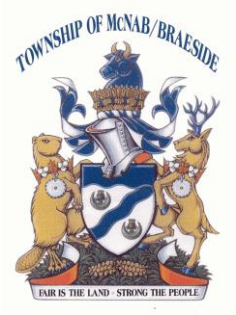

Township of McNab/Braeside
Fire Department

REQUEST FOR PROPOSAL
FD-2018-01
Fabrication, Supply and Delivery of One (1) New Tanker/Pumper Fire Apparatus

Date of Issue: Wednesday April 18, 2018

Tender Closing Date: Wednesday May 16, 2018 @ 3:00:00 pm local time

TABLE OF CONTENTS

INTRODUCTION / SCOPE OF WORK

The Township of McNab/Braeside is seeking Proposals for the fabrication, supply and delivery of a new Tanker/Pumper Fire Apparatus in accordance with the attached terms, conditions, and specifications. Qualified Manufactures with equipment that meets or exceeds that provided in the specifications are invited to submit a Proposal outlining the vehicle/equipment specifications by no later than the closing date/time identified below.

Please include all pertinent literature with your RFP describing the unit.

Sealed Request for Proposal (RFP), including the supplied Forms are to be addressed to Lindsey Lee, CAO/Clerk, 2508 Russett Drive, Arnprior, Ontario, K7S 3G8 and marked on the envelope:

FD-2018-01
Fabrication, Supply and Delivery of One (1) New
Tanker/Pumper Fire Apparatus

will be received until 3:00:00 p.m., Wednesday May 16, 2018

Any inquires during the submission process are to be directed to Fire Chief Dave Hartwick via email (**firechief@mcnabbraeside.com**) or alternately, by telephone or fax (Tel. (613) 623-5756 x 233 OR Fax: (613) 623-9138). Questions of clarification will be answered individually, but response(s) to any question that modifies the scope of the RFP will be circulated in writing as an Addendum to all registered document takers who have received the RFP document from the Township. No verbal instructions or verbal information to vendors will be binding on the Township.

To ensure fairness to all proponents, any and all questions that require detailed clarification or that may materially alter this RFP shall be submitted in writing (email form is acceptable) by Wednesday May 9, 2018 at 1:00:00pm. All written instructions and specifications will be considered clear and complete unless written attention is called to any apparent discrepancies or incompleteness before the official closing.

Should any error, ambiguity, divergence, omission, oversight, contradiction, or item subject to interpretation be identified in this RFP, the proponent shall, as it is discovered, notify the primary contact (in writing) requesting instruction, decision, direction or clarification of same. The primary contact will determine the extent of resolution required.

The Township shall have the right to reject any or all Proposals for any reason, or to accept any Proposals which the Township in its sole unfettered discretion deems most advantageous to itself. The lowest, or any, Proposals will not necessarily be accepted and the Township shall have the unfettered right to:

i. accept a non-compliant RFP;
ii. accept a RFP which is not the lowest RFP; and
iii. reject a RFP that is the lowest bid even if it is the only Proposal received.

GENERAL CONDITIONS

1.0 Schedule

The following timeline has been established:

ITEM	DATE
RFP Issued	Wednesday, April 18, 2018
Deadline for Questions	Wednesday May 9, 2018 @ 1:00:00pm
Receive Proposals	Wednesday May 16, 2018 @ 3:00:00pm
Public Opening	Wednesday May 16, 2018 @ 3:00 pm
RFP Award Date	Tuesday June 5,2018

Note: Although every attempt will be made to meet all dates, the Township reserves the right to modify any or all dates at its sole discretion.

2.0 Date and Place for Receiving Proposals

Proposals will be received at: Township of McNab/Braeside Municipal Office, 2508 Russett Drive, Arnprior, ON K7S 3G8

Proposals must be addressed to:

Township of McNab/Braeside
2508 Russett Drive
Arnprior, ON
K7S 3G8
Attention: Ms. Lindsey Lee, CAO/Clerk

E-mail or FAX copies will not be accepted. Hard copies only. Proposals received after 3:00:00p.m., local time, on Wednesday May 16, 2018 will be returned unopened. Lowest bid or any proposal not necessarily accepted.

3.0 Official Documents and Addenda

Only documents obtained from the Township directly are to be considered the "official" documents. The Township accepts no responsibility for the accuracy of information obtained from other sources.

This RFP may only be amended by an addendum, in accordance with this subsection. Such addenda may contain important information including significant changes to this RFP. If the Township, for any reason, determines that it is necessary to provide additional information relating to this RFP, such information will be communicated to all Bidders by addenda. Each addendum shall form an integral part of this RFP.

Although the Township will attempt to email registered Bidders, to notify them when addenda are available, the Township does not guarantee that emails will be sent to all Bidders or received

by all Bidders. It is the Bidder's sole responsibility to check to inform themselves of any addenda.

4.0 Proposal Documentation

One copy of the Proposal is required. Proposals shall be addressed and submitted to the address provided in an envelope clearly marked as follows:

Request for Proposal – Fabrication, Supply and Delivery of One (1) New Tanker/Pumper Fire Apparatus Contract #FD-2018-01

Submit all required Proposal Contents in a single sealed envelope.

Contents of the Proposal shall include:

1) Company Profile and References
2) Warranty and Service Details
3) Detailed Vehicle Specifications
4) Proposal Form
    a. Proposal Form
    b. Schedule of Prices
5) Qualification Sheet
6) Additional Documentation / photos relating to the vehicle bid may be included.
7) Additional Features: All vendors are requested to list on a separate sheet, any features that they are providing in addition to the basic specifications provided herein and submit this information with their bid.
8) Bid Deposit

The Township is not responsible for submissions which are not properly marked and / or delivered to any other location, than that specified herein. RFPs received by any other method will be rejected.

The RFP Form must be signed and witnessed, in the space(s) provided on the Form, with the signature of the Bidder or of a responsible official of the organization bidding. If a joint bid is submitted, it must be signed and witnessed on behalf of each of the Bidders, and if the signing is vested in one individual, he shall sign, separately, on behalf of each Bidder. In the case of an incorporated company, the corporate seal must be affixed to the RFP Form.

The RFP must be legible, written in a permanent ink and all items within a Schedule must be bid, with the unit price for every item and other entries clearly shown.

The Bid must not be restricted by a statement added to the RFP Form, or alterations to the Forms provided by the Township.

Erasures, overwriting or strike-outs must be initialed by the person signing on behalf of the organization bidding.

5.0 Proposal Evaluation

Proposal Evaluations will be carried out based on the following criteria:

Evaluation Criteria	Weighted Points
Technical Meets Specifications (15) Body and Structure (5) Material and Workmanship (5) Engineer on staff (5) All Certifications (5)	35
Warranty, Parts and Service Service within 200 km (5) Availability of Parts (5) Warranty Support (5) Warranty Procedure (5)	20
Experience, References and Other Quantity of vehicle builds (10) References (10) Accessibility Plan (5)	25
Financial Price of the Vehicle (15) Company Stability (5)	20
TOTAL	**100**

The relative weight of each requirement to all other requirements is shown in the table above (Weighted Points).

All received proposals will be reviewed a Review Committee and Proponents will be scored on the basis of how well their response meets the criteria specified.

The selection of the successful proponent will be made by Township Council, upon review and recommendation by the Review Committee.

6.0 Acceptance of Proposal and Contract

It is expected that one Proponent will be selected for this project. Upon selection, the successful proponent will be invited to enter into a contract with the Township.

The contract will be based on the specifications, terms and conditions expressed in this document, the successful proponent's proposal and documented negotiations.

All proposals are to be submitted with the understanding that evaluation by the Township does not result in the formation of a contract, nor does it create any obligation on the Township to enter into any further discussions.

Proposals will be evaluated under the Criteria provided in Section 5.0, based on the information and references provided by Proponents, which rates how strongly and the ease at which the characteristics of proposals meet the needs of the Township as stated in this RFP.

The Proposal that includes the lowest cost or any Proposal at all will not necessarily be accepted.

The Township reserves the right to reject any or all Proposals. The Township also reserves the right to not proceed with the Project without stating reason thereof.

In the event a Proposal does receive a recommendation from the Review Committee, such proposal will be the Proposal which in the sole opinion of the Review Committee (as determined by the exercise of the Best Value Evaluation Criteria), provides the Township with the best overall value.

The Township reserves the right to negotiate Terms of Reference including material used, with a Successful Proponent in discussions between Successful Proponent and the Township, which may affect the end price of a potential contract.

The Township reserves the right to accept or reject any and or all Proposals and/or to cancel this RFP in its entirety for final cancellation or potential reissue either in advance of or following the receipt of Proposals without providing reasons should such be determined by the Township in its sole and absolute discretion to be in its best interest. Should only one Proposal be received, the Township reserves the right to reject it.

Each proposal shall be open for acceptance by the Township for a period of sixty (60) calendar days following the date of closing.

The Township will prepare the Contract document for execution by both parties.

7.0 Withdraw or Substitution of Submission

A Bidder may withdraw their RFP at any time up to the RFP Submission Deadline by submitting a letter bearing the Bidder's signature, to an authorized representative of the Township, who will mark thereon the time and date of receipt and will place the letter in the RFP box. The Bidder's name and the contract number shall be shown on the envelope containing such letter.

Telegrams, facsimiles, emails, texts or telephone calls will not be accepted. RFP's withdrawn under this procedure cannot be reinstated.

If two (2) bids for the same RFP are received in different envelopes the envelope with the latest date and time received shall be considered the intended bid and invalidate all RFP's previously submitted by that Bidder.

If two (2) bids for the same RFP are received in the same envelope and are properly executed and prices differ, the lower price RFP shall be considered the intended bid.

8.0 RFP Opening and Results

A public opening will occur as indicated in Section 1.0. Proposals will be reviewed and further information will not be released until a contract is awarded. Following the award of the contract, the successful bidder's name and total bid price will be released.

9.0 Bid Deposit

Each bid shall be accompanied by a bank draft in the amount of 25,000.00 CAD. The deposit is to be furnished by the company who will build the apparatus proposed. Bids must remain firm for a period of 60 days. Bid deposits will be returned to the unsuccessful bidders. The Township may retain the bid deposit of the successful bidder until the completion of the build. An exception to this requirement will not be allowed.

10.0 Bidders Expense

The Township will not reimburse any Proponent for any costs related to the preparation of a proposal response to this proposal. Without foregoing any generalities, this shall extend to any onsite review, presentations, and any supplemental information provided, and shall also extend to subsequent negotiations, if any, with the Township.

11.0 Assignment of Contract

The successful Bidder shall not assign the Contract, or any portion thereof, without the prior written consent of the Township.

If the Township agrees to the assignment of the Contract, all Assignment Agreements will be prepared, at the sole cost of the Bidder, and under no circumstances will the Township be responsible for these costs.

12.0 Prices

Prices quoted shall be the net cost to the Township and shall include all associated costs (i.e. labour, equipment, material, delivery, applicable licences and permits) and all other associated costs required to perform the service to the complete satisfaction of the Township. The price must include all items listed in the specification.

The price quoted shall be in Canadian funds and shall include all duty, custom clearances and all other charges.

Equipment shall be delivered F.O.B. (free on board) to the Township of McNab/Braeside, Fire Station #1 Glasgow, 2494 Russett Drive, Arnprior, Ontario, K7S 3G8.

Prices quoted shall remain firm for a period of sixty (60) calendar days from the closing date of the receipt of RFP.

13.0 Inspection and Approval

All products or services provided by the Builder shall be new upon delivery and installed in good operating condition free of defects; the Builder shall repair or replace any damaged or marred items caused or occasioned through the handling or installation by the Contractor or otherwise occasioned in transit.

All goods shall be delivered subject to Township inspection and approval and payment in whole or in part shall not constitute acceptance or approval. The Township may reject and return the equipment at the Proponents sole expense if the equipment is not delivered as specified, or if deliveries, quantities, or quality is not as specified or warranted. Receipt at the provided delivery locations does not indicate acceptance or approval.

14.0 Delivery

A penalty of $200.00 per day will be considered if the equipment is not received as complete by the Department on or before the specified date. The decision as to the assessment of a penalty shall be that of the Fire Chief. The decision shall be final. This shall be in addition to any other remedies to which the Township may avail itself.

15.0 Payment (CHASSIS PAYMENT REQUIRED?)

The Company shall invoice the Township of McNab/Braeside following inspection and approval of the equipment provided. The Township shall pay said invoice within thirty (30) days. The Township shall have the right to withhold, from any sum otherwise payable to the Company, such amount as may be sufficient to remedy any defect or deficiency in the work, pending correction of the samphire de.

16.0 Tax Status

The Harmonized Sales Tax (HST) shall be indicated in the prices quoted. All other taxes and fees shall be included in the quoted unit price.

17.0 Default by Company

If the Company commits any act of bankruptcy or if a receiver is appointed on account of its insolvency or in respect of any of its property or if the Company makes a general assignment for the benefit of its creditor, then, in any such case, the Township may, without notice, terminate the Contract.

If the Company fails to comply with any request, instruction or order of the Township or fails to pay its accounts or fails to comply with or persistently disregards statutes, regulations, by-laws or directives or relevant authorities relating to the work or fails to prosecute the work with skill and diligence or assigns or sublets the Contract without the Township's written consent or refuses to correct defective work or is otherwise in default in carrying out its part of any of the terms, conditions and obligations of the Contract, then, in any such case, the Township may, upon expiration of ten (10) days from the date of written notice to the Company, terminate the Contract.

Any termination of the Contract by the Township, as aforesaid, shall be without prejudice to any other rights or remedies the Township may have.

If the Township terminates the Contract, it is entitled to:

- Take possession of all of the work in progress and finish the work by whatever means the Township may deem appropriate under the circumstances.
- Withhold any further payments to the Company until its liability to the Township can be ascertained.
- Recover from the Company loss, damage and expense incurred by the Township by reason of the Company's default. Said recovery (or portion therefore) may be deducted from any monies due or becoming due to the Company.

18.0 Liability

While the Township has used considerable effort to ensure the accuracy of information in this requested document, it does not guarantee the correctness of the information and shall not be held liable or accountable for any error or omission, which may be identified at a later date. All information contained in this document with respect to operations, quantities, values, descriptions of properties, losses, etc., are reasonably and realistically accurate to the best of the Township's knowledge at the time of issuance of this request.

19.0 Insurance

The successful Proponent shall maintain sufficient Public Liability Insurance and shall provide to the Township proof of such insurance in the form of a Certificate of Liability issued by an insurance company licensed to write property casualty insurance in the Province of Ontario and providing as a minimum requirement the following:

i) $2,000,000 primary limits (or primary plus excess liability coverage equaling $2,000,000 or greater) for both General Liability and owned Automobile Liability, coverage to include Bodily Injury, Property Damage and Products/Completed Operations; policies to be written on an occurrence basis.

ii) $2,000,000 coverage for Professional Liability Insurance against Errors and Omissions.

iii) Certificates must provide for sixty (60) days' notice to the Township of McNab/Braeside in the event of cancellation or in the event of nonrenewal of an Insurance Policy or pertinent coverage.

iv) Certificates to name the Corporation of the Township of McNab/Braeside as additional insured with respect to the work being performed.

The successful Proponent is required to protect its employees with WSIB coverage and a valid Certificate of Clearance indicating the project involved must accompany the first invoice for payment.

The Proponent agrees that if the Proponent fails to take out or keep in force any such insurance and should the Proponent fail to rectify the situation within seventy-two (72) hours after written notice by the Township, the Township has the right, without assuming any obligation in connection herewith, to effect such insurance at the sole cost of the Proponent which cost shall be payable on demand as additional rent.

20.0 Safety Requirements

The bidder will meet all Federal and Provincial safety standards and laws that are in effect on the date of the bid for the item(s) that are being specified and the particular use for which they are meant.

21.0 CAN/ULC Standard S515

The Underwriter's Laboratory of Canada (ULC) Standard CAN/ULC-S515 for Automotive Fire Apparatus, in force at the time of the preparation of these specifications, shall be used as a reference and, unless otherwise specified in these specifications, its requirements shall be met by the bidder. Mandatory minor apparatus equipment as stated in the applicable paragraphs of the standard shall not be provided unless specifically stated and listed in purchaser's written specifications.

22.0 Title

The Proponent has the full power and legal right to convey title to all products hereunder which shall pass to the Township in accordance with the terms of the contract and all goods and products hereunder shall be free from all liens, encumbrances, security interests and that all transactions contemplated under the contract are in the ordinary course of business of the Bidder.

23.0 Accessibility

The Township is committed to the accessibility principles of preventing and removing barriers in accessing goods and services to people with disabilities and is bound by the Standards under the Accessibility for Ontarians with Disabilities Act, 2005 as may be amended from time to time. Pursuant to Section 6 of Ontario Regulation 429/07 ("Regulation"), Accessibility Standards for Customer Service made under the *Accessibility for Ontarians with Disabilities Act, 2005*, the contractor, i.e. successful Bidder/proponent, shall ensure that all of its employees, agents, volunteers, or others for whom it is at law responsible, receive training about the provision of the goods and services contemplated herein to persons with disabilities. Such training shall be provided in accordance with Section 6 of the Regulation and shall include, without limitation, a review of the purposes of the Act and the requirements of the Regulation, as well as instruction regarding all matters set out in Section 6 of the Regulation.

24.0 Municipal Freedom of Information and Protection of Privacy Act (MFIPPA)

In accordance with the Municipal Freedom of Information and Protection of Privacy Act, the information collected in response to the Request for Proposal is collected under the authority of the Corporation of the Township of McNab/Braeside and the Municipal Act, S.O. 2001, c.25, as

amended. The information collected will be used solely for the purpose of evaluating the submissions for supplying external auditing services. All proposals submitted become the property of the Township. Because of MFIPPA, respondents are reminded to identify their proposal material for specific scientific, technical, commercial, proprietary, or similar confidential information, the disclosure of which could cause them injury. Complete proposals are not to be identified as confidential. Questions about the collection of information should be directed to the CAO/Clerk.

25.0 Compliance with Laws

The Proponent shall comply with the relevant Federal, Provincial and Municipal statutes and regulations pertaining to the work and its performance. The firm shall be responsible for ensuring the similar compliance by its suppliers. The contract shall be governed by and interpreted in accordance with the laws of the Province of Ontario.

PROPOSAL FORM

Company Name: _____

Address: _____

City/Province/Postal Code: _____

Phone Number: _____ Fax Number: _____

Email: _____

BID DOCUMENT NAME: **Fabrication, Supply and Delivery of One (1) New Tanker/Pumper Fire Apparatus**

BID DOCUMENT NUMBER: **FD-2018-01**

1. I/We have reviewed all terms and conditions of all forms included as part of this RFP package.

2. I/We have read and understand all of the terms and conditions of the forms included as part of this RFP package.

3. I/We understand that if our Proposal is successful, all requirements of the successful Proponent as outlined in this document will be completed by the time and in the format required.

4. I/We acknowledge Receipt of Addenda as follows and that the pricing quoted includes the provisions set out in such addenda:

Addendum #:	Date Received:
#_____	_____
#_____	_____
#_____	_____

Dated at _____ this _____ day of _____, 2018.

_____ _____
Signature of Authorized Person Witness

_____ **(Company Seal)**
Print Name

_____
Position

SCHEDULE OF PRICES

Item No.	Description	Amount
1	Vehicle Price: Fabrication, Supply and Delivery of One (1) New Tanker/Pumper Fire Apparatus in accordance with RFP terms, conditions and specifications	$
2	Applicable Taxes:	$
	TOTAL BID PRICE	$

Pricing shall be held firm for a maximum of 60 calendar days

****Delivery Date, no later than:**_____, 201_
Note: Delivery of the completed vehicle shall be F.O.B. Fire Department no later than 270 calendar days after the acceptance of the order.

I / We do hereby quote and offer to enter into a Contract, to provide the equipment described or implied herein, in strict accordance with the RFP documents and to accept in full payment, therefore, the sums as set forth, for the applicable item(s).

I/WE further declare that all statements, schedules and other information provided in this proposal are true, complete and accurate in all respects to the best knowledge and belief of the Bidder.

I/WE further declare that this proposal is made without collusion, connection, knowledge, comparison of figures or arrangement with any other company, firm or persons making a proposal and is in all respects fair and without collusion for fraud. I/we understand that this may result in the rejection of the proposal.

I/WE further declare that no Township employee is or will become interested, directly or indirectly as a contracting party or otherwise in the supplies, work or business to which it relates or in any portion of the profits thereof, or in any such supplies to be used therein or in any of the monies to be derived there from.

Company Name: _____

Dated at _____ this _____ day of _____, 2018.

_____ _____
Signature of Authorized Person Witness

_____ **(Company Seal)**
Print Name

_____
Position

QUALIFICATION SHEET

All bidders must full this form out completely. Bids not returned with this form completely filled out will be disqualified.

Any blank spaces or noncompliance to **Mandatory Requirements** could result in the manufacturers bid submittal being disqualified.

REQUIREMENTS

1) The bidder must have been manufacturing fire apparatus continuously, without interruption for a minimum of Twenty (20) years. (**Mandatory Requirement)**

   Comply (Yes/No) _____

2) The vehicle proposed must not be a prototype. Photos of the proposed model to be included with the bid package with the customer's contact information (**Mandatory Requirement)**

   Comply (Yes/No) _____ Photos Attached (Yes/No)_____

   Customer Contact Attached (Yes/No)_____

3) How long has the proposed vehicle been in production?

   Number of Years _____

4) The bidder shall have a documented and certified ISO 9001 quality program in place. A copy of the certifications must be included with the bid submittal. The apparatus manufacturer shall provide the name of the ISO provider, as well as the ISO providers contact information including phone number. (**Mandatory Requirement)**

   Comply (Yes/No) _____ Certificates Attached (Yes/No)_____

   Contact Information Attached (Yes/No)_____

5) The bidder shall have a quality manual available for inspection by the purchaser (**Mandatory Requirement)**

   Comply (Yes/No) _____

6) The bidder must indicate that they are the prime contractor for this bid, and that all non-purchased components are not subcontracted.

   Comply (Yes/No) _____

7) All welding on the apparatus body and plumbing systems must be performed by certified welders. The certificates must be certified in a minimum of Division 2. Copies of the certification must be attached with the bid submittal. (**Mandatory Requirement)**

Comply (Yes/No)_____ Certificates Attached (Yes/No)_____

8) The apparatus manufacturer must be a current member of the Fire Apparatus Manufacturers Association (FAMA). A copy of the certificate must be attached with the bid submittal.

Comply (Yes/No)_____ Certificates Attached (Yes/No)_____

9) The apparatus manufacturer must provide documentation of having a certified engineer on staff with the bid submittal. **Sub Contracted Engineers Shall Not Be Acceptable And Shall Disqualify The Bid** (**Mandatory Requirement)**

Comply (Yes/No)_____ Certificates Attached (Yes/No)_____

10) The manufacturer of the apparatus must supply a Certificate of Insurance proving that they carry a minimum of $25,000,000.00 in product liability insurance. Bids not meeting this requirement will not be accepted. A copy of the certificate shall be included with the bid submittal. **(Mandatory Requirement)**

Comply (Yes/No)_____ Certificates Attached (Yes/No)_____

11) The manufacturer of the apparatus must be registered with Transport Canada to the National Safety Mark Standards. Bids not meeting this requirement will not be accepted. Copies or registration must be attached with the bid submittal. **(Mandatory Requirement)**

Comply (Yes/No)_____ Certificates Attached (Yes/No)_____

12) The manufacturer of the apparatus must be certified and in good standing with the Workers Compensation Board. Proof of certification must be supplied with the bid. A manufacturer that is not certified in Factory Manufacturing or not in good standing with their local Workers Compensation Board shall be disqualified (**Mandatory Requirement)**

Comply (Yes/No)_____ Certificates Attached (Yes/No)_____

MANUFACTURER, WARRANTY AND SERVICE

The warranty information provided below shall be applicable to items of this Request for Proposal.

The specifications provided in this RFP document lists only the major details of the vehicles and equipment required. It is the Bidder's responsibility to deliver fully equipped vehicles and equipment, with compatible components, to provide dependable efficient service.

Requirements of the Apparatus Manufacturer

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

Warranty Requirements of Apparatus

Additional information relating to Warranty may be attached to this section and submitted with your RFP submission, for evaluation.

Signed Manufacturer's Factory Warranty documents shall be supplied for the vehicles and equipment purchased.

The specific warranty requirements of the Fire Apparatus is as follows:

1) Chassis – Shall be as per the chassis manufacturer
2) Engine—Shall be as per engine manufacturer—Five (5) Years
3) Transmission—Shall be as per transmission manufacturer—Five (5) Years
4) Pump—Shall be as per pump manufacturer—Five (5) Years
5) Body—Shall be as per apparatus manufacturer—Twenty (20) Years non-prorated corrosion perforation
6) Paint—Shall be as apparatus manufacturer—Ten (10) Years non-prorated
7) Accessories—If manufactured by apparatus manufacturer shall be—One (1) Year

The Township may elect at its discretion to undertake any necessary repairs or adjustments to the fire apparatus that may be required during the warranty period and will be reimbursed for all costs incurred for the repair, upon submission of a completed warranty claim form.

Service

The Proponent shall provide their service agency location(s), contact(s), telephone numbers as well distance to Fire Station #1 (Glasgow), 2494 Russett Drive, Arnprior, Ontatio.

The service agency, at the location address provided, shall be capable of performing all required service & maintenance tasks (routine or unforeseen) on a a "24 Hour", "7-Day Per Week" emergency parts and service toll free telephone number.

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

Service Company Name	Service Location Address	Contact Name	Phone Number	Distance to Township Yard (km)

Availability of Parts

The Proponent shall provide details regarding the availability of parts both locally and for special orders.

_____

_____

_____

Engineering Drawings

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

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

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

Testing and Certification

The completed vehicle shall be tested and labeled to CAN/ULC-S515-13 by an independent third party certification organization.

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

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

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

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

There shall be no conditional, temporary, or partial certification of test results.

Appropriate forms of data sheets shall be provided and used during testing.

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

The manufacturer shall be certified to ISO 9001

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

COMPANY PROFILE AND REFERENCES

Company Profile

Proponents are to provide information on their company such as, but not limited to, the following:

a) Provide a general company profile including the ownership and affiliations of the firm and number of years the firms has been in business.
b) Address, and contact information for the proposing entity.
c) Size of company, number for employees both locally and other.

Additional information relating to the Company Profile may be attached to this section and submitted with your RFP submission, for evaluation.

_____

_____

_____

_____

_____

_____

_____

_____

_____

References

The Proponent shall provide references for three (3) municipalities or private companies that are utilizing the quoted equipment.

Municipality/Company Name	Equipment Make/Model	Year	Contact Name	Phone Number

DETAILED SPECIFICATIONS

(1) New Tanker/Pumper Fire Apparatus

1.1 The completed unit shall be delivered F.O.B to the Township of McNab/Braeside Fire Station #1 (Glasgow), 2494 Russett Drive, Arnprior, Ontario.

1.2 The unit must be a new 2018 standard production model and must comply with all Federal and Provincial Legislation in effect, at the time of delivery.

1.3 Proponent shall include with the Proposal a complete list of specifications and features that are included with the quoted unit.

1.4 The complete unit shall be delivered to the Township by an authorized representative of the manufacturer/supplier.

1.5 Upon delivery of the complete unit, adequate time shall be spent with the Township to train and review any pertinent operational and maintenance specifications. The training and review shall be carried out/performed by a qualified representative of the manufacturer with up to seven (7) Township Fire Department members onsite for this training/review.

Acknowledge each item of the specifications by indicating **YES or No or EXCEPTION** in the Proponent's Response column to confirm compliance with the specifications if no details are required, and a description to indicate any deviation of item being bid from the specifications. Any deviations from these specifications which, in the opinion of the Township do not affect the overall requirements of the unit may be considered.

Leave no blanks. Tenders submitted without full details may be rejected as informal.

INTENT OF SPECIFICATIONS	YES ❒ NO ❒ EXCEPTION ❒
It is the intent of these specifications to cover the furnishing and delivery to the purchaser of a complete apparatus equipped as hereinafter specified. With a view to obtaining the best results and the most acceptable apparatus for service in the Fire Department, these specifications cover only the general requirements as to the type of construction and tests to which the apparatus must conform, together with certain details as to finish, equipment, and appliances with which the successful bidder must conform. Minor details of construction and materials where not otherwise specified are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features. The applicable sections of the latest edition of the **CAN/ULC- S515, Standard for Automobile Fire Fighting Apparatus shall** be used as a reference and, unless otherwise specified in these specifications, its requirements shall be met by the bidder. Mandatory minor apparatus equipment as stated in the applicable paragraphs of the standards shall not be provided unless specifically stated and listed in purchaser's written specifications. The chassis shall be a custom or commercial model designed specifically for fire service and/or severe service, built of steel, aluminum or stainless steel. The body shall be custom built of aluminum, stainless steel or polypropylene and shall be designed for strength, durability and safety. Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified and shall state the location of the factory where the apparatus is to be built. They shall also show that they are in a position to render prompt service and to furnish replacement parts for the apparatus. Each bid shall be accompanied by a set of "Contractor's Specifications" consisting of a detailed description of the apparatus and equipment proposed to which the apparatus furnished under the contract must conform. Total price on the bidder's proposal sheet must include all items listed in the specifications. Listing any items contained in the specifications as an extra cost item shall	

automatically be cause for rejection.	
GENERAL CONSTRUCTION, QUALITY AND WORKMANSHIP The apparatus shall be designed and constructed with consideration for ease of operation and safety. The apparatus shall comply with all applicable federal, state or provincial motor vehicle laws and regulations. The apparatus shall be designed and the equipment mounted with due consideration to distribution of load between the front and rear axles so that all specified equipment, including a filled water tank, full complement of personnel and fire hose shall be carried without damage to the apparatus. Guards, shields or other protection shall be provided where necessary to prevent injury to personnel by hot, moving, or rotating parts during normal non-maintenance operations. Electrical insulation or isolation shall be provided where necessary to prevent electrical shock from onboard electrical equipment. The workmanship shall ensure a safe operating environment free of accessible sharp projections and edges. Hydraulic lines, air system tubing, control cables and electrical lines shall be clipped to the frame or body structure of the apparatus and suitably protected where they pass through body panels or structural members. Apparatus components that interfere with the repair or removal of other components shall be attached with fasteners that will allow the component to be removed and replaced with ordinary hand tools. These components shall not be welded or otherwise permanently secured in place. Dissimilar metals in intimate contact with each other shall be protected against electrolytic corrosion.	YES ❒ NO ❒ EXCEPTION ❒

PUMPER CERTIFICATION TEST (ULC) The fire pump shall be tested and certified to Underwriters Laboratories of Canada (ULC), as a **Pumper** as defined in the current edition of CAN/ULC- S515, Standard for Automobile Fire Fighting Apparatus. The testing shall be conducted at the factory of the contractor by a representative of ULC, prior to delivery of the completed unit. A copy of the test results shall be sent directly to the purchaser with the completed unit. A stamped test plate bearing the ULC mark shall be attached to the pump operator's position. **NO EXCEPTIONS.**	YES ❒ NO ❒
CERTIFICATIONS The following certificates represent the manufacturer's commitment to building to the accepted industry standards and **must** be included in the proposal package: FAMA CERTIFICATE Manufacturer shall belong to the Fire Apparatus Manufacturer's Association. Current certificate must be included with proposal. No Exceptions PAINTING CERTIFICATES The manufacturer's painter shall be product specific certified is preferred. Current certificates to be included with proposal. CWB CERTIFICATIONS The manufacturer must include current certifications from the Canadian Welding Bureau (or AWS) in Stainless Steel and Aluminum and steel. No Exceptions.	YES ❒ NO ❒ EXCEPTION ❒

APPROVAL DRAWINGS & MANUFACTURER SPECIFICATIONS Engineering blueprints and full detailed specifications, specifically for this apparatus, shall be provided by the manufacturer in the package. The drawings shall be drawn to scale on a CAD system to ensure an accurate and professional drawing. The drawing shall show a minimum of three (3) views of the vehicle (left side, right side and rear). The blueprints shall show the overall dimensions of the apparatus, proposed compartment sizes and features, as well as the location of all emergency warning and work lights that are to be provided on the apparatus. No Exceptions ***An example drawing has been included with this package. This drawing is a concept design only and included as a guideline. The department understands that manufactures will provide their own designs to meet the following specifications.***	YES ❒ NO ❒
PRE-CONSTRUCTION MEETING(S) One (1) meeting(s) shall be conducted at the manufacturer's facility prior to the start of construction. Representatives of the manufacturer and the purchaser shall be in attendance to review the specifications and construction details. The manufacturer shall be responsible for the cost of transportation, lodging, and food for up to three (3) representatives of the purchaser attending the meeting(s). Air travel from Ottawa, Ontario shall be provided by the manufacturer should the distance be more than 400 km from the fire hall	YES ❒ NO ❒ EXCEPTION ❒
PRE-DELIVERY INSPECTION(S) One (1) Inspection shall be conducted at the manufacturer's facility prior to delivery of the completed apparatus. The manufacturer shall be responsible for the cost of transportation, lodging, and food for up to three (3) representatives of the purchaser attending the meeting(s). Air travel from Ottawa, Ontario will be provided by the manufacturer should the distance be more than 400 km from the fire hall.	YES ❒ NO ❒ EXCEPTION ❒

DELIVERY AND TRAINING Whenever applicable, the apparatus, to insure proper break-in of all components while still under warranty, shall be delivered under its own power. Rail or truck freight is not desirable, unless circumstances merit such. A qualified and responsible representative of the manufacturer shall instruct personnel specified by the purchaser, in the proper operation, care, and maintenance of the firefighting apparatus and equipment delivered. As the department is a volunteer department training may be required during the evening or weekends and must be a minimum of 5 hours.	YES ❒ NO ❒ EXCEPTION ❒
MANUALS Two copies of the manual with wiring diagrams shall be included with delivery. The manual and wiring diagram must be "as built" and not generic. One (1) printed manual and one (1) digital.	YES ❒ NO ❒ EXCEPTION ❒
INTERNATIONAL COMMERCIAL CHASSIS The township prefers to purchase the chassis locally if possible. Please state the chassis dealership address. An International Commercial Chassis shall be supplied with the following features: • Year: 2018 • Model: 7500 SBA 6 X 4 • Cab: Conventional – Two (2) Seats • Wheelbase: 228 • Cab to Axle: 160.90 • Engine: Navistar N10 350 HP • Transmission: Allison 3000 EVS • GVWR: 62 000 • Front GVWR: 16 000 • Rear GVWR: 46 000	YES ❒ NO ❒ EXCEPTION ❒ CHASSIS DEALER _____ _____

FLUID DATA PLAQUE IN CAB A permanent plate shall be installed in the chassis cab to specify the quantity and type of the following fluids used in the vehicle: a) Engine oil b) Engine coolant c) Chassis transmission fluid d) Pump transmission lubrication fluid e) Pump primer fluid f) Drive axle(s) lubrication fluid g) Air conditioning refrigerant h) Air conditioning lubrication oil i) Power steering fluid j) Cab tilt mechanism fluid k) Transfer case fluid l) Equipment rack fluid m) Air compressor system lubricant n) Generator system lubricant o) Tire Pressure Cold - Front (per NFPA) p) Tire Pressure Cold - Rear (per NFPA)	YES ❒ NO ❒ EXCEPTION ❒
FIRST AID KIT MOUNTED IN CAB One (1) First Aid Kit shall be mounted in the chassis cab.	YES ❒ NO ❒ EXCEPTION ❒
2-1/2 LB. FIRE EXTINGUISHER IN CAB One (1) 2-1/2 lb. Multipurpose dry chemical fire extinguisher shall be installed in a mounting bracket in the chassis cab.	YES ❒ NO ❒ EXCEPTION ❒
REFLECTIVE TRIANGLES IN CAB Three (3) reflective safety triangles with carrying case shall be supplied in the chassis cab.	YES ❒ NO ❒ EXCEPTION ❒

CHASSIS CAB STEP AREA ENHANCEMENT The chassis cab steps, fuel tank, and battery box shall be optioned from the chassis manufacturer to provide enhanced products and finishes. These options will create more durable and cosmetically pleasing surfaces, as well as improve the ergonomics. In the case of an International cab and chassis, these enhancements shall include; two bright aluminum cab steps per door, a polished aluminum fuel tank with bright finish stainless steel straps, and a bright finish stainless steel battery box cover.	YES ❒ NO ❒ EXCEPTION ❒
AIR COMPRESSOR SYSTEM WITH BATTERY CONDITIONER A Kussmaul Pump Plus 1000 air compressor and automatic battery charger shall be installed. The automatic charger shall maintain 1 bank of batteries with a maximum output current of 15 amps. A 3 Amp Battery Saver shall be included to power rechargeable handlights and other accessories and remove their load from the battery whenever A. C. power is applied to the charger. The automatic charger shall sense the state of charge of the vehicle batteries and recharge exactly as much as required. When the batteries are fully charged, all charging shall stop. The state of charge of the batteries shall be indicated on a bar graph display whenever power is applied to the vehicle. The bar graph display may be remotely located on the vehicle if required. The air compressor shall have a capacity of .30 CFM @ 80 PSI and utilize a pressure switch to start and stop the compressor as required, to maintain system pressure. A check valve shall be installed to prevent system air loss. A Selector Switch shall be provided on the charger to operate the compressor either as a D.C. compressor or as an A. C. compressor. In either switch position the compressor shall operate from the vehicle's battery. When "D.C." is selected, the compressor shall operate whenever the pressure switch senses low system pressure. When the Selector Switch is placed in the "A. C." position the compressor shall operate when the A. C. power is available, but shut off when the shoreline is removed. In either switch position the compressor is operated by the vehicle's battery	YES ❒ NO ❒ EXCEPTION ❒

SHORELINE RECEPTACLE A 15 amp. male receptacle shall be provided for shoreline power. The receptacle shall be equipped with a hinged, weather-resistant chrome cover and shall be mounted on the vehicle near the driver's door step.	YES ❒ NO ❒ EXCEPTION ❒
REAR TOW PLATES A custom fabricated tow plate assembly shall be installed at the rear of the chassis frame. The assembly shall be of the "outrigger" design constructed of 1/4" heat-treated steel flat stock and "U" channel. The assembly shall incorporate Two (2) elongated flat tow plates with a minimum 2" diameter eye opening. This entire rear sub-frame/tow eye assembly shall be adequately reinforced and designed to permit towing of the fully loaded vehicle directly from the rear or up to 45-degrees on each side of center without flex or damage to the vehicle chassis frame or body. The complete assembly shall be painted black unless specified otherwise.	YES ❒ NO ❒ EXCEPTION ❒
REAR MUDFLAPS Heavy duty black rubber mud flaps incorporating the manufacturer's logo shall be installed behind the rear wheels, one (1) each side.	YES ❒ NO ❒ EXCEPTION ❒
CHASSIS PROVIDED AIR HORNS The air horns will be an integral part of the chassis	YES ❒ NO ❒ EXCEPTION ❒
ENGINE COMPARTMENT LIGHTS Two (2) weatherproof 12 volt lamps with clear lens shall be installed in the chassis engine compartment. The lamps shall be controlled automatically by a mercury switch, activated when the hood is raised.	YES ❒ NO ❒ EXCEPTION ❒

SCBA BRACKET FOR CREW CAB A Ziamatic series QM-ROLO- SA Rol-Loc Mechanical SCBA Bracket shall be provided. The bracket shall be equipped with a PVC coated top clamp to securely lock SCBA cylinders without the need for straps or levers. A Ziamatic series QM-AF-R footplate further ensures that the cylinder is secure. The clamping system shall meet the requirements of NFPA 1901. The bracket shall be installed in each SCBA seat in the cab or crew cab.	YES ❒ NO ❒ EXCEPTION ❒
POWER BAR IN CAB WIRED TO EXISTING SHORELINE CONNECTION A 120V power bar shall be installed in the cab to provide power for chargers and other devices when the vehicle is parked in quarters. The power bar shall be connected to the existing receptacle mounted on the vehicle.	YES ❒ NO ❒ EXCEPTION ❒
MAP LIGHT A map light with flexible neck and integral switch shall be provided in the chassis cab.	YES ❒ NO ❒ EXCEPTION ❒

FIRE PUMP	A Hale Model DSD, single stage Midship, centrifugal fire pump shall be installed. The pump shall have a rated capacity of **5000 LPM** and meet all applicable NFPA 1901 requirements. The pump shall deliver the percentage of rated capacity at the pressures listed below: 100% of rated capacity at 150 PSI Net Pump Pressure 70% of transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance. The entire pump shall be hydrostatically tested to a pressure of 600 PSI. The pump shall be fully tested at the pump manufacturer's factory to the performance spots as outlined by the latest NFPA Pamphlet No. 1901. Pump shall be free from objectionable pulsation and vibration. The pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI (All metal moving parts in contact with water shall be of high quality bronze or stainless steel. Pump utilizing castings made of lower tensile strength cast iron not acceptable. Pump body shall be vertically split, on a single plane for easy removal of entire impeller assembly including clearance rings. Pump shaft to be rigidly supported by two bearings for minimum deflection. The bearings shall be heavy-duty, deep groove ball bearings in the gearbox and they shall be splash lubricated. The pump shaft shall have only one mechanical seal. The mechanical seal shall be spring loaded, maintenance free and self-adjusting Pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machined, hand ground and individually balanced. The vanes of the impeller intake eyes shall be hand -ground and polished to a sharp edge and be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. Impeller clearance rings shall be bronze, easily renewable without replacing impeller or pump volute body. The pump shaft shall be heat-treated, electric furnace, corrosion resistant stainless steel. Pump shaft must be sealed with double-lip oil seal to keep road dirt and water	YES ❒ NO ❒ EXCEPTION ❒

	out of gearbox.	
GEARBOX	The gearbox shall be assembled and tested at the pump manufacturer's factory. (No exceptions.) Pump gearbox shall be of sufficient size to withstand up to 16,000 lbs. ft. of torque of the engine in road operating condition. The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature. The gearbox drive shafts shall be of heat-treated chrome nickel steel and at least 2-3/4 inches in diameter, on both the input and output drive shafts. They shall withstand the full torque of the engine in both road and pump operating conditions. All gears both drive and pump, shall be of highest quality electric furnace chrome nickel steel. Bores shall be ground to size and teeth integrated, crown shaved, and hardened to give an extremely accurate gear for long life, smooth, quiet running, and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust. (No exceptions.) The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected. The gearbox shall be equipped with a power shift. The shifting mechanism shall be a heat treated, hard anodized aluminum power cylinder, with stainless steel shaft. An in-cab control for rapid shift shall be provided that locks in road or pump. For automatic transmissions, three green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift from Road to Pump position. Two green lights to be located in the truck driving compartment and one green light on pump operator's panel adjacent to the throttle control. For manual transmissions, one green warning light will be provided for the driving compartment and one green light on the operator's panel. All lights shall have appropriate identification/instruction plates.	YES ❒ NO ❒ EXCEPTION ❒

PUMP INLET MANIFOLD The pump inlet manifold shall be a custom fit weldment of 6" schedule10 Stainless steel pipe and 6" butt weld schedule 10 Stainless Steel fittings to minimize turbulence .All welding must be performed by a CWB certified shop and welders to CSA standard W59-03.Flanged connections, victraulic, NPTF and NPTM are to be used only to connect manifolds to pump and at valve termination points .All pipe and fittings shall be T304 stainless steel. The manifold when installed is hydrostatically tested to 500 psi as per NFPA 1901 16.5.3 with supporting documentation from the manufacturer.	YES ❒ NO ❒ EXCEPTION ❒
DRIVELINES Hollow-tube drive lines and universal joints, properly matched to the engine and transmission output torque ratings, shall be installed.	YES ❒ NO ❒ EXCEPTION ❒
PUMP ANODE SYSTEM An anti-corrosion system shall be installed to prevent galvanic corrosion within the fire pump. The system shall consist of one (1) sacrificial zinc anode(s), mounted on each of the main pump intake(s). The anode(s) shall be easily removable for inspection and replacement.	YES ❒ NO ❒ EXCEPTION ❒
PUMP DISCHARGE MANIFOLD The pump discharge will be custom fabricated from schedule 10 stainless steel pipe and butt weld fittings to minimize turbulence. All welding must be performed by a CWB certified shop and welders to CSA standard W59 – 03. Flanged connections, victraulic, NPTF and NPTM fittings are to be used only to connect manifolds to pump and at valve termination points. All pipe and fittings shall be T304 stainless steel. The manifold when installed will be hydrostatically tested to 500 psi as per NFPA 1901 16.5.3 with supporting documentation from the manufacturer.	YES ❒ NO ❒ EXCEPTION ❒

TOTAL PRESSURE GOVERNOR (TPG)	YES ❒ NO ❒ EXCEPTION ❒
Apparatus shall be equipped with a Class1 “Total Pressure Governor” (TPG) that is connected to the Engine Control Module (ECM) mounted on the engine. The “TPG” will operate as a pressure sensor (regulating) governor (PSG) utilizing the engine’s J1939 data for optimal resolution and response when supported by the engine manufacturer. If J-1939 engine control is not supported, then analog remote throttle control shall be provided by the “TPG”. The "TPG" shall utilize control algorithms that minimize pressure spikes during low or erratic water supply situations. The “TPG” shall be backwards compatible to any engine that supplies J1939 RPM, Temperature and Oil Pressure information providing the ability to maintain a consistent fleet fire-fighting capability and reduce operator cross training and confusion. PSG system diagnostics shall be built in and accessible by technicians. Programmable presets for RPM and Pressure settings shall be easily configurable. The straightforward menu structure shall allow the “TPG” configuration to match existing apparatus operation as closely as possible. The “TPG” shall also include indication of engine RPM, system voltage, engine oil pressure and engine/transmission temperature with audible alarm output for all. The “TPG” uses the J1939 data bus for engine information, requiring no additional sensors to be installed. The "TPG" shall monitor and display pump and engine hours. The “TPG” shall use J1939 broadcast warnings for the alarm as a standard and allow the “user” to select warning values if “SOP’s” dictate.	

SUPPLEMENTARY HEAT EXCHANGER COOLING SYSTEM A heat exchanger shall be installed for supplementary engine cooling during fire pump operations. The system shall allow cooling water from the fire pump to circulate around the engine coolant without mixing or coming into direct contact. A valve mounted at the pump control panel shall regulate the flow of water from the fire pump to the heat exchanger. The control valve shall be labeled to identify the valve and indicate the direction of opening and closing.	YES ❒ NO ❒ EXCEPTION ❒
PUMP PRIMING SYSTEM The pump shall be equipped with a Hale model ESP (Environmentally Safe Priming) priming system. The pump shall be a positive displacement, vane type, powered by a12 volt electric motor, totally enclosed to prevent dust, dirt and water entering. The pump shall be self-lubricating, eliminating the need for an oil reservoir. The pump shall be controlled from the pump operator's panel.	YES ❒ NO ❒ EXCEPTION ❒
MASTER DRAIN VALVE A Trident master pump drain valve shall be provided. The ten (10) port brass valve shall have a round chrome plated brass handle. The valve shall be enclosed with a rubber type boot for a single drainage outlet.	YES ❒ NO ❒ EXCEPTION ❒

PUMP PIPING The entire discharge and intake piping system, valves, drain cocks and lines and intake and outlet caps or closures, shall be suitable to withstand a minimum hydrostatic burst pressure of 500 psig (3450 kPag). The only exception to this requirement shall be the tank fill and tank to pump lines on the tank side of the valves. Intake and outlet caps or closures, 3-1/2" and smaller, shall be secured to the apparatus with chains or cables. Manually operated individual drain or bleeder valves, as indicated in this specification, shall be Class 1 style 34V, 3/4" ball type valves. The valve shall have an all brass body, teflon seals, nickel plated brass ball and chrome plated handle with recessed identity tags. Automatic drain valves, as indicated in this specification, shall be Class 1 style 34AD, 3/4" size. This valve is normally open and closes at 6 PSI. The valve shall have an all brass body, heavy duty neoprene seal, and brass check assembly with a stainless steel spring. Suction and discharge lines of 2" or larger diameter shall be **stainless steel** or heavy duty pressure/vacuum hose with stainless steel or brass threaded end fittings. Where vibration or chassis flexing may damage or loosen piping, the pipe shall be equipped with Victaulic or rubber couplings. All threaded fittings shall be sealed with a heavy duty anaerobic pipe sealant. It shall be in a liquid form with a consistency similar to grease to prevent corrosion between the mating surfaces and to allow for easy disassembly of the joints if necessary. Teflon tape shall not be acceptable. All water carrying pressure gauge lines are to be of flexible polypropylene tubing to prevent breakage from vibration.	YES ❒ NO ❒ EXCEPTION ❒
AKRON INTAKE AND DISCHARGE VALVES The pump intake and discharge valves shall be manufactured by Akron Brass and shall utilize a nickel-chrome plated brass ball for longer valve life and improved sealing abilities.	YES ❒ NO ❒ EXCEPTION ❒

HYDROSTATIC TESTING The discharge and intake piping, valves, drain cocks and lines and intake and outlet closures, shall be suitable to withstand a minimum hydrostatic burst pressure of 3450 Kpa (500 psig). The only exception to this requirement shall be the tank fill and tank suction piping on the tank side of the valve. Testing will be completed by the final stage apparatus manufacturer and a certificate indicating results must include in with delivery of the apparatus. NO EXCEPTIONS	YES ❒ NO ❒ EXCEPTION ❒
INTAKE PRESSURE RELIEF VALVE An Elkhart 2-1/2" intake relief valve shall be permanently installed on the intake side of the pump. It shall have minimum pressure adjustment of 75 to 250 psig with the discharge plumbed to the underside of the truck away from the operator. The valve shall be pre-set to pressure of 125 psi.	YES ❒ NO ❒ EXCEPTION ❒
PUMP BY-PASS A 3/8" discharge line shall be installed from the pump to the water tank. The discharge shall be controlled by a labeled valve located on the pump control panel.	YES ❒ NO ❒ EXCEPTION ❒
6" MAIN PUMP INTAKES Two (2) 6" pump intakes shall be provided, one on each side of the vehicle, extending through the side pump panels. The intakes shall be equipped with 6" male threads and removable screens.	YES ❒ NO ❒ EXCEPTION ❒
6 INCH CHROME SUCTION CAP Two (2) Long handle, chrome, pressure rated suction cap(s) with female threads shall be provided.	YES ❒ NO ❒ EXCEPTION ❒

PUMP INLET WARNING LABEL A permanent warning label shall be provided at the pump control panel, stating: "Warning -Death or serious injury might occur if proper operating procedures are not followed. The pump operator as well as individuals connecting supply or discharge hoses to the apparatus must be familiar with water hydraulics hazards and component limitations."	YES ❒ NO ❒ EXCEPTION ❒
2-1/2" AUXILIARY PUMP INTAKE(S), RIGHT SIDE One (1) Gated suction inlet(s) shall be provided at the right side pump panel. The valve(s) shall be 1/4 turn ball type, mounted behind the panel, with the control handle at the valve. Each inlet shall be furnished with a chrome plated, swivel inlet with 2-1/2" female threads, a removable strainer and a 2-1/2" male chrome plug with retainer chain. An individual 3/4" bleeder drain with a control handle shall be furnished. The drain shall be piped towards the ground, below the chassis frame.	YES ❒ NO ❒ EXCEPTION ❒
2-1/2" AUXILIARY PUMP INTAKE(S), LEFT SIDE One (1) Gated suction inlet(s) shall be provided at the left side pump panel. The valve(s) shall be 1/4 turn ball type, mounted behind the panel, with the control handle at the valve. Each inlet shall be furnished with a chrome plated, swivel inlet with 2-1/2" female threads, a removable strainer and a 2-1/2" male chrome plug with retainer chain. An individual 3/4" bleeder drain with a control handle shall be furnished. The drain shall be piped towards the ground, below the chassis frame.	YES ❒ NO ❒ EXCEPTION ❒

TANK SUCTION A tank to pump valve shall be installed between the water tank and the pump. The valve shall be a minimum 3" bronze, quarter turn, swing-out, full flow ball type. Piping shall be 4" I. d. The valve shall be controlled by a chrome push/pull locking type control installed on the pump control panel. A color-coded engraved, identification label shall be installed at the control. To prevent pressurization of the water tank, a check valve shall be installed between the pump and the valve.	YES ❒ NO ❒ EXCEPTION ❒
2-1/2" DISCHARGE(S), PUMP COMPARTMENT PANEL, LEFT SIDE Two (2) 2-1/2" diameter discharge(s) shall be piped to the left side pump panel. The valve(s) shall be 2-1/2" bronze, quarter turn, swing-out, full flow ball type, installed behind the pump panel. Piping shall be 2-1/2" I. d. A removable stainless steel garnish ring shall be installed on each discharge allowing for valve removal or maintenance without removing the side pump panel. The discharge(s) shall terminate outside of the pump panel with a 30 degree sweep discharge elbow with male threads, cap and chain. A 3/4" bleeder valve shall be provided for each discharge. The valve(s) shall be controlled at the pump control panel. The valve(s) shall lock at any position between open and closed and shall operate freely up to maximum pump discharge pressure. A color-coded, engraved identification label shall be installed at the control. Each discharge shall be equipped with a 2-1/2" pressure gauge, installed at the pump control panel.	YES ❒ NO ❒ EXCEPTION ❒

2-1/2" DISCHARGE(S), PUMP COMPARTMENT PANEL, RIGHT SIDE One (1) 2-1/2" diameter discharge(s) shall be piped to the right side pump panel. The valve(s) shall be 2-1/2" bronze, quarter turn, swing-out, full flow ball type, installed behind the pump panel. Piping shall be 2-1/2". A removable stainless steel garnish ring shall be installed on each discharge allowing for valve removal or maintenance without removing the side pump panel. The discharge(s) shall terminate outside of the pump panel with a 30 degree sweep discharge elbow with male threads, cap and chain. A 3/4" bleeder valve shall be provided for each discharge. The valve(s) shall be controlled at the pump control panel. The valve(s) shall lock at any position between open and closed and shall operate freely up to maximum pump discharge pressure. A color-coded, engraved identification label shall be installed at the control. Each discharge shall be equipped with a 2-1/2" pressure gauge, installed at the pump control panel.	YES ❒ NO ❒ EXCEPTION ❒

4" STORZ DISCHARGE(S), RIGHT SIDE PUMP COMPARTMENT PANEL One (1) 4" Storz discharge(s) shall be piped to the right side pump panel. The valve(s) shall be 3" bronze, slow operating, swing-out, full flow ball type, installed behind the pump panel. Piping shall be 3". A removable stainless steel garnish ring shall be installed on each discharge allowing for valve removal or maintenance without removing the side pump panel. Each discharge shall terminate outside of the pump panel with a 30 degree sweep discharge elbow with 4" Storz fitting, Storz cap and chain. A 3/4" drain valve shall be provided for each discharge. The valve(s) shall be controlled at the pump control panel. The valve(s) shall lock at any position between open and closed and shall operate freely up to maximum pump discharge pressure. A color-coded, engraved identification label shall be installed at the control. Each discharge shall be equipped with a 2-1/2" pressure gauge, installed at the pump control panel.	YES ❒ NO ❒ EXCEPTION ❒

TWO 1-1/2" or 1-3/4" CROSSLAY DISCHARGES A double crosslay compartment shall be provided on the pump compartment. One (1) adjustable 3/16" aluminum divider shall be installed to form two (2) hose beds, each with a capacity of 200' of 1-1/2" or 1-3/4" diameter, double jacket fire hose with nozzle. The floor of each hose bed shall be equipped with removable floor decking. The valves shall be 2" bronze, quarter turn, swing-out, full flow ball type, installed on a discharge manifold. Piping shall be 2" I. D. Each discharge shall terminate with a brass, 2" chicksan swivel reduced to 1-1/2" male threads. An automatic drain valve shall be provided for each discharge. The valves shall be controlled by a chrome push/pull type control installed on the pump control panel. The valves shall lock at any position between open and closed and shall operate freely up to maximum pump discharge pressure. A color-coded, engraved identification label shall be installed at the control. Each discharge shall be equipped with a 2-1/2" pressure gauge, installed at the pump control panel.	YES ❒ NO ❒ EXCEPTION ❒
VINYL COVER FOR CROSSLAY HOSEBED A vinyl cover with vinyl end flaps shall be provided for the crosslay hose bed. The cover and end flaps shall be fastened with snaps, twist-lock fasteners and/or Velcro in a manner to insure covers will remain in place while the apparatus is moving.	YES ❒ NO ❒ EXCEPTION ❒
CROSSLAY HOSEBED ROLLERS One (1) horizontal and two (2) vertical stainless steel roller assemblies shall be installed on both sides of the crosslay/transverse hose bed.	YES ❒ NO ❒ EXCEPTION ❒

2.5" TANK FILL A 2.5" tank fill valve shall be installed between the water tank and the pump. The valve shall be a bronze, quarter turn, swing-out, full flow ball type. Piping shall be 2.5" I. D. The valve shall be controlled by a chrome push/pull locking type control installed on the left side pump panel. A color-coded engraved, identification label shall be affixed adjacent to the control.	YES ❒ NO ❒ EXCEPTION ❒
PUMP ENCLOSURE AND PANEL - ALUMINIUM The fire pump enclosure shall be a freestanding module, attached and supported at the chassis frame rails, designed to permit independent flexing of the pump enclosure from the body. The enclosure shall be constructed from formed and fully welded 3/16" 5052H32 aluminium plate and an aluminium channel support structure. The top of the pump enclosure, or dunnage bin floor, shall have a removable aluminium cover. To provide access to the fire pump and the interior of the pump enclosure, the right upper side of the pump compartment shall be equipped with a hinged door and the right side lower panel shall be removable. The pump enclosure shall be equipped with running boards, located at the base of the pump enclosure, each side. The running boards will extend from the forward end of the body module to behind the chassis cab. The running boards shall be constructed of 6061-T6 aluminum Diamondback ventilated deckplate to provide a slip resistant surface. The running board assembly shall be supported by 3" x 2" full depth supports.	YES ❒ NO ❒ EXCEPTION ❒

PUMP CONTROL PANEL – SIDE MOUNT	YES ❒ NO ❒ EXCEPTION ❒
The pump control panel shall be located on the left side of the apparatus, and shall consist of upper and lower sections. The panels shall be fabricated from 12 gauge #4 polished stainless steel and shall be laser cut for precision. The upper instrument panel shall be attached with a full-length vertical stainless steel hinge. Quick release fasteners shall be used to secure the panel, allowing it to swing out for easy access to the instruments and gauges. A horizontal member shall be installed in the pump enclosure to provide structural support for the valve controls, allowing the controls to operate smoothly. In addition, all control rods shall be provided with universal joints with ball and socket connections to eliminate binding. Engraved labels shall be installed for all discharges and intakes. Discharge labels shall be color-coded. All other controls and indicators shall be labeled, as required, to indicate their function. The following controls and displays shall be located on the panels, configured for convenient operations: - Master pressure - Master vacuum - Individual discharge pressure - Engine information (RPM, oil pressure, coolant temperature, voltage) - All discharge controls - Engine speed controller - Pump pressure controller - Primer control - Tank fill control - Tank to pump control - Test taps for pump intake and pump pressure - Auxiliary cooler control - Master pump drain control - Water level indicator - Panel light switch - Pump compartment heater switch	

RUNNING BOARDS Side running boards, located at the base of the pump enclosure, each side will extend from the forward end of the body module to behind the chassis cab. They shall be constructed of 6061-T6 aluminum Diamondback ventilated deck plate to provide an NFPA compliant slip resistant surface, supported by formed aluminum brackets.	YES ❒ NO ❒ EXCEPTION ❒
PUMP ENCLOSURE - PAINT The entire pump enclosure, inside and out, shall be painted to match the apparatus body.	YES ❒ NO ❒ EXCEPTION ❒
MASTER PUMP INTAKE AND DISCHARGE GAUGES Two (2) Span 4 1/2" diameter master intake and discharge gauges shall be installed. The gauges shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The cases shall be temperature compensated with an internal breathing diaphragm to permit filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature material and be sealed from the water system using an isolating Sub-Z diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge faces shall be white with black and red lettering and shall be graduated in both Imperial and metric units over a range of 30" of vacuum to 600 psi and -100 to 4000 kPa. The gauges shall be installed on the pump control panel with the intake gauge mounted to the left of the discharge gauge. Each gauge shall be identified with an engraved label.	YES ❒ NO ❒ EXCEPTION ❒

PRESSURE GAUGES The discharge line pressure gauges shall be manufactured by Span and shall be 2-1/2" in diameter. The gauges shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The cases shall be temperature compensated with an internal breathing diaphragm to permit filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature material and be sealed from the water system using an isolating Sub-Z diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The gauge faces shall be white with black and red lettering and shall be graduated in both Imperial and metric units over a range of 0 to 400 psi and 0 to 2800 kPa.	YES ❒ NO ❒ EXCEPTION ❒
PUMP COMPARTMENT HEATER Two (2) 17,500 BTU forced air coolant heaters shall be installed. The heaters shall be mounted low in the pump house so that the heat will be distributed evenly in the pump house and will keep the drain lines open. A two speed switch shall be mounted on the pump panel for operation of the heaters.	YES ❒ NO ❒ EXCEPTION ❒
REMOVABLE HEAT PAN A removable heat pan shall be provided beneath the pump compartment for use during cold weather. It shall assist in warming the pump and piping by containing the heat from the engine's exhaust pipe and muffler within the pump compartment. The pan shall be supported in a box type structure bolted to the bottom of the pump compartment. The pan shall be easily removed for summer use.	YES ❒ NO ❒ EXCEPTION ❒

TANK LEVEL GAUGE A Class 1 Intelli-Tank, tank level gauge shall be installed on the pump control panel. The gauge shall utilize a pressure transducer mounted on the outside of the tank for sensing water levels. No probes shall be required inside the tank. The gauge shall utilize a super bright 4 LED display to provide an accurate reading of the tank level in 1/8 increments with 9 levels of indication. The gauge shall provide an active output for a secondary visual or audible alarm.	YES ❒ NO ❒ EXCEPTION ❒
TANK LEVEL ADDITIONAL REMOTE DISPLAY A Class 1 Intelli-Tank remote display shall be installed to provide additional indication of water or foam tank levels at the rear of the apparatus. The gauge shall utilize a super bright 4 LED display to provide an accurate reading of the tank level in 1/8 increments with 9 levels of indication.	YES ❒ NO ❒ EXCEPTION ❒

BOOSTER TANK	YES ❒ NO ❒ EXCEPTION ❒
The booster tank shall have the following capacities: ***2500 Imperial gallons*** ***11365 Liters*** This tank shall be provided with a lifetime warranty tank manufacturer. The transverse and longitudinal swash partitions shall be manufactured of Polypropylene Copolymer material. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow and meet NFPA rules. All swash partitions interlock with one another and are welded to each other as well as to the walls and floor of the tank. The tank shall have a combination vent and fill tower. The fill tower shall be constructed of .5" thick Polypropylene Copolymer and shall be a minimum dimension of 8"x 8" outer perimeter. The tower shall be located in the left front corner of the tank unless otherwise specified by the purchaser. The tower shall have a .25" thick removable Polypropylene Copolymer screen and a Polypropylene Copolymer hinged-type cover. Inside the fill tower, there shall be a combination vent overflow pipe. The vent overflow shall be a minimum of schedule 40 pipe with a minimum I.D of 4", unless a dump chute is included in the design in which case the I.D shall be 6". Both shall be of a design to run through the tank. The tank overflow shall be piped behind the rear wheels. The tank cover shall be constructed of recessed .5" thick Polypropylene Copolymer, stress relieved, U.V. stabilized material. A minimum of two lifting dowels shall be drilled and tapped .5" x 2" to accommodate the lifting eyes. There shall be one (1) sump standard per tank. The sump shall be constructed of .5" Polypropylene Copolymer and be located in the left front corner of the tank and shall meet the requirements of NFPA. There will be two (2) standard tank outlets: one for tank to sump suction line and one for a tank fill line. All tank fill couplings shall be backed with flow deflectors to break up	

	the stream of water entering the tank, and be capable of withstanding sustained fill rates of up to 1,000 G.P.M. The tank shall rest on the body cross members in conjunction with such additional cross members, spaced at a distance that would not allow for more than 530 square inches of unsupported area under the tank floor. In cases where overall height of the tank exceeds 40 inches, cross member spacing must be decreased to allow for not more than 400 square inches of unsupported area. The tank must be isolated from the cross members through the use of hard rubber strips with a minimum thickness and width dimension of .25" x 2" and a minimum Rockwell hardness of 60 durometer. Additionally, the tank must be supported around the entire bottom outside perimeter and capture both front and rear as well as side to side to prevent tank from shifting during vehicle operation. The tank shall be mounted in the apparatus body in a manner that the total outside bottom perimeter of the tank shall be supported. The bottom of the tank shall be completely isolated from the frame by heavy-duty .25" thick rubber strips. There shall be a picture frame type cradle mount system utilized for the purpose of capturing the tank. There shall be a support system across the top of the tank to prevent excessive bouncing when the tank is empty. Although the tank is designed as a free-floating suspension unit, it is required that the tank has adequate hold down restraints to minimize movement during vehicle operation. If proper retention has not been incorporated into the apparatus hose floor structure, an optional mounting restraint system shall be located on the top of the tank, halfway between the front and rear on each side of the tank. The tank shall be completely removable without disturbing or dismantling the apparatus structure.	

BOOSTER TANK – PAINTED The booster tank shall be painted with the PPG paint process for a Polypropylene plastic surface. The paint process shall include having the entire surface cleaned with warm soapy water followed by a rinse with clean water. The tank shall be allowed to dry overnight maintaining a 65 degree Fahrenheit temperature. The surface shall be cleaned using DX 103 Multi prep followed by DX394 waterbase wax and grease remover. The surface shall then be final sanded with 280 Grit paper and cleaned again using DX 103 Multi prep. A medium wet coat of DPX 801 universal plastics primer shall be applied. F3975 surface primer shall be applied after a 30 minute dry time at 70 degree Fahrenheit and the surface shall be re sanded, washed and reprimed with DPX 801. The surface shall receive up to 3 coats of base coat until hiding has been achieved. The base coat shall consist of 3 parts color to 1 part hardener to 1 part solvent. The surface then shall receive 3 coats of clear coating. The painted surface shall be warranted for 3 years, or upgraded to 5 years with optional extended warranty. The manufacturer shall be audited by the paint manufacturer yearly for compliance to the application and adherence to the paint application process. This audit shall be available for the customer's inspection if requested. **There shall be no exception to this requirement.**	YES ❒ NO ❒ EXCEPTION ❒
<u>WELDING STANDARD</u> All welding will be done in a CWB certified shop to CSA Standard 47.2 for fusion welding of aluminum. All welds to be non-pulsed GMAW with 100% Argon shielding gas and ER5356 filler material .Evidence of certification must be provided.	YES ❒ NO ❒ EXCEPTION ❒

STORZ DIRECT TANK FILL One (1) 4" Fireman's Friend tank fill valve(s) with a 4" Storz fitting with a 30 degree elbow and cap shall be mounted on the rear of the water tank. The valve(s) shall feature heavy gauge stainless steel casting, EPDM rubber seals, high grade stainless steel springs, shafts, and prevailing torque fasteners. The pressure actuated valve shall be installed inside the water tank to eliminate possibility of freezing.	YES ❒ NO ❒ EXCEPTION ❒
ELECTRIC DUMP VALVE(S) REAR A Newton ten (10) inch dump valve(s) shall be installed, on the rear of the apparatus. The valve(s) shall incorporate a hinged, flip-up type back plate for maximum water flow. The valve(s) shall be controlled electrically. No Exceptions The valve shall include a grey powder coat finish as standard from the manufacturer.	YES ❒ NO ❒
DUMP CHUTE EXTENSION One (1) dump chute extension(s) shall be installed on the tank dump valve(s). The chute extension(s) shall operate manually and shall telescope to an extended length of thirty-six (36) inches.	YES ❒ NO ❒ EXCEPTION ❒
10" REAR SWIVEL DUMP CHUTE The rear dump valve shall be equipped with a Newton "chiksan" style aluminum swivel dump chute with a minimum 10" throat. The chute shall operate through a 180-degree arc to permit dumping from the rear, the left side or the right side of the vehicle and shall be designed to clear the top of a porta tank and/or ground ladder storage frame.	YES ❒ NO ❒ EXCEPTION ❒

TANKER-PUMPER BODY General Design Requirements The following specifications have been written to establish the minimum level of quality and design. Since the specified metal material and gauges are available to all manufacturers, exceptions or substitutions of lighter gauges, materials, or the use of custom extrusions shall not be acceptable.	YES ❒ NO ❒ EXCEPTION ❒
Independent Body Mounting Prior to the construction of this apparatus, various chassis attachments such as battery boxes, air reservoirs, mufflers, tail pipes, filters, and other bolt on frame attachments may be relocated as required. This will permit full utilization of the chassis for specified compartments and pump installation. The apparatus body shall be attached to the chassis frame through the use of steel support structures, thereby creating an apparatus body that is independent of the water tank. The support structures shall be fabricated from structural steel channels and angles that are fully welded together. These structures shall be bolted to the chassis frame rails, and the apparatus body shall be bolted to the structures. All welding shall be compliant with CSA standard W47.1 for fusion welding of steel and performed in a CWB certified shop by CWB certified welders.	YES ❒ NO ❒ EXCEPTION ❒

	Body and Compartment Fabrication The compartments and panels that form the extruded body shall be fabricated from 5083 H 321 salt water marine grade aluminum. The compartment floor construction shall permit easy cleaning with a "sweep out" type design. All compartment floors are reinforced to support a load of 1000lbs. The compartment doorframe shall be of channel shaped double break design on the sides. Vertical divider panels in compartment fabrication shall be in single metal sections. All compartments shall be provided with vents to allow the compartments fresh air. All welding shall be compliant with CSA standard W47.2-11 for fusion welding of aluminum and performed in a CWB certified shop by CWB certified welders. Only stainless steel fasteners shall be used for the mounting of hardware, equipment, and accessories with isolation from dissimilar metals where required. Pop rivets shall be acceptable. **(NO EXCEPTIONS)** All compartment interior seams shall be caulked with a continuous bead of polyurethane sealant prior to coating. A protective Dinitrol 440 chip guard is applied and then painted with a grey and white splatter finish for improved durability and visibility within the compartment.	YES ❒ NO ❒ EXCEPTION ❒
	Aluminum Tread Plate Aluminum tread plate shall be provided at the rear of the apparatus body on any recessed or inside facing surface, on the front face of the front body compartments, and the left and right side compartment tops. On horizontal surfaces the tread plate shall be 1/8" thickness 3003H22 embossed aluminum to provide an NFPA compliant slip resistant surface	YES ❒ NO ❒ EXCEPTION ❒

	Rear Body Step/Bumper The rear step/bumper assembly of the apparatus shall be bolted to the lower edge of the rear compartment with a space for water drainage. The step assembly shall be of one-piece construction, 8" deep minimum with provision for marker light mounting. The unit shall be constructed of 6061-T6 aluminum Diamondback ventilated deck plate to provide an NFPA compliant slip resistant surface	YES ❒ NO ❒ EXCEPTION ❒
	Wheel Well Liner The inner wheel well liner shall be constructed of 3/16" aluminum fully welded forming an integral part of the body module structure.	YES ❒ NO ❒ EXCEPTION ❒
	Wheel Well Trim The body wheel well openings shall be equipped with a polished stainless steel fenderette.	YES ❒ NO ❒ EXCEPTION ❒

AMDOR STANDARD HEIGHT ROLL-UP COMPARTMENT DOORS

YES ❒
NO ❒
EXCEPTION ❒

The apparatus shall be equipped with four (4) Amdor STANDARD HEIGHT compartment shutter doors. The doors shall be constructed of box frame type aluminum slats, with a satin anodized finish unless specified otherwise. The exterior slat surface shall be flat, while the rear surface shall be flat or concave to prevent loose equipment from jamming the door.

Doors will be a true box section with a flat interior surface to prevent equipment from hanging. Each slat incorporates a recessed slat seal to weatherproof the compartment and reduce rattle between slats. For every inch of height an integral continuous hinge joint spans the width of the door to provide superior strength. The door glides on non – interlocked end shoes. Each end shoe is independent and positively secured by an exclusive snap -in device. Door slats can be easily removed and replaced when required.

The stainless steel lift bar system shall be provided to keep the door securely closed. This system complements the superior strength of the bottom rail with bottom seal and integral reinforcing flange. Wear components are constructed of Type 6 Nylon to provide maximum strength and durability. Type 6 Nylon is a naturally lubricating material which provides exceptional temperature characteristics. Each door is equipped with slat, top, bottom and side seals to keep moisture and dirt on the outside. The non- marring top seal provides a seal without marking the door surface. A switch shall be installed to activate the compartment light(s) and/or door ajar system.

EQUIPMENT COMPARTMENTS

YES ❒
NO ❒
EXCEPTION ❒

Minimum Compartment Dimensions (inches)

Compartment	Width	Height	Depth
L1/R1	57	38	28
L2/R2	46	38	28

ALUMINIUM C-CHANNEL RUB RAIL Aluminium protective rub rails shall be installed on the lower faces of all exterior compartments. The rub rails shall be of a "C-Channel" design and shall extend beyond the compartments approximately 1 inch. They shall be fabricated from 6063 T6 anodized aluminum. The upper part of the rub rail shall be textured to provide traction, and they shall be fabricated in such a way as to facilitate the mounting of lights or reflective materials. The rub rails shall be installed with 1/4" nylon spacers between the body and the rub rail to prevent the trapping of road debris and de-icing chemicals between the rubrail and the body.	YES ❒ NO ❒ EXCEPTION ❒
REAR BODY HANDRAILS Two (2) handrails shall be mounted vertically at the rear of the apparatus body. The handrails shall be constructed of polished extruded aluminum with rubber inserts for maximum grip. The end stanchions shall be chrome plated, zinc diecast, mounted to the body with stainless steel bolts.	YES ❒ NO ❒ EXCEPTION ❒
INTERMEDIATE BODY HANDRAIL One (1) handrail shall be mounted horizontally at the rear of the apparatus body, below the hose bed. The handrail shall be constructed of polished extruded aluminum with rubber inserts for maximum grip. The end stanchions shall be chrome plated, zinc diecast, mounted to the body with stainless steel bolts.	YES ❒ NO ❒ EXCEPTION ❒
ADDITIONAL HANDRAILS Four (4) additional handrails, up to 18" in length, shall be installed on the apparatus. The handrail(s) shall be constructed of polished extruded aluminum with rubber inserts for maximum grip. The end stanchions shall be chrome plated, zinc diecast, mounted to the body with stainless steel bolts. Locations: Two (2) handrails mounted on both sides of the apparatus above the pump box and two (2) handles on both sides of the apparatus at the top rear of the hose bed. Final location to be confirmed by purchaser.	YES ❒ NO ❒ EXCEPTION ❒

FOLDING STEPS Two (2) large polished folding steps shall be installed on the apparatus in locations indicated on the construction drawing. The steps shall have a minimum of 42 square inches of serrated nonskid surface area and meet current NFPA specifications. The steps shall be tested to withstand a minimum of 2000 pounds of static load. Heavy duty stainless steel springs shall be incorporated into the hinge to hold the steps in either the open or closed position.	YES ❒ NO ❒ EXCEPTION ❒
FIXED STEPS WITH LIGHTS Four (4) cast aluminum steps shall be installed on the apparatus in locations indicated on the construction drawing. The steps shall have a nonskid surface area and meet current NFPA specifications. Each step shall incorporate a 12 volt light with clear lens below the step.	YES ❒ NO ❒ EXCEPTION ❒
WIDE INTERMEDIATE FIXED STEP(S) One (1) intermediate fixed step(s) shall be installed on the apparatus in the location indicated on the construction drawing. The step(s) shall shall have a minimum of 35 square inches of surface area and shall be constructed of 6061-T6 aluminum Diamondback ventilated deckplate to provide an NFPA compliant slip resistant surface. The step(s) shall be as wide as practical and shall be supported from the body/frame to support a minimum of 500 lb. load without deformation.	YES ❒ NO ❒ EXCEPTION ❒
HARD SUCTION HOSE STORAGE Storage for two (2) suction hoses shall be provided on the apparatus in the locations indicated on the construction drawing. The hoses shall be stored in aluminum trough(s) with velcro straps to secure the hoses.	YES ❒ NO ❒ EXCEPTION ❒
PORTA TANK MOUNTING RACK(S) Electric fold down racks will be acceptable. To provide protection to the portable water tank when stored in the rack, type #3003 polished aluminum tread plate panels shall be installed on the ends and outer side of the rack.	YES ❒ NO ❒

GROUND LADDER ACCESS SYSTEM Manual fold down systems will be acceptable. The ladder lift system will be mounted on the top of the body side compartments. The system will raise and lower the ground ladders 31". The maximum load of the system is 300 lbs.	YES ❒ NO ❒
SHELF TRACKING FOR ADJUSTABLE SHELVES A total of one (4) compartment(s) shall be equipped with heavy duty, extruded aluminum, "C" channel vertical shelf tracking for future use. One (1) per wall on compartment depths 20" or less and two (2) per wall on depths greater than 20".	YES ❒ NO ❒ EXCEPTION ❒
PLASTIC GRATING ON SHELVES, TRAYS AND FLOOR The compartment shelves, trays and floor shall be provided with minimum ¾" thick removable plastic grating. The grating shall be interlocking squares, black in color. Turtle Tile Brand or approved equivalent.	YES ❒ NO ❒ EXCEPTION ❒
CUSTOM-BUILT ROLL-OUT TRAY Two (2) Roll-out trays shall be installed. Each tray shall be constructed of 3/16" aluminum, broken with a flange on all four sides with welded corners for added strength. The front flange shall be formed with a double break to create a full-width handle for pulling out the tray. Each tray shall be mounted on two (2) telescopic full extension slides equipped with precision steel ball bearings to provide high lateral stability and smooth action. A locking rail shall be utilized to hold the tray in both the open and stored positions.	YES ❒ NO ❒ EXCEPTION ❒
ALUMINUM PIKE POLE MOUNTING TUBE(S) One (1) aluminum tubes for mounting pike poles shall be installed. The tubes shall be furnished with an offset cutout in one end to allow the pike head to be inserted, turned, and locked into place.	YES ❒ NO ❒ EXCEPTION ❒

EXTERIOR AIR CYLINDER STORAGE IN WHEEL WELLS Four (4) SCBA air cylinder storage tubes shall be provided and installed in the rear wheel wells. Each tube shall be a formed round aluminum enclosure, measuring 8" (approx.) in diameter, with a rubber pad on the base and a hinged, cast aluminum, door with latch.	YES ❒ NO ❒ EXCEPTION ❒
HOSEBED DIVIDER(S) Two (2) adjustable hose bed divider(s) shall be installed to separate individual hose loads. The divider(s) shall be constructed of 3/16" brushed finish, aluminum.	YES ❒ NO ❒ EXCEPTION ❒
VINYL HOSE BED COVER The hose bed shall be protected by a cover made from heavy duty 16 oz. (Minimum) reinforced vinyl. The cover shall be attached with Velcro on the front and sides with additional chrome snap or twist-lock fasteners on the front for increased wind protection. The rear portion of the cover shall drop vertically to completely cover the rear of the hose load area and shall be secured at the bottom.	YES ❒ NO ❒ EXCEPTION ❒
WHEEL CHOCKS One (1) Zico SAC-44 folding wheel chock assembly (ies) shall be installed on the apparatus. Each assembly shall consist of two (2) chocks with mounting brackets. The wheel chocks shall meet NFPA 1901, ULC S515 and SAE J348 standards.	YES ❒ NO ❒ EXCEPTION ❒
SAFETY WARNING LABELS Warning labels as required by NFPA or ULC shall be supplied and installed on the apparatus.	YES ❒ NO ❒ EXCEPTION ❒

12-VOLT ELECTRICAL SYSTEM	YES ❒ NO ❒ EXCEPTION ❒
The apparatus shall be equipped with a heavy-duty 12-volt electrical system. The system shall include all parts, components, switches, relays, and wiring to insure reliable operation. All body module electrical equipment shall be served by circuits, separate and distinct from the vehicle chassis circuits. All wiring, installed by the apparatus body manufacturer, shall be stranded copper or copper alloy, type SXL, GXL or TXL, rated for 125% of the maximum current for which the circuit is protected. The wiring shall be function and colour coded, and mounted in a protective loom harnessed to body members with bolt on clips or nylon wire ties. The edges of all metal members through which wiring passes shall be deburred and provided with edge protection or large rubber grommets. All electrical connections shall be made with heat shrinkable nylon crimps. Wire nut, insulation displacement, and insulation piercing connections shall not be used. An all-aluminum customized load center box shall be installed within a body compartment. This box shall provide a weatherproof centralized location housing all of the relays, breakers, current sensors, load managers, etc. required to effectively control the electrical system. From this box, separate harnesses shall be run to the applicable sections of the body; engine, pump compartment, switch pack, left body side and right body side. All wiring from power source to using device shall not have a voltage drop exceeding 10 %. Harnesses shall contain spare wires for future expansion of the system. Switches, relays, terminals and connectors, installed by the apparatus body manufacturer, shall have a dc rating of 125% of the maximum current for which the circuit is protected. Protection of circuit shall be accomplished by utilizing fuses, circuit breakers, fusible links, or solid-state equivalent devices. Protective covers shall be provided for all terminal strips. The apparatus shall be furnished with a complete “As-Built” CAD wiring diagram for the apparatus body.	

CUSTOM CONSOLE AND SWITCH PANEL A custom console shall be installed in the cab, positioned for use by the driver or officer. The console shall contain a 12 volt switch panel and the siren control head. Additional space shall be provided for the installation of a 2-way radio head, and storage for maps and emergency response guides etc. The configuration of this space shall be based on the specific requirements of the purchaser. The console shall have a removable cover to facilitate inspection and servicing. The 12 volt switch panel shall house the switches for the emergency warning lights and other non-emergency lighting and controls. The switches shall be rocker type with coloured indicator lamps in each switch. All emergency warning light switches shall utilize a red indicator lamp. All other switch indicators shall be green. A master warning light switch shall be installed to permit the emergency warning light system to be activated by one switch.	YES ❒ NO ❒ EXCEPTION ❒
MASTER BATTERY DISCONNECT SWITCH WITH INDICATOR LIGHT A master battery disconnect switch with green indicator light shall be installed in the chassis cab, driver's side.	YES ❒ NO ❒ EXCEPTION ❒

REAR STOP, TURN AND BACK-UP LIGHTS -LED The rear of the apparatus shall be equipped with two (2) taillight groupings, one mounted on each side. Each grouping shall consist of: One (1) Whelen 60A00TAR, amber LED turn signal One (1) Whelen 60BTT, red LED stop/tail One (1) Whelen 60C00VCR, clear LED back up One (1) Whelen 60R02FRR, red LED warning Mounted in one (1) Cast Products LH46114, polished aluminum 4-in-1 vertical light housing.	YES ❒ NO ❒ EXCEPTION ❒
LICENSE PLATE LIGHT WITH MOUNT A license plate light with tag mounting hardware shall be installed on the rear of the apparatus.	YES ❒ NO ❒ EXCEPTION ❒
BODY CLEARANCE AND MARKER LIGHTS AND REFLECTORS The apparatus shall be equipped with body clearance and marker lights and reflectors mounted at various locations. The size, quantity, location and colour shall conform to Federal Motor Vehicle Safety Standards and/or Regulations. The Clearance and marker lights shall be of the LED type.	YES ❒ NO ❒ EXCEPTION ❒
MID-POINT TURN SIGNAL LIGHTS Where the total length of the apparatus is 30 ft. Or more, an additional LED turn signal light shall be installed at the midpoint of the apparatus at the approximate height of the running boards.	YES ❒ NO ❒ EXCEPTION ❒

BACKUP ALARM One (1) 60 series 102 decibel single-tone backup alarm from Star Warning Systems shall be installed at the rear of the frame. The alarm shall incorporate a compact rear-facing speaker with a heavy-duty housing to provide a reliable sound chamber and protecting the speaker from damage caused by dirt, high pressure spray, and fine dust. The alarm shall activate automatically when the gear selector is placed in reverse.	YES ❒ NO ❒ EXCEPTION ❒
REAR STEP LIGHTING One (1) surface mounted work light(s) shall be provided, to illuminate the rear step/bumper area. The light(s) shall have a clear lens and shall activate when the headlights are switched on and the parking brake is applied.	YES ❒ NO ❒ EXCEPTION ❒
AMDOR LED GROUND LIGHTING Amdor strip lighting shall be installed under the apparatus cab and body to illuminate the ground at the areas designed for personnel to climb onto or descend from the apparatus. Lights shall be mounted under the body on a slight angle at the cab steps, at the side running boards and the rear body step/bumper area. The lights shall activate when the parking brake is set and the headlights are on.	YES ❒ NO ❒ EXCEPTION ❒
SCENE LIGHT(S) Six (6) Whelen 900 Series gradient clear scene light(s) with chrome flange shall be installed on the apparatus. Each light shall be 7-1/8" wide x 9-1/8" high and shall be equipped with 24 LED bulbs	YES ❒ NO ❒ EXCEPTION ❒

LED DECK LIGHTS Two (2) Whelen Micro Pioneer model MPPBCS LED pedestal mount flood lights shall be installed at the rear of the apparatus body to illuminate the hose bed. The lights shall have a standard 8 degree spot light lens and have the ability to change the optics with three different flood light pattern lenses provided with the Micro Pioneer. The low profile pedestal mount shall consist of a cast stainless steel pedestal base with cast stainless steel swivel mount stud, pivot, and hinge assembly. The MPPBCS light shall have 4100 usable lumens.	YES ❒ NO ❒ EXCEPTION ❒
RADIO ANTENNA A radio antenna shall be supplied and installed on the vehicle. Purchaser will be responsible for supplying and installing all other radio equipment.	YES ❒ NO ❒ EXCEPTION ❒
AMDOR LUMABAR COMPARTMENT LIGHTS All compartments on the apparatus will be equipped with a total of two (2) Amdor Lumabar strip lights that will be an integral part of the roll-up door. The strip lights will feature the following: - Wide angle 120 degree surface mount LED installed on a printed circuit - Board for shock and vibration resistance. - Lighting will be enclosed within a high impact polycarbonate enclosure - Output will exceed NFPA 1901 Compartment Lighting standard - Draw not to exceed 130 mA per foot / forward voltage of 20mA per LED - 21” boards will be connected in series using a high grade Molex connector	YES ❒ NO ❒ EXCEPTION ❒

DOOR AJAR WARNING SYSTEM The apparatus shall be equipped with one (1) visual warning light to inform the driver of an open compartment door. The light shall be a minimum of 3" in diameter, with a red lens and shall flash when activated. The light shall be located in the cab, in clear, unobstructed view of the driver. The light shall be labelled "DO NOT MOVE APPARATUS WHEN LIGHT IS ON" A current sensor, installed in the compartment door light circuit, shall control the warning light.	YES ❒ NO ❒ EXCEPTION ❒
INDIVIDUAL COMPARTMENT LIGHT SWITCHES Each exterior compartment light shall be controlled by an automatic door switch.	YES ❒ NO ❒ EXCEPTION ❒
EMERGENCY WARNING LIGHT SYSTEM An emergency warning light system, conforming to the requirements of NFPA 1901, shall be installed on the apparatus. The system shall be designed to provide an optical warning at the front, rear, left and right sides of the apparatus. The system shall operate in two signaling modes during emergency operations. One mode shall signal to drivers and pedestrians that the apparatus is responding to an emergency and is calling for the right-of-way. The other mode shall signal that the apparatus is stopped and is blocking the right of way. The system shall operate in the CALLING FOR RIGHT-OF-WAY mode by activating a master switch in the chassis cab. The system shall switch automatically to BLOCKING RIGHT-OF-WAY mode when the parking brake is applied or the transmission is placed in park position.	YES ❒ NO ❒ EXCEPTION ❒

FRONT UPPER LED LIGHTING SYSTEM COMPONENTS - COMMERCIAL One (1) Whelen Model FN55QLED 55" LED Light bar installed on the chassis cab roof. The light bar shall consist of: • Two Front Corner Red Linear LEDs • Four Front Linear LEDs (2 Red/2 White) • Two End Red Linear LEDs	YES ❒ NO ❒ EXCEPTION ❒
FRONT LOWER LED LIGHTING SYSTEM COMPONENTS Two (2) Whelen 600 series Super LED warning lights with red lenses shall be installed on the front grille.	YES ❒ NO ❒ EXCEPTION ❒
REAR UPPER LED LIGHTING SYSTEM COMPONENTS Two (2) Whelen model L31 series Linear Super-LED heads shall be installed on the upper rear of the apparatus. The LEDs and lenses shall be red. The lights shall be controlled by switches located on the cab switch module.	YES ❒ NO ❒ EXCEPTION ❒
LOWER REAR LED LIGHTING SYSTEM COMPONENTS Two (2) Whelen model 600 series Linear Super-LED heads shall be installed on the lower rear of the apparatus. The LEDs and lenses shall be red. The lights shall be controlled by switches located on the cab switch module	YES ❒ NO ❒ EXCEPTION ❒
LEFT AND RIGHT SIDE, LOWER - LED A total of six (6) Whelen 600 series Super LED warning lights with red lenses installed Two (2) per side. Two (2) lights shall be positioned forward of the front axle centerline and as close to the front corner of the apparatus as practical. Two (2) lights shall be positioned forward of the rear axle centerline. Two (2) lights shall be positioned behind the rear axle centerline and as close to the rear corner of the apparatus as practical.	YES ❒ NO ❒ EXCEPTION ❒

SIREN CONTROL A Whelen Siren Amplifier model # 295SLSA1 shall be provided. The siren amplifier shall incorporate a 12V/200W siren installed on an aluminum alloy chassis covered by a black polycarbonate powder coated housing for maximum protection. The 295SLSA1 shall have the ability for either 100 or 200 watt output.	YES ❒ NO ❒ EXCEPTION ❒
SIREN SPEAKER A Whelen model SA314 100 watt cast aluminum multi-port speaker shall be installed at the lower front of the vehicle and connected to the siren control.	YES ❒ NO ❒ EXCEPTION ❒
LOOSE EQUIPMENT All ladders required by ULC shall be supplied by the Purchaser. One 24’ extension ladder, 12’ roof ladder and attic ladder.	YES ❒ NO ❒ EXCEPTION ❒
10ft PIKE POLE - FIBERGLASS One (1) 10 foot pike pole with fiberglass handle.	YES ❒ NO ❒ EXCEPTION ❒
6" LIGHT WEIGHT HARD SUCTION HOSE Two (2) Ten (10) ft. light weight hard suction hose(s) shall be supplied with the vehicle. The internal diameter of the hose shall be six (6) inches, thread is NH.	YES ❒ NO ❒ EXCEPTION ❒
HARD SUCTION BARREL STRAINER One (1) six (6) inch diameter barrel type hard suction strainer(s) with rope, shall be supplied with the vehicle.	YES ❒ NO ❒ EXCEPTION ❒
PORTA TANK 2500 IMPERIAL GALLON One (1) Portable water tank(s) with a capacity of 2500 Imperial Gallons (11 365 Litres) shall be furnished with the vehicle. The tank(s) shall be manufactured by Husky and shall feature a liner manufactured of 22 oz yellow vinyl coated polyester, liner laces on heavy gauge, tubular, aluminum frame and includes a 10″ quick-drain tube which, when lowered, allows fluid to drain from tank within seconds.	YES ❒ NO ❒ EXCEPTION ❒

PAINT FINISH	YES ❒ NO ❒ EXCEPTION ❒
The colour of the body shall match the department's current **red** painting scheme. No exceptions The apparatus shall be finished to fire apparatus standards. All exposed surfaces not plated or stainless steel shall be painted. Only PPG products shall be used. Consistent with this requirement to insure optimum adhesion of final paint, and service life of the finish, all related materials shall be those specified by PPG procedures. Application must be performed by paint techs that have received PPG certification training in the use and application of their products. The apparatus builder must maintain PPG Warranty certification. Evidence of training and warranty certification must be provided. The apparatus body shall be pre drilled for all attachments, prior to any primer or paint being applied. All items that are attached by fasteners shall be removed to insure that all holes, openings, and fittings receive a full coat of both primers and finish paint. Any items that have been removed, that require paint such as fabricated mounts, compartment doors, etc. shall be painted separately. All surfaces requiring paint shall be prepped, sanded, and properly cleaned per procedures prepared by PPG Industries. The painting process shall be a four (4) stage process, consisting of (1) a vinyl wash primer; (2) a vinyl high solids primer; (3) a vinyl sealer primer; (4) a final basecoat clear coat is then applied. The final topcoat color applied to the body shall have a total mil thickness of 6 to 8 mils. Paint Colours 2613, Red	

TWO TONE CAB PAINT The upper portion of the chassis cab shall be painted white. The lower portion shall be painted to match the apparatus body color. Paint colours shall be as listed in the supplied chassis specifications. No exceptions. Paint Colours 9219, Winter White 2613, Red	YES ❒ NO ❒
COMPARTMENT PAINT FINISH Each compartment interior shall be finished with a three stage gray & white spatter coat process. First stage using Dinitrol 440 a protective synthetic resin /plastic based grey coating, followed by a second stage high solids sealer. The third stage of a white splatter paint is then applied providing a tough, durable, and light reflective compartment interior.	YES ❒ NO ❒ EXCEPTION ❒
REFLECTIVE STRIPING A Four (4) inch reflective stripe, conforming to Federal specifications for reflectivity, shall be provided around the perimeter of the vehicle. At least 50 percent of the cab and body length on each side, at least 50 percent of the rear body width and at least 25 percent of the width of the front of the apparatus shall have the reflective material affixed to it per NFPA requirements.	YES ❒ NO ❒ EXCEPTION ❒
1" ADDITIONAL REFLECTIVE STRIPING One (1) 1" reflective stripe(s), conforming to Federal specifications for reflectivity, shall be provided around the perimeter of the vehicle, in addition to the standard body stripe. Final striping pattern to be confirmed with purchaser prior to application.	YES ❒ NO ❒ EXCEPTION ❒
LETTERING AND NUMBERING Reflective letters or numbers with printed outline shadow, shall be applied to the apparatus. Size, colour, wording and location to be confirmed with purchaser at pre-construction meeting.	YES ❒ NO ❒ EXCEPTION ❒

REAR REFLECTIVE CHEVRONS Reflective striping shall be provided in a chevron pattern on the rear of the vehicle. The colour of the striping shall be confirmed with purchaser at pre-construction meeting.	YES ❒ NO ❒ EXCEPTION ❒
BODY CORROSION PROTECTION (KROWN) Krown rust proofing protection spray will be applied to every corner of the vehicle, lifting any moisture off and out of seams. It will act as a long term moisture repellant operating as a moisture-resistant bond on the surface of all metal.	YES ❒ NO ❒ EXCEPTION ❒