?

4.2) **Minimum Specifications – 35%**

Does the equipment bid comply with minimum specifications? If not, are the deviations from specifications within acceptable limits and/or do they enhance the serviceability of the equipment?

4.3) **Delivery – 25%**

Although no performance surety has been requested, proponents are required to quote a firm delivery date. Has the proponent offered a delivery date that is realistic and attainable?

4.4) **Service Response Time – 5%**

Is the proponent able to respond to all service requirements within one (1) business day, including travel time?

4.5) **Cost – 30%**

Cost will be a factor, however neither the only factor nor the determining factor, in the evaluation of bids.

4.0 **EVALUATION OF PROPOSALS**

The lowest proposal bid may not necessarily be accepted. The City of Saint John reserves the right to accept or reject any or all proposals. Proponents may be requested to supply supplemental information after the closing date to support their proposal. Proponents may be asked either in person or by phone for an interview to discuss aspects of their proposal.

5.0 SUBMISSION OF PROPOSALS:

Proponents shall submit **one (1) one original and four (4) copies of their technical proposal, and one (1) original signed financial proposal (in a separate, sealed envelope, labeled as “Financial Proposal”)** no later than **4:00:00 PM, local time, Wednesday, February 7, 2024**, clearly indicating the Proponent’s name and address and marked:

“PROPOSAL NO. 2024-235001P – FIRE APPARATUS – RESCUE PUMPER”

to the attention of:

Mike Lewis, SCMP
Procurement Specialist
Supply Chain management
1st Floor, 175 Rothesay Avenue
Saint John, NB, E2J 2B4

Please note that:

1. Late proposals or proposals submitted by facsimile will be rejected.
2. The City assumes no responsibility for improperly addressed or delivered proposals.
3. The City of Saint John does not, by virtue of this proposal call, commit to an award of this bid, nor does it commit to accepting the lowest or any proposal submitted, but reserves the right to award this proposal in any manner deemed to be in the best interest of the City.
4. Immediately following the closing time, proposal packages will be publicly opened in the office of the purchasing manager. Only the names and addresses of the proponents will be made public at this time.
No other information about the proposals will be disclosed until and only if the bid has been awarded. Proposals will then be forwarded to an evaluation committee for review and recommendation.

SECTION 2 – STANDARD TERMS AND CONDITIONS

GOVERNING LAW, TRADE TREATIES AND POLICIES

This procurement will be in accordance with the laws of the province of New Brunswick and the federal laws of Canada.

This procurement is also subject to the following Policies, Legislation and Internal Trade Agreement(s) including:

- Canadian Free Trade Agreement
- Canada – European Union Comprehensive Economic and Trade Agreement (CETA)
- The Atlantic Procurement Agreement
- Agreement on the Opening of Public Procurement for New Brunswick and Quebec (2008)
- New Brunswick Procurement Act and Regulation 2014-93
- City of Saint John Policy for the Procurement of Goods, Services and Construction

ENQUIRIES

Bidders shall promptly examine the bid documents and report any errors, omissions or ambiguities and may direct enquiries or seek additional information in writing by email before the deadline for enquiries to the Authorized Enquiries Contact as set out below. No such communications are to be directed to anyone other than the Authorized Enquiries Contact.

AUTHORIZED ENQUIRIES CONTACT

Mike Lewis, SCMP
Supply Chain management
City of Saint John
Email: supplychainmanagement@saintjohn.ca

It is the Bidder's responsibility to seek clarification from the City on any matter it considers unclear. The City shall not be responsible for any misunderstanding on the part of the Bidder concerning this bid document or its process.

The City intends to confirm receipt of a bidder's communication by way of an email or facsimile in reply. If a bidder has not received a reply, the bidder may wish to resend its communication as the lack of reply may have resulted from a technical problem. The City is under no obligation to respond to enquiries or provide additional information but may do so at its sole discretion.

Responses to inquiries may be distributed to all bidders on the invitation list as having received the bid documents as of the date the response is prepared. The source of the question will not be identified in the response. Verbal information shall not be binding upon the City. Inquiries received after the deadline for enquiries will not receive a response.

SCHEDULE FOR THE BID PROCESS

Issue Date	Thursday, January 18, 2024
Deadline for Enquiries	4:00:00 PM, AST, Tuesday, January 30, 2024
Deadline for Issuing Addenda	4:00:00 PM, AST, Wednesday, January 31, 2024
Submission Deadline	4:00:00 PM, AST, Wednesday, February 7, 2024
Date of Award (if applicable)	TBA

The Schedule for the bid process is tentative only and may be changed by the City in its sole discretion.

ADVISORY NOTICE(S)

Periodically, the City of Saint John is required to issue clarification notices to a bid document in the form of Advisory Notices. Normally these notifications will not have a direct bearing on the cost of a project and will not influence bidding.

Bidders are responsible for obtaining all advisory notice(s) issued by the City. Advisory Notice(s) may be obtained from the City’s website (www.saintjohn.ca) under the menu option “Tender and Proposals”.

Bidders are instructed to sign the Advisory Notice and return it either by fax to (506) 658-4742 or email to supplychainmanagement@saintjohn.ca prior to the closing date.

Failure to comply with the instructions on an advisory may result in rejection of the bid.

ADDENDA

Periodically, the City of Saint John is required to issue notification of changes or corrections to a bid document by way of addenda. Normally these notifications will have direct bearing on the cost of a project and will influence bidding. Therefore, it is important that the City have assurances that bidders have in-fact received the notification(s).

Bidders are responsible for obtaining all addenda issued by the City. Addenda may be obtained from the City’s website (www.saintjohn.ca) under the menu option “Tender and Proposals”.

Bidders are required to sign and include the all addenda with their bid submission.

Failure to include a copy of all signed addenda with the bid submission may result in rejection of the bid regardless of whether or not the changes noted in the addendum are included in the bid submission.

TAXES

The bid price shall be all taxes extra. The City of Saint John shall be invoiced for and pay all applicable taxes related to this bid.

REVIEW OF PROPOSALS

The evaluation committee may invite proponents to meet with the review committee to make an oral/visual presentation in support of their proposal. The City will provide the meeting venue at its cost. The proponent shall bear its own costs related to such meeting.

ADDITIONAL INFORMATION FROM PROPONENTS

The City of Saint John reserves the right during evaluation of the bids to seek further information from any proponent and to utilize that information in evaluation and award without becoming obligated to seek further information from any other proponents.

CLARIFICATION OF BIDS

The City of Saint John reserves the right in its sole discretion to clarify any bid after close of bidding without becoming obligated to clarify any other bid.

NEGOTIATION

The City reserves the right in its sole discretion to negotiate the final terms and conditions of the engagement contract with the most probable candidate for award prior to award of the engagement.

PAYMENT

Payment shall be made on a lump sum basis only after the goods are received or the work is complete and Net 45 Days from date of invoice. Invoices are to be sent to: City of Saint John, Accounts Payable Department, P.O. Box 1971, Saint John, NB, E2L 4L1.

DELIVERY / FREIGHT

The net price on each of the commodity(s) and/or service(s) are to be quoted as D.D.P. delivered to Saint John, NB, prepaid.

MASH Sector Entities

As a condition of award, the successful vendor(s) agree(s) that MASH Sector entities (Municipalities, publicly funded Academic institutions (universities), School districts and Health entities (hospitals) shall have the advantage of the discounts and prices accepted by the City.

This in no way commits these entities to accepting any agreement(s) resulting from this procurement but provides them with the opportunity to take advantage of the City's volume purchasing discounts.

The City is not responsible for payment for products or services supplied to any MASH Sector entity.

The Vendor(s) shall invoice MASH Sector entities directly for any product or service supplied to them under this quotation.

Failure to comply with the above terms and conditions of this quotation may result in the immediate cancellation of the contract, without further notice.

RESERVED RIGHTS

The City reserves the right to:

- a) Reject an unbalanced bid submission. For the purpose of this section, an unbalanced bid submission is a bid submission containing a unit price which deviates substantially from, or does not fairly represent reasonable and proper compensation for the unit of work bid or one that contains prices which appear to be so unbalanced as to adversely affect the interests of the City. The City reserves the right to use other bids submitted in response to this bid solicitation or for other like or similar work as a guideline in determining if a bid is unbalanced.
- b) Amend or modify the scope of the Work, and/or cancel or suspend the bid award, at any time for any reason;
- c) Require bidders to provide additional information after the submission deadline to support or clarify their bid submission;
- d) Not accept any or all bids;
- e) Not accept a bid submission from a bidder who is itself, or whose principals, owners or directors are also principals, owners or directors of another entity which is, involved in litigation, arbitration or any other similar proceeding against the City;
- f) Reject any or all bid submissions without any obligation, compensation or reimbursement to any bidder or any of its team members;
- g) Withdraw this bid solicitation and cancel or suspend the bid process;
- h) Extend, from time to time, any date, any time period or deadline provided in this bid solicitation (including, without limitation, the submission deadline), upon written notice to all bidders;
- i) Assess and reject a bid submission on the basis of:
 - (i) information provided by references;
 - (ii) the bidder's past performance on previous contracts;
 - (iii) the information provided by a bidder pursuant to the City exercising its clarification rights under this bid process;
 - (iv) the bidder's experience with performing the type and scope of work specified;
 - (v) other relevant information that arises during this procurement process;
- j) Waive formalities and accept bids which substantially comply with the requirements of this bid solicitation;
- k) Verify with any bidder or with a third party any information set out in a bid submission;

- l) Disqualify any bidder whose bid submission contains misrepresentations or any other inaccurate or misleading information;
- m) Disqualify any bidder who has engaged in conduct prohibited by the bid solicitation;
- n) Make changes, including substantial changes, to the bid solicitation provided that those changes are issued by way of addenda in the manner set out in this bid document;
- o) Select any bidder other than the bidder whose bid submission reflects the lowest cost to the City;
- p) Cancel this procurement process at any stage, for any reason;
- q) Cancel this procurement process at any stage and issue a new bid solicitation for the same or similar deliverables;
- r) Accept any bid submission in whole or in part;
- s) Waive minor non-compliance with the mandatory requirements of the bid solicitation and accept the bid submission; or
- t) Accept a bid submission which contains the following errors:
 - (i) error in mathematics – whether this involves the extension of a unit price or an error in addition, the mistake will be corrected and the correct total will be used for evaluation purposes and will be binding on the bidder.
 - (ii) conflict between the written and numerical bid prices. In all cases, the total bid price will be corrected to reflect the written bid price, whether lump sum or unit price (where applicable).
 - (iii) failure to include the contingency allowance in the total bid price (where applicable). If the contingency allowance was not included in the addition, the bid price shall be corrected to reflect its inclusion.

and these reserved rights are in addition to any other express rights or any other rights which may be implied in the circumstances and the City shall not be liable for any expenses, costs, losses or any direct or indirect damages incurred or suffered by any bidder or any third party resulting from the City exercising any of its express or implied rights under this bid solicitation.

By submitting a bid, the bidder authorizes the collection by the City of the information set out at paragraph i) in the manner contemplated in that subparagraph.

Limitation of Liability and Waiver

Each bidder, by submitting a bid, agrees that:

- a) Neither the City nor any of its employees, agents, advisors or representatives will be liable, under any circumstances, for any Claim arising out of this procurement process including but not limited to costs of preparation of the bid submission, loss of profits, loss of opportunity or for any other Claim; and

- b) The bidder waives any Claim for any compensation of any kind whatsoever, including Claims for cost of preparation of the bid submission, loss of profit or loss of opportunity by reason of the City's decision to not accept the bid submitted by the bidder, to award a Contract to any other bidder or to cancel this procurement process, and the bidder shall be deemed to have agreed to waive such right or Claim.

Validity Period

The bid submission constitutes an offer which shall remain open and irrevocable until 90 days after the submission deadline.

**SAINT JOHN FIRE DEPARTMENT CUSTOM PUMPER
 VEHICLE No. 031**

SPECIFICATION No. 287-23

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
1. MODEL			
A. New, not previously used			
B. OPTION: Pre-owned or Demo unit, not more than five model years of age			
2. TYPE			
A. Custom 49,700 lbs. (22,544 kg.) minimum GVWR tilt cab and chassis			
B. Indicate year, make and, model.			
C. The vehicle, apparatus and equipment components must be designed and constructed in accordance with and as it applies to the current <i>NFPA 1901</i> and <i>ULC Standards and Regulations for Pumper Fire Apparatus</i>			
D. The supplier is responsible for delivering a fully equipped vehicle with compatible components to provide dependable efficient service. Where applicable, the vehicle must comply or surpass the mandatory requirements of the Canadian Motor Vehicle Safety Standards and bear the National Safety Mark.			
3. ENGINE			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. The engine shall be an electronically controlled, turbo charged, six (6) cylinders, four-cycle engine developing 400 hp at 2200 rpm. A 5 year /100,000-mile warranty including all internal components shall be standard			
4. AIR CLEANER			
A. The engine air cleaner shall be the size recommended by the engine manufacturer. The air cleaner element shall be manufactured from a fire-retardant media and shall include an ember separator to resist flaming, embers and shall be easily replaced by tilting the cab.			
B. The air cleaner intake shall be located above the front bumper to minimize dirt and water pick up. The air intake shall be protected by a grille with a black wire mesh screen. It shall have a sealed system designed to prevent water from entering the intake pipe or air cleaner. The air cleaner shall include a moisture evacuator to allow discharge of condensation from the intake system			
C. A mechanical air inlet restriction gauge shall be visible through the in-cab service access door and it shall trigger a dash mounted, warning light in the event of an air inlet restriction.			
5. RADIATOR			
A. The cooling system shall include a translucent surge and de-aeration tank. This tank shall have a sensor to warn the			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
driver of a low coolant level via a red warning light on the dash. A sight glass shall be included for quick fluid level check.			
B. The entire cooling system shall be capable of maintaining engine manufacturers recommended engine operating temperature during all load conditions required by the engine manufacturer. The radiator core shall be compatible with all commercial antifreeze solutions.			
6. FAN DRIVE			
A. The radiator cooling fan will be approximately 30", nine-blade nylon design with a Horton Drive Master spring-on/air-disengage fan clutch. An automatic fan control shall be provided. The fan shall engage when the air condition system is on and for pumper vocations, when fire pump shift occurs. As head pressure builds up in the A/C compressor the fan will cycle on and off. The fan will also engage with the operation of the compression brake.			
7. ENGINE COOLANT			
A. Engine coolant shall be extended life heavy duty pre- mixed ethylene glycol antifreeze. Engine coolant shall be treated with supplementary coolant additives (SCA's) required by engine manufacturers. Engine coolant shall provide anti-freeze protection to -40 degrees Fahrenheit.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
8. ENGINE PROTECTION ALARMS			
A. The engine shall be equipped with an alarm system for low oil pressure, high coolant temperature and low coolant level. The system shall warn the driver or pump operator of a potentially damaging engine operating condition. This warning system shall not shut down the engine or reduce power under any conditions.			
9. ENGINE INSTALLATION CERTIFICATION			
A. A letter stating that engine manufacture approves of the engine installation must be provided with this proposal. Submit an engine manufacturer approval of the completed apparatus at time of delivery.			
10. ENGINE STOP CONTROL			
A. The vehicle shall be equipped with a keyless ignition, three (3) position rocker switch, "Off/Run/Start" that shall be easily accessible to the driver. (Starter must not engage while engine in running)			
11. HIGH IDLE			
A. A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm of 1000. A switch will be installed, at the cab instrument panel, for activation / deactivation.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
B. The high idle will be operational only when the parking brake is on and the truck transmission is in neutral.			
12. TRANSMISSION, ALLISON EVS-P 3000P			
A. The chassis shall be equipped with an Allison EVS-P 3000, five (5) speed automatic transmission. It shall be equipped with Fourth Generation operating controls and programmed for Fire Apparatus vocation.			
B. An electronic oil level indicator shall be provided as well as a diagnostic reader port connection. The transmission shall be geared to provide one-to-one ratio in fourth gear which shall also be the fire pump drive gear. A dedicated lock-up circuit shall be provided for split shaft pump operation.			
C. 5 year/unlimited distance warranty includes internal components of the Allison transmission.			
13. TRANSMISSION PROGRAMMING			
A. The transmission shall be equipped with the latest software and shall be programmed for five (5) speed Fire & Emergency #1 pumper application.			
14. TRANSMISSION SHIFTER			
A. Allison push button electronic shift control shall be located on the forward left side of the engine enclosure within easy reach of the operator.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
15. TRANSMISSION OIL COOLER			
A. Water to oil transmission cooler shall be provided, that meets the Allison 80% converter test. Three (3) year parts, labour and collateral damage warranty shall be provide with this cooler. An additional two (2) years of parts and labour only coverage shall also apply. The collateral damage shall not exceed \$10,000.00 per occurrence.			
16. FRONT AXLE			
A. The front axle shall have a capacity of 18,700 pounds (8,165 kg) minimum. It shall be provided with oil lubricated wheel bearings and a clear oil level viewing window. All axle ratings shall be confirmed by manufacturer.			
17. FRONT SUSPENSION WITH SHOCK ABSORBERS			
A. The front suspension shall be a variable rate flat leaf design with a capacity of 18,000pounds (8,482kg.) Front spring pin bushings shall be graphite impregnated bronze with grease seals. Heavy duty, double acting shock absorbers shall be provided.			
18. POWER STEERING RESERVOIR			
A. The power steering reservoir to include a filter and have a capacity of approximately four (4) quarts of power steering fluid.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
19. WHEEL ALIGNMENT			
A. When completed the apparatus will have a four-wheel alignment performed to maximize vehicle road performance while promoting tire life. Documentation shall be provided upon delivery.			
20. FRONT DISC BRAKES			
A. The front brakes shall be disc type. Non-asbestos brake linings, specifically designed for fire and emergency severe service, shall be supplied.			
21. FRONT TIRES			
A. The front tires shall be Michelin radial tires with steer position tread.			
B. The tires shall be 385/65R 22.5 20ply and shall be front axle rated.			
22. REAR AXLE			
A. The rear axle shall be a Meritor with a rating of 31,000 pounds (14,061 kg).			
23. REAR AXLE RATIO			
A. Gear ratio shall be selected for the specified drive train components to provide a top road speed of sixty-five (65) miles (105 km) per hour (+/- 2 mph).			
24. MAGNETIC DRAIN PLUGS			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. The engine, transmission and rear axle(s) fill and drain shall be equipped with magnetic plugs.			
25. REAR SUSPENSION			
A. The suspension shall have a capacity of 31,000 pounds (14,061 kg). (Fire).			
26. REAR BRAKES, S-CAM			
A. Dust shields to be included.			
27. SLACK ADJUSTERS FOR REAR BRAKES			
A. The rear brakes shall be equipped with Meritor automatic slack adjusters.			
28. REAR BRAKE CHAMBERS			
A. The rear brake chambers shall be "36/30" spring brake chambers mounted on the forward side of the drive axle.			
29. PARKING BRAKE INDICATOR			
A. A light located in the driver's dash panel shall, illuminate whenever the park brake is activated.			
30. REAR TIRES			
A. Four (4) rear tires shall be Michelin XDN2 radial tires with winter tread. The tires shall be 315/80R22.5 16 ply and rated for the rear axle.			
31. ON-SPOTS			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. Supply and install rear wheels “On-spot” tire chains			
32. WHEEL CHOCKS			
A. There shall be one (1) set of aluminum alloy wheel chocks, with easy grip handles.			
33. WHEEL CHOCK BRACKETS			
A. There shall be one set (1) of horizontal mounting wheel chock brackets provided. The brackets shall be mounted on the driver’s side of the body ahead of the rear wheels.			
34. AIR BRAKE SYSTEM			
A. Dual circuit, air operated braking system, meeting the design and performance requirements of FMVSS-121 and the operating test requirements of NFPA 1901, 2009 edition, shall be installed. The system shall be powered by an engine mounted, gear driven, air compressor.			
B. The chassis air system shall meet NFPA 1901, latest edition for rapid air pressure build-up within sixty (60) seconds from a completely discharged air system. This system shall provide sufficient air pressure so that the apparatus has no brake drag and is able to stop under the intended operating conditions following the sixty (60) seconds build-up time.			
35. ANTI-LOCK BRAKE SYSTEM			
A. Four-channel Anti-Lock Braking System			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
with four (4) wheel sensors and four (4) modulators to control and compensate braking force at each wheel shall be installed. A dash mounted diagnostic light shall be installed for servicing the system.			
B. The system shall prevent wheel lock-up during braking thereby allowing the vehicle to accomplish a controlled stop while remaining substantially in the direction of travel at the time of brake application.			
36. AUTOMATIC TRACTION CONTROL			
A. An automatic traction control system shall be included with the ABS. The ABS electronic control unit shall work with the engine ECU to control wheel slip. The engine ECU will use information to control engine speed thus allowing only as much throttle application as necessary for the traction available. A mud/snow switch shall be provided on the dash which when activated will allow additional tire slip. This will let the truck climb out and get on top of deep mud or snow.			
37. ELECTRONIC STABILITY CONTROL			
A. The vehicle will be provided with a stability control system working as an integral part of the ABS brake system. The system will meet all conditions of NFPA 1901			
38. ELECTRONIC STABILITY CONTROL, ANTI-LOCK BRAKE SYSTEM AND AUTOMATIC TRACTION CONTROL WARRANTY			

SPECIFICATION	COMPLY (√)		IF "NO"- EXPLAIN
	Yes	No	
A. The ABS/ATC system will come with a three (3) year or 300,000-mile parts and labour warranty.			
39. AIR DRYER			
A. Supply latest Bendix air dryer model with heater shall be installed on the frame rails under the cab. The Bendix dryer shall be used to maintain the warranty coverage on Bendix brake system components and shall provide an added 200 cubic inches of air capacity.			
40. CHASSIS FRAME			
A. The chassis frame shall be a heavy-duty ladder type frame utilizing 110,000 PSI yield strength minimum, 3/8" material formed to a "C" channel and the RBM shall be 1,827,045 inch pounds. Each frame rail shall be mechanically punched for the components selected.			
B. Cross members shall be formed steel and reinforced. A minimum of six (6) cross members shall join the frame rails. Cross member spacing shall sustain the chosen Gross Vehicle Weight Rating, permit properly engineered installation of chosen chassis components and support a lifetime warranty against cracking of either rail in emergency vehicle service.			
C. The rear of the frame shall be square and shall incorporate an inverted "Dog Bone" cross member allowing for service access between the frame rails to the top of the fuel tank from inside the rear compartment.			
D. The frame rails and cross-members to be galvanized.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
41. AUXILIARY BRAKE			
A. The engine shall be equipped with a compression brake providing minimum 230 hp. One (1) engine brake "On/Off" switch and one high/low switch shall be installed on the instrument panel. The engine brake shall interface with the Wabco ABS brake controller to prevent engine brake operation during adverse braking conditions.			
B. The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.			
C. Pump shift interlock circuit shall be provided to prevent the engine brake from activating during pumping operation.			
42. DRIVE LINE			
A. Drive lines will be heavy duty metal tube and be equipped with heavy duty universal joints. Shafts will be dynamically balanced before installation			
43. FUEL TANK			
A. The chassis shall be equipped with a minimum 65 us gallon (246 liter.) rear mounted rectangular fuel tank that shall be constructed of steel alloy with stamped heads. It shall provide a minimum 50 gallon (227 liter) "draw" capacity on an incline in any direction up to 8 degrees. The fuel tank shall be certified to meet FMCSR 393.67 tests.			
B. Dual pick-up, dual return ports and dual fuel level sender ports (dash and pump			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
panel mount) with a single 3/4" tank draw tube shall be provided for possible future requirements. A .25" atmosphere vent line shall be included. The bottom of the fuel tank shall contain a .75" magnetic drain plug that shall be recessed to prevent the plug from protruding from the bottom of the fuel tank.			
C. DEF tank to be a minimum of 5 US Gallons and mounted as close behind the fuel tanks as possible to minimize extension beyond rear of cab or placed under cab.			
D. The tank shall be spring mounted to the frame aft of the rear axle. Mounting shall include (2) stainless steel straps protected against chafing the tank by form fitted rubber channels.			
44. EXHAUST SYSTEM			
A. The engine exhaust system shall be a horizontal design with a stainless-steel muffler mounted under the right side frame rail. A horizontal tail pipe shall be provided extending the exhaust outlet to the forward side of the rear wheels, exiting the right side. All exhaust piping shall be protected against damage from vibration, torque and frame flexing. All components shall be stainless steel. The tail pipe must include stopper for Plymo exhaust ventilation system.			
CUSTOM CAB, FOUR DOOR ALUMINUM			
45. CAB DESIGN AND TESTING			
A. The cab shall be designed and engineered specifically for the rigors and ergonomics			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
of emergency response. The cab and chassis shall be designed, engineered and assembled as a premium quality, integrated unit which provides for safe entry and egress of firefighters properly clothed in full protective gear. Safe transport shall be afforded each occupant who is properly seated and restrained.			
B. The cab interior shall be styled by professional automotive designers. The interior trim shall be tooled to support repeatable high-quality fit-up and appearance as well as serviceable component access. Interior surfaces shall be easy to clean and long lasting under the rigors of contact with firefighter's clothing and personal safety equipment.			
C. The cab and chassis, defined as an "incomplete vehicle", shall meet and/or exceed all applicable FMVSS and FMCSR, Title #49, U.S. Code Requirements for vehicles domiciled in the United States and all applicable CMVSS and Canada Transport Regulations for vehicles domiciled in Canada. Vehicle will carry the National Safety Label. The cab shall have passed all load and impact tests required for compliance certification with United Nations Agreement, "Standard for Protection of Cab Occupants", Regulation #29. A copy of test reports shall be provided with the tender.			
46. CAB CONSTRUCTION AND DIMENSIONS			
A. The cab shall be an all-aluminum structure utilizing tooled stamping of 3003-H14 alloy in all contoured areas to prevent large zones of heat affected metal			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
adjacent to welds. All metal joints shall be caulked. The cab design shall not require the use of body fillers to achieve smooth contours or flat surfaces.			
B. The cab width and length shall permit installation of two (2) seats in the front portion and four (4) seats in the rear portion. The driver and all passengers will have a minimum of twenty-four (24) inches clear width at knee level. The entire roof shall be aluminum, supported by formed hat section aluminum roof bows on 15" centers. The roof exterior shall be free of indentations and shall have a convex profile to provide water runoff to the incorporated drip moldings over the doors. The cab will have a minimum 12.00 inch raised roof.			
C. The cab shall be completely insulated against heat, cold, and sound intrusion. The cab roof will have approximately 1.50" of insulation and side walls shall be covered with approximately 3.00" closed cell foam insulation. The cab dash insulation shall be covered with ABS form-fit paneling. The cab floor shall be completely covered by an insulated non-slip vinyl floor mat. The floor shall be insulated to minimize exterior noise intrusion. Cab interior noise shall not exceed NFPA standard.			
47. CAB AND CHASSIS			
A. Cab and chassis shall be engineered so as to allow the unit to navigate and maneuver on typical urban narrow congested streets with steep grades up to 18 degrees under snow & ice condition.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
B. Specify and provide full detail c/w engineering drawings the following: I. Custom chassis, make, model & style II. Cab design III. Cab dimensions IV. Glass Area			
48. CAB & BODY WARRANTY			
A. The manufacturer shall provide a 10-year warranty including parts and labor to maintain the proposed vehicle against any default arising from design, material, workmanship, delivery or non-compliance to the specifications, corrosion and all other relevant standards acts Federal or Provincial. A copy of the warranty shall be included with the proposal.			
49. CAB DOORS AND STEPS			
A. The cab shall have four (4) side mounted flush fit, full height lockable doors (with two (2) sets of keys) which are weatherproof sealed. (No Barrier doors)			
B. The cab shall be equipped with a bolt on, expanded metal first step mounted under each door.			
50. CAB GLASS			
A. The cab doors and side windows shall have tinted automotive safety plate glass with solar management treatment to assist with the reduction of interior heat loading from UV penetration. The windshield shall be tinted laminated safety glass also with solar management treatment. The windshield shall be curved, two (2) piece			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
design, with replacement glass readily available from manufacture and dealer's stock.			
51. INTERMITTENT WIPERS			
A. The chassis shall have dual heavy-duty bus, pantograph type, wet arm windshield wipers, driven by dual electric motors. The wipers shall have a dash, mounted switch which provides a delay function for the wipers in the event of light rain, fog or mist.			
52. FIXED SIDE WINDOWS			
A. The cab shall have a fixed side windows (both sides) between the front and rear doors. It shall be tinted.			
53. HELMET HOLDERS			
A. Supply and install Ziamatic UHH-1 Helmet holders to be mounted. There will be three (3) on the driver’s side and three (3) on the passenger side. Location to be determined at pre delivery inspection.			
54. EXTERIOR GRAB HANDLES			
A. There shall be four (4) exterior grab handles, one (1) at each door opening. The grab handles shall be a minimum of 18" long, slip resistant knurled aluminum. The grab handles shall be in compliance with NFPA 1901, current edition			
55. CAB TILT MECHANISM			
A. A hydraulic cab lift system will be			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.			
56. CAB MOUNTS			
A. The cab shall be supported at a minimum of four points.			
57. RADIO MOUNTING LOCATION			
A. Location to be allocated in dash for radio mounting			
B. Battery Power ATO style fuse block will be provided by the vendor, capable of 50 Amps and will have the appropriate size power wire to accommodate that current load.			
C. Ignition or Master switched power - ATO style fuse block will be provided by the vendor, capable of 10 amps of current and wired with appropriately sized wire must be provided in the dash.			
58. ALTERNATOR			
A. The alternator shall be a 320-amp Leece - Neville engine driven via a multi-groove V belt and shall be automatically tensioned. The alternator shall meet all applicable NFPA 1901, current edition requirements for performance.			
B. Master battery switch - A master battery switch, to activate the battery system, will be provided inside the cab within easy reach of the driver.			
59. BATTERIES			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. The battery system shall be a single system consisting of four (4) group 31 AGM, Maintenance free non gassing 12-volt commercial deep cycle batteries. Each battery will have 1,000 cold cranking amperes (CCA) at zero degrees Fahrenheit. There will be two (2) steel frame-mounted battery boxes. One mounted on the left rail and one on the right rail. Each will carry two (2) batteries that will be protected from the weather and road splash while being ventilated from gas build up. Batteries to be placed on non-corrosive rubber matting and secured to prevent movement. Batteries to be completely covered with a cover that is fully secured in place			
B. Battery installation shall provide drainage for accumulated fluids and shall meet TMC (Truck Maintenance Council - American Trucking Association) recommended practice RP-125, for battery mounting.			
C. Two (2) Battery Jumper studs will be mounted near the pump panel with plastic color-coded covers installed. Rear of jumper studs to be protected from shorting and corrosion.			
60. ELECTRICAL LOAD MANAGEMENT			
A. The chassis shall be equipped with an integral fire and emergency vehicle electrical package, which shall include the electrical requirements of the fire apparatus body and cab warning light devices, power distribution, load management, lighting administration, and interlock requirements as set forth and			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
recommended by the NFPA 1901, current edition).			
B. The components of the electrical package shall be integrated into the system by an engineered wiring harness and interconnect system designed such that the system wiring, interconnects, warning control, load management, interlock system and associated documentation can remain unchanged regardless of the vehicle lighting and interlock configuration.			
C. The electrical package, shall include an indicating interlock module; a programmable, load management device; a warning light power distribution module and an information display with system diagnostic capabilities.			
61. VEHICLE DATA RECORDER			
A. A Vehicle Data Recorder (VDR) with an Occupant Restraint Indicator shall be provided. The VDR shall be capable of reading and storing vehicle information. The VDR shall be capable of operating in a voltage range from 8 VDC to 16VDC. The VDR shall not interfere with, suspend, or delay any communications that may exist on the CAN data link during the power up, initialization, routine, or power down sequence, The VDR shall continue operation upon termination of power or at voltages below 8VDC for a minimum of 10ms.			
B. The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A CD provided with the apparatus shall include the			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
programming to download the information from the VDR. A USB cable can be used to connect the VDR to a laptop to retrieve required information.			
C. The vehicle data recorder shall be capable of recording the following data via hardwired and/or CAN inputs: <ol style="list-style-type: none"> 1. Vehicle Speed - MPH 2. Acceleration - MPH/sec 3. Deceleration - MPH/sec 4. Engine Speed - RPM 5. Engine Throttle Position - % of Full Throttle 6. ABS Event - On/Off 7. Seat Occupied Status - Yes/No by Position (1-6 Seating Capacity) 8. Seat Belt Buckled Status - Yes/No by Position (1-6 Seating Capacity) 9. Master Optical Warning Device Switch - On/Off 			
62. LOAD MANAGEMENT SYSTEM (LMS)			
A. The electrical package shall include an electrical load management system which will control the warning light switch bank, lighting system operational mode (scene/response), automatic high idle activation, NFPA recommended voltage monitoring, load sequencing, and load shedding functions. The system shall meet the requirements of various system configurations, without wiring modifications from the pre-engineered harness and inter-connect system. The LMS shall consolidate all load management signals, relays and indicators and shall attach to the harness system through connectors.			
B. The LMS shall monitor the main battery			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
bank and shall be capable of monitoring a second, independent battery or battery bank (if present). The voltage detected on each of the battery banks shall be displayed by the load management system.			
C. The load management system shall be configurable so that any warning light or switch controlled by the system can be assigned (or reassigned) without additional wiring or modifications from the pre-engineered harness and interconnect system.			
D. A control switch (or device) can be assigned to be dependent, or not dependent, upon the Master Warning Switch. Devices which are not dependent on the Master Warning Switch will sequence "ON" when the vehicle power is turned on. Devices which are dependent on the Master Warning Switch will sequence "ON" when the Master Warning switch is turned on.			
E. The load management system shall be capable of activating the apparatus high idle system when the system voltage drops to an unacceptable level. The load management system shall activate the high idle feature before any devices are automatically shed OFF. The high idle function request from the load management device shall function only if the appropriate interlocks are present; that is, control of the high idle system is monitored and shall be superseded by the state of the interlock control module.			
F. The automatic high idle system shall be deactivated whenever the brake pedal is pressed and shall remain inactive for two minutes thereafter to allow an operator to			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
override the high idle function and return the engine to idle before pump or PTO engagement.			
G. The following load management functions will be active in both scene and response mode. The load management system shall provide a low voltage output which meets the NFPA recommended timing and voltage levels. The load management system shall provide a warning if voltage measured on an attached secondary battery bank (or voltage source) falls below 11.9 volts. The load management device shall support a user configurable load management output. The output shall be capable of being set at any voltage between 10.5 volts and 15 volts. If the Set Point is selected below 13.8 volts, the output shall activate when the voltage drops to or below the desired Set Point; this shall allow the output to be utilized to activate an auxiliary device or alarm at a user defined point. If the Set Point is selected at or above 13.8 volts, the output shall activate when the voltage rises to or above the Set Point; this shall allow the output to be utilized to activate an over-voltage alarm at a user defined point.			
63. INFORMATION CENTRE			
A. An information centre employing a LCD display shall be encased in an BS plastic housing and installed center mount on “dog house”			
B. The information centre shall have the following specifications: I. Operate in temperatures from -40 to 185 degrees F			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
II. An optical Gel shall be placed between the LCD and protective lens III. Weather resistant user interface switches IV. Sunlight Readable			
64. OPERATION			
A. The information centre shall be designed for easy operation for everyday use.			
B. The page button shall allow a NTSC signal into the information centre to be displayed on the LCD. Pressing any button while viewing a video feed shall return the information screens.			
C. A menu button shall provide access to maintenance, setup and diagnostic screens.			
D. All other button labels shall be specific to the information being viewed.			
65. GENERAL SCREEN DESIGN			
A. The information centre shall utilize an “Alert Centre” to display text messages for audible alarm tones. The text messages shall be written to identify the item(s) causing the audible alarm to sound.			
B. Button Labels: A label for each button shall exist. The label shall indicate the function for each active button for each screen. Buttons that are not utilized on specific screens shall have a button label with no text.			
66. PAGE SCREENS			
A. The information centre shall include the following screens: I. Load Manager Screen: A list of items to be load managed shall be provided			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
<p>as follows:</p> <ul style="list-style-type: none"> a. Description of the load b. Individual load shed priority: The lower the priority number the earlier the device shall be shed should a low voltage condition occur. c. Load Status: The screen shall indicate if a load has been shed (disable) or not shed. <p>II. Do Not Move Truck:</p> <ul style="list-style-type: none"> a. The Do Not Move Truck screen or indicator shall indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices shall be indicated: <ul style="list-style-type: none"> 1. Drive Side Cab Door 2. Passenger’s Side Cab Door 3. Drivers Side Crew Cab Door 4. Passengers Side Crew cab Door 5. Drivers Side Body Doors 6. Passenger’s Side Body Doors 7. Rear Body Door(s) 8. Ladder Rack (if applicable) 9. Deck Gun (if applicable) 10. Hatch Door (if applicable) 11. Steps (if applicable) 			
<p>B. Any other device that is opened, extend, or deployed that creates a hazard or is likely to cause damage to the apparatus if the apparatus is moved, shall cause an “Alert Center” message if the parking brake is disengaged.</p>			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
67. POWER DISTRIBUTION SYSTEM			
<p>A. The electrical package shall incorporate power distribution modules (PDM)s as an integral part of the electrical system to supply power to all loads controlled by the load management system, including all warning lights, the air conditioning system, and all interior lighting. Each PDM shall be able to switch current to circuits via plug-in replaceable relays. Plug-in automatic, self-resetting circuit breakers shall also be provided. To minimize failures and voltage drop, each PDM shall have no point-to-point wiring and shall include integral connectors so as to be a plug-in component in the electrical system. No relays, circuit breakers, or fuses will be installed outside the centralized panels unless protected in a weatherproof electrical box.</p>			
68. ELECTRICAL LOAD MANAGER INTERLOCK			
<p>A. The interlock module shall monitor and provide visual indication of the status (active/not active) and polarity (positive input/grounded input) of the NFPA related interlock inputs; pump/PTO shift switch, pump/PTO engagement switch, park brake switch and neutral switch.</p>			
<p>B. The interlock module shall control and indicate the outputs for the following NFPA related interlock signals: Pump mode interlock, "Okay to pump" and remote throttle interlock (pump panel throttle).</p>			
<p>C. The interlock module shall also control and indicate the following functions:</p>			

SPECIFICATION	COMPLY (√)		IF "NO"- EXPLAIN
	Yes	No	
Transmission lockup command, high idle control logic with adjustable speed, potentiometer for electronic engines so equipped, engine run/starter lockout relay, select switch for foot throttle inhibit during pump operation, and cab and body "door ajar" indication with relay for "door open" alarm.			
69. CAB INTERIOR			
A. The front dash area shall be styled into two (2) cockpits; one (1) in front of the driver and one (1) in front of the officer. They shall be separated by the insulated engine enclosure which shall have a contoured front, symmetrical with the dual cockpits. The center section of the dash shall bridge the engine tunnel and shall provide a central instrument and control panel, accessible to both officer and driver. The center section also shall provide a generous service access for the main HVAC air ducting, dash mounted electrical power distribution modules, air brake control plumbing as well as the instruments and controls in the center dash.			
B. Two (2) Lexan sun visors shall be provided for driver and officer overhead.			
C. Daily engine/transmission inspection and service checks shall be accessed from inside the cab. There shall be a hinged access door located at the rear of the engine enclosure. Fluids checked from inside the cab shall be engine oil, transmission oil, power steering fluid and windshield washer solvent. The engine enclosure shall be a flat rectangular shape with insulated ABS			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
covering suitable for equipment mounting.			
D. The driver's dash shall consist of an automotive styled, molded housing incorporating the main instrument and control panels with serviceable gauges, warning lamps and audio alarm. The instruments and controls shall be panoramically arranged for ease of locating, reading and understanding.			
70. GRAY VINYL INTERIOR			
A. The cab interior shall be a medium gray color. Accent trim shall be dark gray. The following interior components shall be consistent in material and color: I. The header and back wall shall be gray padded vinyl. II. The engine tunnel shall be gray soft touch ABS. III. All dash panels will be gray powder coated aluminum. IV. The overhead console shall be gray molded composite. V. The floor will have black ribbed vinyl mats and be insulated to reduce sound			
71. STEERING COLUMN & WHEEL			
A. The steering column shall be a tilting type, designed to collapse under impact. It shall have infinite adjustment within its range of operation allowing the driver to adjust the wheel with both hands. The steering column shall have a self-canceling turn signal switch with a headlamp dimmer switch, windshield washer switch and hazard flasher			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
controls			
72. GAUGE TYPE			
A. Dash gauges shall be Black faced with White numbers, back lighting and shall read dual measurements with metric dominant.			
73. HEATER, DEFROSTER			
A. The cab shall be equipped with a cold climate package; complete with primary heater/defroster system with a fresh air inlet filter and air conditioning. The system shall provide environmental air treatment in accordance with published SAE standards. The defroster system shall include cold air returns across the top of the windshield to assist in the movement of air across the full height of the windshield without the necessity of auxiliary fans.			
B. The primary heater and air conditioner recirculation switch and manual air conditioner on/off controls shall be heavy duty truck design, utilizing large, rounded surface knobs. The controls shall be located to the right of the driver forward of the transmission control for easy access by the driver.			
74. AUXILIARY HEATING			
A. Two (2) auxiliary heaters shall have a combined rating of 46,000 BTU/hour min and shall be mounted, one (1) in each rear facing crew seat base. Airflow shall be provided by a 130 CFM fan at each heater. The auxiliary heating systems shall be controlled by the crew person in the left side rear facing seat. The controls shall be heavy duty truck design, utilizing large, rounded surface knobs.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
75. REFRIGERANT COMPRESSOR			
A. A HD refrigerant compressor shall be provided to power the primary and auxiliary air conditioner evaporators. It shall be engine driven via a poly-groove power belt tensioned by a threaded rod.			
76. HVAC PERFORMANCE			
A. The HVAC system shall be capable of and tested for cooling and heating a custom cab with a minimum open space of 360 cubic feet, and without occupants, please specify BTU's _____			
77. DRIVER'S SEAT			
A. The driver's seat shall be high-back air suspension seat. The seat shall be readily adjustable by the driver in accordance with SAE J1517. The seat shall be positioned to accommodate a human in at least from the 5th percentile female and the 95th percentile male as defined in SAE J833. The seat shall be equipped with 4" fore/aft adjustment and vertical travel of 4".			
78. OFFICER SEAT			
A. The officer seat shall be a SCBA seat with a full seat cushion			
79. CREW SEAT, REAR FACING			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. The rear cab area shall contain two (2) high back non-suspended, SCBA, rear facing seats. It shall be mounted behind the driver and officer’s seat.			
80. CREW SEATS, FORWARD FACING			
A. The rear cab area shall contain two (2) SCBA forward facing high back non-suspended seats. The two (2) seats shall be mounted at the center of the back wall on an aluminum storage riser			
81. AIR PACK BRACKET			
A. Install SCBA locking systems in all seats except the drivers. The bracket will be easily adjustable. Must be compliant to current NFPA standards.			
82. VINYL SEAT COVERS			
A. All seats will have bolsters, headrest and the surfaces covered with solid color flat finish 44-ounce vinyl. The seat insert shall have Durawear fabric or equivalent, with a minimum tensile strength of 900 lbs. wet or dry and minimum tear strength of 200 lbs. on the warp and fill.			
83. OCCUPANT SEAT BELTS			
A. All seating positions shall be equipped with adjustable three-point red seat belts. Each seat belt shall have 7" of vertical adjustment. The seat belts will be furnished with automatic retractors. Extensions will be provided with the seat belts so the male end can be easily grasped, and the female end easily located while sitting in a normal position while wearing protective clothing. All seats will have seat belt alarms			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
which will be interlocked to the park brake.			
84. ALTERNATING FLASHING HEADLIGHTS			
A. A solid-state flashing unit shall be provided for alternately flashing high beam headlights and shall be switched "On/Off" from the center overhead console. When high beam lights are required for driving while in the flashing mode, activating the high beam light circuit shall automatically cancel the flashing mode.			
85. LED SPOTLIGHT			
A. A handheld unit shall be provided, mounted in a holster on the officer's left side control panel. It shall have a nine foot (9') coiled cord and shall be hardwired into the dash panel. It shall be activated through a switch in the handle of the unit.			
86. BUMPER WITH 18" EXTENSION			
A. The front bumper shall be 10" high, two (2) rib contoured channel rolled from 10-gauge 304 stainless steel. It shall be highly polished and shall have edge protecting molded end caps. It shall be attached to a bolted frame extension 18" ahead of the center of the cab front.			
B. A 3/16" bright finish aluminum tread plate deck shall be provided for the extended front bumper.			
87. BUMPER - HOSE WELL			
A. There shall be one open hose well installed in the front bumper gravel shield. The tray shall be fabricated of 1/8" smooth			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
aluminum plate and shall have drain holes in the bottom corners. There shall be decking in the bottom of the hose well to promote air flow and drainage. The hose well shall have a capacity for a minimum of 150 feet of 1-3/4" double jacket hose which will be pre-connected to a 1 1/2" swivel outlet supplied at the well location.			
B. Hose well must have a hinged metal cover complete with D-ring handle.			
88. FRONT TOW HOOKS			
A. Two (2) chrome plated tow hooks shall be mounted to the bottom flange of the frame rail extension at a position which maintains an angle of approach compliant to NFPA 1901.			
89. REAR & FRONT MUD FLAPS			
A. Mud flaps, shall be installed behind the rear wheels and front wheels shall be attached with stainless fasteners.			
90. FLUID CAPACITY PLATE			
A. A permanently mounted plate shall be installed in the driver's compartment. It shall identify the quantity and type of the following fluids used in the vehicle: Engine oil, engine coolant, chassis transmission fluid, pump transmission lubrication fluid, pump primer fluid (if applicable) and drive axle lubrication fluid.			
91. SEATING CAPACITY PLATE			
A. A permanently mounted plate shall be installed in the cab, specifying the quantity of			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
six (6) personnel the cab is designed to accommodate.			
92. VEHICLE HEIGHT SIGN & WEIGHT SIGN			
A. Installed overhead and in clear view of the driver shall be a permanently mounted sign that is engraved with the overall height of the completed apparatus in metric and imperial measure. GVWR will also be indicated on the sign.			
93. WARNING SIGNS			
A. Warning signs shall be affixed to the rear panel and crew cab prohibiting personnel against riding on the outside of the vehicle, and to ride only inside the cab on the seats provided with seat belts fastened.			
94. PUMP ENCLOSURE			
A. An independent stainless pump module shall be supplied and installed on the apparatus. The module shall be isolated from the truck frame and installed using Grade 8 fasteners. Plumbing as well as the pump shall be integral with the pump module as much as possible. Pump enclosure will be heated and have a removable heat pan. Heat pan to be as close to pump as possible to allow for max ground clearance.			
95. PUMP PANEL			
A. The side control pump panel shall be located at the left side of the apparatus.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
B. The pump panel shall be removable to allow access to the valves and pump. The panels shall be attached with fasteners. The panel shall be made of two (2) pieces, with the upper section hinged, with self-adhering fasteners, for access to the gauges. The discharges and inlets shall be furnished with escutcheon plates to allow service of the valves. Pump Panel configuration to be neat & orderly.			
C. There shall be a removable access panel supplied at the right side of the unit above the side pump panel. This shall allow quick access into the pump area for easy service and repairs. It shall be constructed of the same material as the pump panels.			
D. The controls and dual gauges shall be illuminated by three (3) rectangular lights, switched at the panel, and mounted in a full length, polished stainless-steel shield.			
E. Color coded labels shall be used to identify controls, dual gauges, and accessories. All pump controls and dual gauges installed in compliance with NFPA.			
F. All controls and dual gauges shall be arranged for convenient operation. <u>The following items shall be included on the panels:</u> <ol style="list-style-type: none"> 1. Auxiliary coolers 2. Discharge Outlet Controls 3. Drain Controls 4. Dual Gauges 5. Pressure-Vacuum Panel adapters for testing 6. Underwriter's (ULC) certification plate 7. Suction Inlet Controls 8. Class “A” & “B” Foam Controls 9. Class “A” & “B” Foam external fill lines with “Camlock” caps and shutoff. 			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
10. Engine Throttle Control 11. Tank Fill Control 12. Tank fill line (3/4”) 13. Tank to Pump Control 14. Primer Control 15. Pump Pressure Control 16. Pump Indicator Lights 17. Pump panel light switch 18. Pump panel heater switch 19. Tank level gauges 20. “Enfo IV” or latest version			
96. MONITOR AND DECK GUN			
A. A 3" riser will be piped and plumbed for foam to the deck gun, gated at pump panel.			
B. Supply Akron 3423 deck gun complete with ground base and (2) 2 ½” inlets (with Saint John threads) Discharge tips,” stacked smooth bore” and “fog” nozzle			
C. To be operational from pump panel complete with controls and dual gauges.			
D. Install on top deck, preferably top center over pump.			
97. CROSSLAYS			
A. Three (3) pre-connected crosslay compartments shall be provided. Crosslay compartments will be constructed as low as possible. The crosslay divider shall be adjustable.			
B. The flooring shall be removable sections of maintenance free nonmetallic material. The floors shall include cutouts for the swivel elbows to allow pre-connected hose to be deployed from both sides of the apparatus, preferably on the outside edge. Provide a solid cover with latch. The ends will be enclosed			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
with black 18 ounce PVC tarp with Velcro edges.			
98. CROSSLAY CAPACITY			
A. Two of the crosslays shall accommodate up to 500' of 1-3/4" DJ pre-connected hose in a double stack. One crosslay will accommodate 250' of 2 1/2" pre-connected hose. All crosslays to be plumbed with Class “A” & “B” foam.			
B. 1 1/2” shall terminate with swivel and NPST			
C. 2 1/2” shall terminate with swivel and SJFD threads.			
99. STORAGE AREA			
A. The remaining area above the pump enclosure shall be used for miscellaneous equipment storage. The floor in this area shall be maintenance free non-metallic material. Top to be watertight and covered with aggressive decking.			
100. RUNNING BOARDS			
A. Two (2) 1/8" Gator grip or equivalent aluminum tread plate running boards shall be bolted to the pump enclosure substructure. Running boards shall be a minimum of 12" deep.			
101. TAGS			
A. Permanently mounted color-coded etched zinc tags shall be installed to identify all valve controls, gauges, and drain valves, etc. Color coding format to be used shall be as per the recommendations listed in the Appendix of the current NFPA Pamphlet 1901.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
102. VALVE CONTROLS			
A. Heavy duty Class 1 chrome plated twist lock style push-pull valve control handles shall be installed where built-in valve handles are not specified. Discharges and gated intakes 3" and larger shall include a speed regulated mechanism as required by NFPA 1901.			
B. For ease of operation, the push-pull handles shall be positioned directly below the pressure gauges. An individual color-coded identification label shall be directly inserted into the face of the push-pull handles.			
103. MASTER GAUGES			
A. The Class 1 master pump suction and master pump pressure gauges shall be 4-1/2" diameter 30-0-400 PSI self-dampening compound gauges with stainless steel case and black letters on a white background. (Dual scale, Imperial and metric)			
104. INDIVIDUAL LINE GAUGES			
A. Each discharge shall be equipped with an individual 2-1/2" diameter 30-0-400 PSI self-dampening Class 1 gauge with stainless steel case and black letters on a white background. (Dual scale, Imperial and metric)			
105. ENGINE INFORMATION SYSTEM			
A. Installed at the pump operator's panel shall be Class 1 ENFO IV (or latest version) engine operating information/warning system with large LED displays to monitor the following:			
B. Engine RPM Tachometer, numeric LED display.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
C. Engine oil pressure, numeric LED display. If low oil pressure occurs, display alternates between actual pressure and LO , activating the alarm.			
D. Engine coolant temperature, numeric LED display. If high engine temperature occurs, display alternates between actual temperature and HI , activating the alarm.			
E. Electrical system voltage, numeric LED display. An adverse change in voltage condition will alternate display between actual voltage and LO , or HI , activating the alarm.			
F. The ENFO IV includes a built-in audible alarm wired to the oil pressure, water temperature and chassis voltage warning system monitors			
106. FAST IDLE			
A. A preset fast idle shall be included with the electronic engine. The high idle feature shall be activated by a control switch mounted in the central dash panel			
107. WATER LEVEL GAUGE			
A. The water level gauge shall be color coded lights for water level indication and a maintenance free in tank probe sensor			
108. FIRE PUMP			
A. Waterous (model CSUY 1500, 5700 L) or Hale “Qmax” single stage mid-ship fire pump shall be installed.			
B. All 2.5” (63.5 mm) hose connections to have Saint John Fire Department threads			
109. PUMP ASSEMBLY			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. The pump shall be driven by a drive line from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable the pump to meet and exceed its rated performance.			
B. The entire pump, both suction and discharge passages, shall be hydrostatically tested to a pressure of 500 PSI. The pump shall be fully tested at the pump manufacturer's factory to the performance specifications as outlined by the NFPA. Pump shall be free from objectionable pulsation and vibration.			
C. Provide copies of the original test results as performed by ULC			
110. DRIVE UNIT			
A. The drive unit shall be cast and completely manufactured and tested at the pump manufacturer's factory. Pump drive unit shall be of sufficient size to withstand the engine manufacturer’s pounds/foot of torque rating in both road and pump operating conditions. The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.			
111. MASTER DRAIN VALVE			
A. A master drain valve shall be installed and operated from the pump panel area. The valve shall be located lower than the main pump body.			
112. FIRE PUMP INSTALLATION			
A. Drive lines shall be custom fit and balanced at the chassis assembly stage and properly attached to the pump transmission.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
113. SACRIFICIAL ANODES			
A. Two (2) replaceable sacrificial anodes shall be installed in the pump body, one (1) on the left side and one (1) on the right side, to help prevent pump damage from corrosion or rust.			
114. RELIEF VALVE			
A. A Waterous or Hale thermal relief valve c/w pump panel indicator shall be installed.			
115. PRIMING PUMP			
A. An oil-free priming pump shall be a Waterous or Hale, positive displacement vane type, electrically driven and conform to standards outlined by the NFPA. One priming control shall both open the priming valve and start the priming motor.			
116. PACKING GLANDS			
A. The fire pump shall be equipped with long-life graphite packing glands.			
117. MANUALS			
A. Two (2) sets of pump operation and pump parts manuals shall be supplied.			
B. Plus pump parts and maintenance CD			
118. FIRE PUMP PAINTING			
A. The fire pump body and plumbing shall be painted job colour.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
119. FIRE PUMP WARRANTY			
A. The fire pump shall be covered by a minimum five (5) year warranty.			
120. FOAMPRO			
A. Supply and install Foam Pro 2002 system (or latest version) to operate both Class “A” and Class “B” foam up to a minimum of 6%.			
B. Supply and install foam lines to all pre-connect lines, including monitor.			
121. PUMP PRESSURE CONTROL			
A. The pump pressure shall be controlled by a Class 1 Captain electronic module that interfaces with the electronic engine throttle system controller. The electronic governor control unit, mounted on the pump panel, shall allow the pump operator to operate in either a pressure mode, or in an engine throttle mode by pressing desired sealed membrane switches, together with increase or decrease selector switches.			
B. Installation of the Captain governor shall include safety interlocks to ensure that the parking brakes are engaged, and that the transmission is in proper gear for the intended operation. All switches shall be weatherproof and color coded, and the Alpha numeric display shall be back lighted for ease of operation in ambient light conditions. The system will also have a built in pump cavitation protection features.			
122. RELIEF VALVE			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. An adjustable relief valve shall be installed on the intake side of the pump. The relief valve shall be preset at 150 PSI. Install and label per NFPA 1901 standards.			
123. PUMP SHIFT CONTROL			
A. The mid-ship fire pump shift control shall be an electric over air mechanism that shall be located on the right side of the steering column and positioned in a location that is in close proximity to the transmission shift selector. The shift mechanism shall be wired into the vehicle interface module to interlock the engine rpm control, transmission direct drive hold mode, and pump engage.			
B. An emergency back-up manual pump shift will be provided.			
C. The shift switch console shall consist of three (3) indicator lights. This console shall include a green indicator light that shall be energized when the pump shift has been completed, and shall be labeled, "PUMP ENGAGED".			
D. A second green indicator light in the driving compartment shall be provided and energized when both the pump shift has been completed and the chassis transmission is engaged in pump gear. The light shall be labeled, "OK TO PUMP".			
E. A third green indicator light in the driving compartment shall be provided and energized when the pump shift has been completely disengaged, and the chassis drive axle has been engaged, and shall be labeled, "ROAD GEAR".			
124. PIPING			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. Left and right-side pump panel discharges shall be bolted directly to the discharge ports that are cast into the fire pump body for maximum flow efficiency.			
B. All piping and fittings 1-1/2" through 3" shall be stainless.			
C. Wherever possible, piping shall be flange bolted to the multiple tap openings on the pump body. For ease of service and longer life of plumbing, Victaulic couplings shall be utilized where necessary.			
125. DRAINS			
A. Individual drain/bleeder valves shall be Class 1 quarter turn style, labeled per NFPA standards for 2" and larger lines.			
126. TANK SUCTION			
A. A full flow valve shall be installed between the tank and the pump. The valve shall be operated from the pump operator's panel. A check valve shall be installed in the line to prevent pressurizing the tank.			
127. ENGINE COOLER			
A. An auxiliary heat exchanger shall be provided for added engine cooling during pump operation. The auxiliary engine cooler shall be mounted directly behind the radiator tank and shall use water from the fire pump during pumping operation. The radiator plumbing shall include a drain cock for coolant evacuation.			
B. The control valve for the heat exchanger shall be located on the pump operator's panel, with chrome plated handle and an "Auxiliary Cooler" identification tag			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
recessed into the face of the handle.			
128. PUMP COOLER			
A. The pump shall have a by-pass cooler line installed from the discharge side of the pump to the water tank to cool the pump during sustained period of operation when water is not being discharged.			
B. The pump cooler control valve, located on the pump operator's panel, shall be a quarter turn ball valve with chrome plated handle and "Pump Cooler" identification tag recessed into the face of the handle.			
129. RATING			
A. The pump shall be certified to meet the NFPA and ULC standards			
130. SUCTION INLETS (NH Threads)			
A. A 6" NH main non-gated inlet shall be installed at the suction side of the pump on the right side. Inlet shall be equipped with a removable screen.			
B. A 6" NH main non-gated inlet shall be installed at the suction side of the pump on the left side. Inlet shall be equipped with a removable screen. Provide inlet caps.			
C. An Akron 2-1/2" gated suction valve shall be installed in the left side pump panel with the valve body behind the panel. It shall be piped to the left side suction tube at the front of the pump. The valve shall be equipped with a brass inlet strainer, 2-1/2" chrome inlet swivel, chrome plug and chain. This intake shall be controlled at the valve.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
D. An Akron 2-1/2" gated suction valve shall be installed in the right-side pump panel with the valve body behind the panel. It shall be piped to the right-side suction tube at the front of the pump. The valve shall be equipped with a brass inlet strainer, 2-1/2" chrome inlet swivel, chrome plug and chain. This intake shall be controlled at the valve.			
DISCHARGE OUTLETS (SJFD THREADS STANDARD)			
131. DISCHARGE OUTLETS			
A. One (1) 2-1/2" Droop Snoot valve with cap and chain, shall be located at the left side forward area of the pump enclosure and connected to the discharge side of the pump with the valve body behind the pump panel. Valve shall be controlled from the pump operator's panel.			
B. One (1) 2-1/2" Droop Snoot valve with cap and chain, shall be located at the left side rearward area of the pump enclosure and connected to the discharge side of the pump with the valve body behind the pump panel. Valve shall be controlled from the pump operator's panel.			
C. One (1) 2-1/2" Droop Snoot valve with cap and chain shall be located at the right-side forward area of the pump enclosure and connected to the discharge side of the pump with the valve body behind the pump panel. Valve shall be controlled from the pump operator's panel.			
D. One (1) 3" full flow gate to 4" storz with cap and chain, shall be located at the right-side rearward area of the pump enclosure and connected to the discharge side of the pump with the valve body behind the pump panel.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
Valve shall be controlled from the pump operator's panel.			
E. One (1) Akron 2" valve and full flow plumbing shall be piped to a 1-1/2" SJFD male swivel elbow under crosslay bed number 1.			
F. One (1) Akron 2" valve and full flow plumbing shall be piped to a 1-1/2" SJFD male swivel elbow under crosslay bed number 2.			
G. One (1) 2 ½" discharge under cross lay bed number 3. Controlled at the pump operator's panel. Discharge shall be equipped with a chrome SJFD thread 2-1/2" discharge elbow, cap and chain.			
H. One (1) Akron 2" valve and full flow plumbing shall be piped to a 1-1/2" SJFD male swivel elbow in front bumper hose well.			
132. WATER AND FOAM TANKS			
A. The booster tank shall have a minimum of 832 Imperial Gallons and a maximum capacity of 1,000 Imperial Gallons of water. Providing the fully loaded unit does not exceed the 5% reserve on the rear axle.			
B. Foam tank capacity for Class “A” 50 gal and Class “B” 50 gal. Tank to be integrated inside the water tank.			
C. The tanks shall have a combination vent and manual fill tower. The water fill tower shall be constructed of ½" polypropylene and shall be a minimum dimension of 8" x 8" on the outer perimeter. The fill towers shall be located in the front of the tank and marked for “Water”, Class “A” and Class “B”.			
D. The water tower shall have a 1/4" thick polypropylene screen and a hinged type cover. Inside the water fill tower, halfway down from the top, shall be fastened a vent overflow pipe. The vent overflow is schedule 40 polypropylene pipe, with a minimum I.D. of			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
4.0" that shall be designed to run through the tank and shall be piped behind the rear wheels and directed away from differential breather.			
E. There shall be one (1) sump installed in the tank. The sump shall be a minimum of 8 “x 8”x6” with a 3 /4” bottom, and shall be located in the left front quarter of the tank. The sump shall have a 1 ½” gated drain with push/pull control cable located at the operator pump panel.			
133. WATER TANK WARRANTY			
A. The tanks will have a lifetime warranty			
134. BODY DESIGN AND CONSTRUCTION			
A. The body shall be of prime commercial quality stainless steel. The exterior of the body shall be finished smooth with symmetrically rounded corners and edges, including rub rails, presenting a modern and aerodynamic appearance. The body shall be designed and built to provide impact and penetration resistance, with appropriate channel reinforcing to assure rigidity.			
B. All parts of the body and attachments shall be fastened together with stainless steel fasteners in a manner which shall preclude loosening of any bolts or screws and the cracking of welded joints. The body shall be made of not less than .125 inch thick metal and be reinforced at all points where brackets are attached.			
C. The body components shall be bolted and welded to the frame of the chassis. In the assembly of the body, areas where aluminum comes in contact with the steel substructure it shall be isolated with barrier tape to the best industry practices. This item is to be reviewed at preconstruction.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
D. A fire hose compartment shall be provided and designed to carry a minimum of 1,200 feet of 4” hose. The compartment shall be Approx. 120" in length. The compartment shall be constructed of aluminum and reinforced at the corners. The interior of this compartment shall be smooth and free from all projections such as nuts, sharp angles, or brackets, which might damage the hose. Vinyl hose bed cover to be supplied and installed.			
E. Drip rails shall be installed over all compartment doors and shall be easily removable or replaceable.			
F. All compartments shall be aerated by a louvered vent and each shall be of a sweep out design. A sign shall be placed on the apparatus that shall comply with NFPA 11-7.4			
G. NOTE: All fasteners used in the construction of the body or mounting of equipment shall be stainless. This shall include all washers, lock washers, and nuts.			
135. COMPARTMENT DOORS			
A. The compartment doors on the left and right sides of the apparatus shall be satin finish “roll up” type.			
136. SUBFRAME			
A. The substructure shall be fastened to the frame with steel grade 8 bolts. The sub-frame shall be designed so that each compartment of the apparatus shall have a payload capacity of 500 lbs. The substructure shall be provided with a 20-year warranty. Angle of departure must remain at 12 degrees loaded min.			
PUMPER BODY SPECIFICATIONS			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
137. SCBA COMPARTMENT OVER REAR WHEELS			
A. Provide four (4) SCBA cylinder storage compartments (8" tubes) 2 per side, lined on the bottom with 1/8" rubber mat for a nonslip surface. The tubes shall tilt 2 degrees inward toward the frame. Each door shall be sealed with a tubular (hollow) gasket attached to the door. A positive door locking mechanism shall be used to secure the compartment doors.			
B. The compartments shall be constructed and installed in compliance with NFPA 11-5.6.			
138. COMPARTMENT LIGHTS			
A. Each compartment to have “LED” lighting mounted inside; with door activated switch.			
139. LOUVERS			
A. All body compartments will have a minimum of one (1) set of louvers to provide air flow inside the compartment			
140. LIGHTED FOLDING STEPS			
A. Two (2) forward body driver’s side.			
141. HOSE BED DIVIDER			
A. Two hose bed dividers shall be constructed of smooth aluminum plate and shall be adjustable for varying the hose loads.			
142. HOSE BED COVER			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. Full length hose bed tarp constructed of black 18-ounce PVC. With a breaking strength of 495/377 lbs/inch, a low cold crack of -40 degrees C and tear strength of 91/70 lbs. Using ASTM D 751 test method. The tarp will close in the rear and be fastened to the grab rail under hose bed by four (4) Velcro straps.			
143. COMPARTMENT SHELVING			
A. Provide five (5) shelves to include adjustable tracks in all compartments.			
B. All shelving and floors to be provided with lip edge and matting (Turtle tile).			
144. NFPA WARNING LIGHT SYSTEM OPERATION			
A. The emergency warning light system shall be activated by rocker switches located on a panel mounted on the cab dash. The rocker switches shall have an internal indicating light to show when the switch is energized. Individual switches shall be installed to allow pre-selection of various components of the warning system. The switches shall be mounted in centrally located panel for easy service and identification. The electrical system components and wiring shall be readily accessible through panels for checking and maintenance.			
B. The Optical Warning Device System shall comply with NFPA 1901 without exception. To minimize the load placed on the electrical system during apparatus start-up for an emergency response, a sequential switching device shall be installed to energize the optical warning devices.			
C. The warning system shall be divided into upper and lower warning levels.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
D. The apparatus manufacturer shall provide a "Certification of Compliance" of the warning system.			
E. Certification that actual measurement of the lighting system was performed after installation on the apparatus.			
145. CAB ROOF LIGHT BAR			
A. Supply and install one (1) full width roof mounted L.E.D. light bar.			
B. Two (2) Scene lights shall be installed, one (1) on each side of the cab. There shall be red LED indicator lights at the switch console to indicate the selected lights are illuminated. Two (2) switches shall be mounted in the switch panel			
146. L.E.D WARNING LIGHTS-			
A. There shall be installed on the front of the chassis two (2) red L.E.D. lights, with chrome plated flange.			
B. There shall be installed on the forward sides of the cab, two (2) red L.E.D. warning lights. One (1) left side, one (1) right side.			
C. There shall be installed at the rear wheel well two (2) red L.E.D. warning lights, one (1) each side.			
D. Two (2) additional L.E.D. lights with red lens shall be installed at the lower rear of the apparatus body, one (1) each side. Above the stop/tail/turn lights			
147. REFLECTORS			
A. Reflectors shall be installed on the apparatus in compliance with Federal Motor Vehicle Safety Standards and NFPA 1901.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
148. CLEARANCE LIGHTS			
A. Install five (5) red LED marker lights at the rear of the apparatus body.			
B. Install two (2) amber LED marker lights, one each side mid-body.			
149. UNDERBODY GROUND LIGHTS			
A. Eight (8) L.E.D. underbody work lights shall be installed under the body around the perimeter of the vehicle. The lights shall be strategically placed to illuminate the immediate ground area around the unit.			
B. The lighting under the driver and crew riding area exits shall be activated automatically when the exit doors are opened. All other lights shall be switched on inside the cab on the cab switch panel. These lights shall be installed in compliance with NFPA 1901.			
150. UPPER PUMP AREA ILLUMINATION			
A. Illumination shall be provided for the upper pump enclosure area, in accordance with NFPA requirements. PARK BRAKE activated?			
151. LICENSE PLATE			
A. A license plate bracket complete with” LED” light shall be installed on the rear of the vehicle. It shall be located at the left side of the vehicle towards roadside center, and shall be wired to come on with the marker lights.			
152. STOP, TURN, AND BACK-UP LIGHTS			
A. Install polished cast aluminum triple lamp bezels, one (1) each side on the lower rear body corners. Each bezel shall be			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
<p>mounted with closed cell neoprene molding around the full perimeter contact surface area of the body to seal out moisture and eliminate electrolysis. The tail lamps shall be installed in the following descending order:</p> <p>I. TOP = Red Stop/Tail Light (LED)</p> <p>II. CENTER = Amber Arrow Turn Signals (LED)</p> <p>III. BOTTOM = Clear Lens Back-Up (LED)</p>			
153. DUAL ELECTRIC HORNS			
<p>A. Dual electric horns rated at 400hz/500hz shall be installed under the cab, controlled through the horn ring on the center of the steering column, and wired through a dash mounted selector switch allowing control of either the electric or air horns.</p>			
154. SIRENS			
<p>A. The chassis shall be equipped with a 200-watt electronic Federal e-Q2B siren. A remote-control head shall be mounted in the cab center dash. The siren control head shall have red LED indicators to monitor speaker power.</p>			
<p>B. One (1) 200-watt speaker with cast aluminum housing with protection grille.</p>			
155. AIR HORNS			
<p>A. Two (2) 24" air horns shall be mounted behind the front bumper, one each side of frame rails. A horn/air horn selector switch shall be installed on the central dash panel for choosing either the dual electric horns or the air horns to be activated by the steering wheel horn button and officers side floor switch.</p>			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
156. BACK-UP ALARM			
A. An automatic self adjusting electronic back up alarm producing 87-112 db shall be installed at the rear between the frame rails			
157. PAINTING - GENERAL REQUIREMENTS			
A. The final finishing of the apparatus shall be performed to the highest standards of the fire apparatus industry.			
158. CAB AND BODY PAINT			
A. The body shall be painted using a single color to match the cab primary color.			
B. The cab to include two primary colours with red below windows and white above the windows. These two primary colours to be separated by turned gold over black stripping.			
C. Colours as per Saint John Fire Department requirements and paint chips must be supplied and approved by the Fire Chief of the Saint John Fire Department.			
159. CAB AND BODY WARRANTY			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. The manufacture shall provide a 10-year warranty including parts and labor to maintain the proposed vehicle against any default arising from design, material, workmanship, corrosion (including corrosion due to dissimilar metals), delivery or non compliance of the specifications and all other relevant standard and acts, Federal or Provincial. A copy of the warranty shall be included with the proposal.			
160. CAB AND BODY UNDERCOATING			
A. The body shall be thoroughly prepared and sprayed with a rust inhibiting undercoating. Areas to be sprayed shall include the backsides and undersides of all compartments. All substructure under the body shall be undercoated thoroughly			
161. SCOTCHLITE STRIPING			
A. There shall be a white 4" wide, straight Scotchlite stripe applied in compliance with NFPA guidelines. The exact location of the stripe shall be determined at the pre-construction conference			
162. REAR CHEVRONS COLOURS			
The rear chevrons, as per NFPA 1901 requirements will be constructed with the following material: I. 6” Red Diamond Grade 983-72NL 3M material. II. 6” FL.Yellow/Green Diamond Grade 983-23ES 3M material.			
163. DETAILING			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. The apparatus shall be thoroughly washed and detailed in preparation for final acceptance.			
164. LADDER AND LADDER RACK (MUST MEET CURRENT NFPA STANDARD)			
A. One (1) 24 ft., one (1) 12 foot, and one (1) 10 ft. ladder to be supplied			
165. WARRANTY			
A. The cab, chassis, all features and options, exclusive of maintenance items, shall be warranted against defective materials and workmanship by the chassis manufacturer for three (3) years from the in-service date.			
B. The body structure shall be warranted by the manufacturer against cracking and corrosion damage for a period of twenty (20) years from the in-service date.			
C. The frame rails shall be warranted against breakage and cracking for the duration of ownership by the first in-service owner.			
D. All warranties shall include parts and labour required only by the manufacturer's authorized repair facility to perform the repair as directed by the manufacturer; and at the location necessary to properly perform the repair.			
E. The engine and transmission shall be warranted by their manufacturers for five (5) years.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
F. If the manufacturer’s local representative cannot provide adequate service, the City of Saint John Fleet Services will undertake necessary repairs or adjustments and will be reimbursed of all costs incurred for the repair upon submission.			
166. AXLES WARRANTY			
A. A five (5) year parts and labour warranty shall be provided on the drive axle(s) (differential assemblies, axle shafts and axle housings) and for the steering axle (beam, spindles, kingpins and kingpin bearings and steering arm).			
167. CAB AND BODY CORROSION WARRANTY			
A. A ten (10) year warranty shall be provided for cab or body perforation due to corrosion from within. It shall exclude surface rust caused by chips or scratches in the paint but will include corrosion due to dissimilar metal.			
168. FRAME RAILS WARRANTY			
A. A lifetime warranty shall be provided for chassis frame rails due to breaking or cracking. Any modification to the rail or body application must receive written permission from the builder before it is performed to validate warranty.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
169. PUMP PLUMBING WARRANTY			
A. The stainless-steel plumbing components and ancillary brass fittings used in the construction of the water system shall be warranted for a period of Ten (10) years. This will cover structural failures caused by defective design or workmanship or perforation caused by corrosion.			
170. WARNING EQUIPMENT WARRANTY			
A. A three (3) year warranty shall be provided for all chassis manufacturer installed components, including air horns, electric horns, strobe lights, contour light bar, 200-watt siren and speaker(s) (except consumable parts) and electric load management system.			
171. FIVE (5) YEAR ELECTRONIC MODUAL AND DISPLAY WARRANTY			
A. The electronic modules and displays shall be provided with a five (5) year material and workmanship limited warranty. The warranty shall cover electronic modules to be free from failures caused by defects in material and workmanship.			
172. BASIC WARRANTY			
A. The vehicle shall have a one (1) year bumper to bumper warranty, unlimited distance warranty provided upon delivery and acceptance. Unless			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
<p>excluded elsewhere in the warranty or described as having longer time and distance limitations. Please state warranty for the following:</p> <p>I. Fire Pump Panel and Controls including - control handles and linkages, gauges, indicators and sending units; remote throttle controls: water tank level indicators and sender(s). _____ Years</p> <p>II. Body Emergency Lighting and Controls including - directional light bars and other visual warning devices installed at time of build. _____ Years</p> <p>III. Roll-Up Compartment Door including shutters (slats), switches, tracks and latches. _____ Years</p> <p>IV. Body trim including - fenders, rub rails, grab handles. _____ Years</p> <p>V. Body Lighting and Controls including - marker lights; scene lights, ground and panel lights, stop and taillights. _____ Years</p> <p>VI. Body Electrical Systems including - wiring, circuit breakers and distribution panel(s). _____ Years</p>			
<p>B. The bidder must state specifically any and all warranties covering this vehicle if any manufacturer’s extended warranties are available, please state extra cost, if any and provide details</p>			
<p>173. BODY/CAB RUST THROUGH WARRANTY</p>			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. The body /cab shall be warranted for ten (10) years to be free of cracks resulting from stress and corrosion through of the component panels. It does include corrosion caused by the use of dissimilar metal.			
174. PAINT WARRANTY			
A. The chassis paint coatings shall be warranted by the apparatus manufacturer (not a third-party paint manufacturer) for a period of twelve (12) years from delivery and acceptance of the complete vehicle. The non-prorated warranty shall include adhesion, peeling, delamination, cracking, clouding or loss of gloss. Paint chipping and surface fracturing caused by an object striking the paint surfaces are not warrantable.			
B. The exterior paint and finish on the body shall be warranted against peeling, delaminating, cracking/checking or loss of gloss due to cracking, checking or hazing for a period of ten (10) years.			
175. ELECTRICAL SYSTEM			
A. Provide an as built drawing of the electrical system (3 copies) along with Multiplex report. This drawing must be certified as accurate by the manufacturer engineering staff.			
B. It is expected from the manufacturer that the best trade practices will be utilized for the installation of all electrical equipment in dry or wet			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
locations. All remote magnetic switches, relays, circuit breakers, fuses and switches shall be mounted in weatherproof boxes and or protected from moisture. The proper installation of these components will be heavily scrutinized during pre delivery inspection.			
176. OPERATOR'S MAINTENANCE AND WARRANTY MANUALS			
A. Three (3) detailed and comprehensive manuals, each depicting chassis component operating procedures, maintenance requirements, maintenance intervals and procedures, warranty registration with the manufacturer, warranty coverage and claim procedures, shall be presented and reviewed with the Saint John Fire Department acceptance authority prior to vehicle acceptance. These manuals /CD's shall be delivered with the vehicle.			
B. The successful bidder to supply the City of Saint John's Fleet Maintenance division with two (2) complete sets of "as built" drawings.			
C. Three (3) complete sets of shop service manuals / CD's and operator's manuals to be supplied with the vehicle.			
D. Current updated computer software for engine, transmission, and ABS, ATC, and RSC systems to be supplied.			
177. OPERATOR'S TRAINING			
A. The successful bidder shall provide operation and maintenance training to Saint John Fire Department and Fleet			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
Services maintenance personnel. The training to be done by authorized, factory trained personnel at a City of Saint John facility at a time mutually agreed upon. Three (3) full 8-hour days w/ SJFD Training Division			
B. The successful bidder shall provide upon delivery preventative maintenance form(s) relative to this apparatus and equipment			
178. STANDARD EQUIPMENT			
A. To include all other items listed as Standard on Manufacturer's Specifications			
B. The complete apparatus and equipment shall comply with all current Federal, Provincial, NFPA, and ULC Standards and Regulations			
179. MANUFACTURER'S SPECIFICATIONS			
A. Complete manufacturer's specifications and illustrated description shall be submitted with each bid, insufficient descriptive information shall be cause for rejection of the bid			
180. PROVINCE OF NEW BRUNSWICK LICENSE, REGISTRATION AND, M.V.I.			
A. Current and valid Province of New Brunswick registration, license and, Motor Vehicle Inspection certificate and sticker, complete with Safety Triangles and Fire Extinguisher shall be provided and installed by vendor upon delivery.			
181. DELIVERY			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
A. Vehicle to be delivered to the Manager of Fleet Management, 175 Rothesay Avenue, Saint John, N.B.			
B. The successful bidder to complete and return upon delivery the City of Saint John vehicle delivery and information sheet (supplied)			
C. The successful bidder to supply the Manager, Fleet Management with a recommended preventative maintenance form and schedule for this apparatus and equipment			
D. Please specify expected delivery date: _____			
182. OPTIONS:			
A. Supply and install Two (2) 12-volt LED brow lights.			
B. Supply and install two (2) 12-volt pedestal lights on top of rear truck body			
C. Supply and install stainless steel body with painted reinforced fiber panels.			
D. Supply and install slide out tray for portable 6500-watt generator.			
E. Supply and install two (2) light weight hard suction.			
F. Supply and install aluminum front and all rear wheels.			
G. A forward-facing EMS compartment shall be provided. Location will be between the two forward facing rear seats.			
H. The compartment will be approximately 38.00" wide x 30.00" high x 20.00 deep with non-locking doors.			

SPECIFICATION	COMPLY (√)		IF “NO”- EXPLAIN
	Yes	No	
I. The compartment will be constructed of smooth aluminum and painted to match cab interior. One adjustable shelf with 1.50 inch raised edges will be installed in the compartment			
J. Supply (1) one 14 ft. roof ladder to replace 12 ft. roof ladder and one (1) 35 ft. extension ladder to replace 24 ft.			



**PROPOSAL FOR FURNISHING
RFP NO. 2024-235001P
FIRE APPARATUS – RESCUE PUMPER
TO: THE CITY OF SAINT JOHN**

ITEM # 1 - SPEC # 287-23 (Item 1.A) – FIRE APPARATUS – RESCUE PUMPER (NEW)

The undersigned hereby agrees to furnish the equipment listed in accordance with the specifications on file in the office of the Purchasing Agent and which are attached hereto.

Mfg. Year: _____ Mfg. Make: _____

Mfg. Model: _____ Mfg. Stock Code: _____

Odometer Reading _____ Hours Reading _____

Net purchase price: Quantity (1) \$ _____ / Each
Bid price to exclude tax (HST).

It is agreed that the unit(s) as bid will be delivered **complete within** _____ **weeks (state number of weeks)** from date of purchase order and that failure to deliver within such period will be cause for cancellation of the purchase order. Delivery is to be made to the Fleet Management Division, 175 Rothesay Avenue, Saint John, N.B.

**ITEM # 2 - SPEC # 287-23 (Item 1.B) – FIRE APPARATUS – RESCUE PUMPER
(PRE-OWNED/DEMO)**

The undersigned hereby agrees to furnish the equipment listed in accordance with the specifications on file in the office of the Purchasing Agent and which are attached hereto.

Mfg. Year: _____ Mfg. Make: _____

Mfg. Model: _____ Mfg. Stock Code: _____

Odometer Reading _____ Hours Reading _____

Net purchase price: Quantity (1) \$ _____ / Each
Bid price to exclude tax (HST).

It is agreed that the unit(s) as bid will be delivered **complete within** _____ **weeks (state number of weeks)** from date of purchase order and that failure to deliver within such period will be cause for cancellation of the purchase order. Delivery is to be made to the Fleet Management Division, 175 Rothesay Avenue, Saint John, N.B.

COMPANY:	ADDRESS:
NAME:(print)	SIGNATURE:
TEL NO:	FAX NO:
DATE:	REMARKS:



**PROPOSAL FOR FURNISHING
RFP NO. 2024-235001P
FIRE APPARATUS – RESCUE PUMPER
(UPGRADE OPTIONS)**

UPGRADE OPTIONS – COMPLETE DESCRIPTIONS IN SPEC # 287-23

ITEM 182. - OPTIONS	PRICE TO ADD OPTION
A. Supply and install Two (2) 12-volt LED brow lights	
B. Supply and install two (2) 12-volt pedestal lights on top of rear truck body	
C. Supply and install stainless steel body with painted reinforced fiber panels	
D. Supply and install slide out tray for portable 6500-watt generator.	
E. Supply and install two (2) light weight hard suctions.	
F. Supply and install aluminum front and all rear wheels.	
G. A forward-facing EMS compartment shall be provided. Location will be between the two forward facing rear seats.	
H. The compartment will be approximately 38.00" wide x 30.00" high x 20.00 deep with non-locking doors.	
I. The compartment will be constructed of smooth aluminum and painted to match cab interior. One adjustable shelf with 1.50 inch raised edges will be installed in the compartment.	
J. Supply (1) one 14 ft. roof ladder to replace 12 ft. roof ladder and one (1) 35 ft. extension ladder to replace 24 ft.	

The proposal price is to remain open for acceptance by the City for a period of 90 days from date of proposal closing.

This shall in no way operate as a waiver on the City of Saint John or any of its rights under the contract.

It is understood by the undersigned that the right is reserved by the City of Saint John to reject any and all bids, and to accept any bid deemed to be in the City's best interest.

It is understood by the undersigned that the authorized signature on the proposal hereby affirms that no collusion with other proponents has taken place. Evidence of collusion shall be cause for rejection of the bid.

COMPANY:	ADDRESS:
NAME:(print)	SIGNATURE:
TEL NO:	FAX NO:
DATE:	REMARKS: