



VICTORIA INTERNATIONAL AIRPORT

## REQUEST FOR PROPOSAL

### AIRPORT RESCUE FIRE FIGHTING VEHICLE

#### PROJECT 6208

The Victoria Airport Authority is seeking proposals from **qualified experienced** ARFF vehicle manufacturers to supply a new 2012 Airport Rescue Fire Fighting Vehicle for the Victoria International Airport Fire Service.

A qualified experienced ARFF vehicle manufacturer is one whose primary business is the building fire apparatus and airport rescue fire fighting vehicles and one which has a minimum of 10 years experience.

Proponents must provide proof of qualifications and experience when submitting responses to this request for proposal.

It is the Airport Authority's intent to provide a list of minimum requirements for this vehicle and the onus is on the manufacturer to ensure compliance with all the applicable Canadian Federal and British Columbia Provincial motor vehicle standards, laws and regulations. This vehicle must also comply with the testing and performance requirements of the Canadian Aviation Regulations.

The successful proponent will undertake all associated duties and work in regard to supplying this vehicle in accordance with the specifications provided.

A maximum of thirty (30) days following delivery shall be allotted for final inspection and acceptance of the vehicle, during this time the fire service officers and airport mechanics shall check and sign off all the systems of the vehicle.

#### **GENERAL CONDITIONS**

1. The Victoria Airport Authority assumes no responsibility, liability or costs incurred by proponents pursuant to this document;
2. Proponents must certify their bid as firm for acceptance for no less than **ninety (90)** days following the closing date of this document. Proponents will not be permitted to alter pricing or content of their bid during this time;
3. The proponent's reply to this document shall become part of any contract awarded as a result of this document;
4. All replies to this document are to indicate pricing in US funds;
5. Replies to this document may be withdrawn by written notice only, provided such written notice is received in the Victoria Airport Authority offices prior to the date and time of closure set forth in this document;
6. All proponents must use this document when submitting a quote. Proponents may, however, include any additional data, information or samples deemed pertinent;
7. All bid pricing, comments, suggestions and notations must be submitted in ink and signed by the proponent. No erasures or oral, emailed, photocopied, or faxed bid copies will be considered;
8. Any proponent finding uncertainties, irregularities, errors, omissions or discrepancies within this document shall notify the Victoria Airport Authority in writing. Such notification shall not obligate the Victoria Airport Authority to make changes however, if deemed relevant the Victoria Airport Authority shall notify all proponents of any changes, alterations or addendum to this document;

9. The Victoria Airport Authority reserves the right to seek Proposal clarification with the Proponent to assist in making reasonable and rational evaluations;
10. Any dispute arising from this document shall be resolved according to the laws of the Province of British Columbia and the jurisdiction of said disputes shall be the Greater Victoria Area;
11. Proponents will not offer entertainment, gifts, gratuities, or other special services or incentives, regardless of value, to any employee or officer of the Victoria Airport Authority;
12. No act, other than in writing signed by the President and CEO of the Victoria Airport Authority shall constitute acceptance of a Proposal;
13. The successful proponent will be notified in writing if and when an award is made;
14. The successful proponent shall fully indemnify the Victoria Airport Authority from and against any and all liability or expense by way of legal costs or otherwise incurred in respect of any claim which may be made for a lien or charge at law or in equity, or to any attachment for debt, garnishee process or otherwise;
15. Such acceptance shall bind the successful Proponent to execute in a manner satisfactory to the Victoria Airport Authority;
16. The successful Proponent may be required to enter into a legal agreement with the Victoria Airport Authority. Any such legal agreement will be prepared by the Victoria Airport Authority and will embody terms of the Proposal and any subsequent written amendments;
17. The Victoria Airport Authority may, by written notice of default to the proponent, terminate the whole or part of this document if the proponent fails to perform any provision of this document within the specified time, or to the satisfaction of the Victoria Airport Authority;
18. Goods and services must be delivered FOB Victoria International Airport no later than **December 31, 2012**.
19. Delivery of goods and services not received by **December 31, 2012** shall be assessed \$1000USD per day penalty until such time as those goods and services are received FOB Victoria International Airport;
20. Each proposal will be evaluated on the basis of the best value to the Victoria Airport Authority;
21. Headings are for convenience only. Headings and titles in the Request for Proposal are not necessarily explanatory of the clauses with which they appear;
22. In the case of any inconsistency or conflict between the provisions of the Request for Proposal, the provisions of such documents and addenda thereto will take precedence in governing in the following order: (1) addenda; (2) Memorandum of Agreement; (3) special conditions; (4) project specifications; (5) standard specifications; (6) drawings; (7) executed Form of Proposal; (8) all other documents;
23. The contract documents will represent the entire Agreement between the Victoria Airport Authority and the successful Proponent, and supersedes all prior negotiations, representations, or Agreements either written or oral. Contract amendments may only be made by written instrument agreed and executed by both parties;
24. The Victoria Airport Authority reserves the right to accept or reject any or all replies or partial replies to this document and to waive any informality or irregularity in any replies received and without limiting the foregoing, the Victoria Airport Authority reserves the right to reject any and all Proposals which:
  - a) are incomplete, obscure, irregular or unrealistic;
  - b) have any erasure or corrections in the Proposal Offer or any Schedule thereto: that are not initialled by the appropriate person(s);
  - c) omits or fails to include any one or more items in the Proposal Offer for which a price is required by the Request for Proposal;

- d) fails to complete the information required by the Request for Proposal to be furnished with a Proposal or fails to complete the information required whether the same purports to be completed or not;
25. It is the purpose of the Victoria Airport Authority to obtain a Proposal most suitable to the interests of the Victoria Airport Authority, and those that it wishes to accomplish, the Victoria Airport Authority has the right to waive any irregularity or insufficiency in any Proposal submitted, and to accept a Proposal which is deemed most favourable to the interests of the Victoria Airport Authority.
26. Any of the following acts or occurrences shall constitute an event of default by the Proponent::
- a) Failure to meet full commitment of the obligation(s) within the Agreement, thirty (30) days after the due date;
  - b) Non-performance or non-observance of any covenants, agreements, or obligations, expressed or implied continuing for thirty (30) days after the Victoria Airport Authority has given written notice to the successful Proponent. If the failure cannot be rectified within thirty (30) days, then the Victoria Airport Authority, at its discretion may extend the time period, or terminate the Agreement;
  - c) If the terms granted under this agreement at any time cease, or be taken in execution or attachment by any creditor of the successful Proponent, or if the successful Proponent shall make assignment for the benefit of creditors or, become bankrupt or insolvent, the Agreement shall be withdrawn and immediately become forfeit and void. Any monies paid on account by the Victoria Airport Authority shall be automatically refunded by the Proponent;
  - d) If sufficient cause exists to justify such action, the Victoria Airport Authority may, without prejudice to any other right or remedy, which the Victoria Airport Authority may have at law or in equity, give the Proponent written notice terminating the Agreement. The Victoria Airport Authority shall be entitled to recover any monies then owed. Similarly, if a court of competent jurisdiction, on account of Proponent insolvency, appoints a receivership, the Victoria Airport Authority may take the same action in the same manner;
  - e) Notwithstanding anything contained herein, the Victoria Airport Authority may at any time during the Agreement, upon thirty (30) days written notice to the Proponent, terminate the Agreement, if the Victoria Airport Authority is of the opinion the goods and/or services supplied are not of a satisfactory standard. Further, the Victoria Airport Authority may, at its sole discretion terminate the Agreement for reasons including, but not limited to, unethical or criminal activity upon giving seven (7) days written notice to the Proponent;
  - f) A proposal may be rejected on the basis of the Proponents past performance, financial capabilities, completion schedules or failure to comply with Federal, Provincial or Municipal legislation.
27. The Victoria Airport Authority reserves the right to award any contract for such services as it deems in its best interest;
28. The final approval shall be contingent upon, but not limited to, approval of the Victoria Airport Authority in accordance to purchasing guidelines;
29. Each reply must include at least one printed copy of this document, signed and initialled in the appropriate location by an authorised accountable executive;
30. All enquiries regarding the general nature of the service requested shall be directed to Rick Robertson, Manager, Safety and Emergency Services at 250-953-7567 or [rick.robertson@victoriaairport.com](mailto:rick.robertson@victoriaairport.com) ;

## **SPECIAL CONDITIONS**

A qualified Proposal is one that meets the needs and specifications of the Victoria Airport Authority, the terms and conditions contained in this Proposal, as well as the cost expectations of the Victoria Airport Authority for this Request for Proposal:

1. The Victoria Airport Authority will decide whether a Proposal is qualified by evaluating all the Proposals based on the needs of the Victoria Airport Authority, specifications, terms and conditions, price, and other relevant criteria;
2. A Proposal that is unqualified is one that exceeds the cost expectations of the Victoria Airport Authority and/or does not meet the terms and conditions contained in this Request for Proposal and/or the needs and specifications of the Victoria Airport Authority;
3. The Victoria Airport Authority recognizes that "value" is the essential part of purchasing a product and/or services and therefore the Victoria Airport Authority may prefer a Proposal with a higher price, if it offers greater value and better serves the Victoria Airport Authority interests as determined by the Victoria Airport Authority, over a Proposal with a lower price;
4. All equipment, goods, and workmanship must conform to all laws and standards necessary for use in Canada and the Province of British Columbia;
5. The successful proponent shall guarantee that its Proposal will meet the needs of the Victoria Airport Authority and that the unit, and any or all item(s) supplied by the proponent and/or service(s) rendered shall be correct and suitable;
6. If any unit item(s) supplied by the proponent and/or service(s) rendered by it are in any way incorrect or unsuitable, all corrections shall be borne solely by the Proponent;
7. All proposed prices shall be in US dollars and include delivery FOB the Victoria Airport Authority Fire Service, 9751 Dakota Road, Sidney BC, Canada.
8. The Proponent shall bear all costs and risks of loss, theft and/or damage while in transit;
9. Site visits, at the proponent's expense, shall be conducted by two (2) members of the Victoria Airport Authority Fire Service to the proponents plant for final testing of the apparatus, prior to delivery;
10. Training, at the proponent's expense, shall be provided for two (2) members of the Victoria Airport Authority mechanical staff at the proponents plant on similar apparatus within six months of delivery;
11. Any special laws governing GVW, axle loadings, rims, tire sizes and ply, as set down by the Tire and Rim Manufacturers Association will be the responsibility of the Proponent. Any breach of existing law governing the manufacture of fire apparatus or any amendments to the existing laws will render the Proposal void;
12. A CD copy and printed copy of a complete Operation and Maintenance Manual for similar apparatus shall be supplied with the Proposal and;
13. The Victoria Airport Authority reserves the right to reject any or all Proposals, and the decision of the Victoria Airport Authority shall be final.

## PROPOSALS

Proposals must be submitted in printed form in Microsoft Word or PDF format and include the following:

1. Two (2) complete printed copies of the Proposal. One clearly marked "Original" and one clearly marked "Copy". A third electronic copy in Microsoft Word format shall also be supplied on a readable CD;
2. A cover letter signed by an authorised accountable executive outlining the intent of the response and stating the information contained within the response accurately describes the unit and/or services to be provided;
3. Proponent qualifications must be provided with a brief overview of the firm, its history and a summary of relevant background experience;
4. Proponent supplied proof of delivery of a minimum of ten (10) similar vehicles and services provided to other airports, aerodromes or air bases, etc within the past five years (5) that have entered service. **Prototype or demonstration type vehicles provided for product knowledge or testing are not acceptable as proof of delivery;**
5. Contact information of person(s) receiving the above similar vehicles and services provided to other airports, aerodromes or air bases, etc shall be provided. These references will be contacted;
6. The proponent shall provide as much information as possible when replying to each point throughout the Proposal, and must identify any specific requirement(s) with which it is unwilling or unable to comply;
7. All measurements related to capacities, fire package performance, discharge rates and vehicle performance statistics shall be in both Imperial and Metric measurements;
8. Proponents must supply complete, in-depth detailed written specifications of the vehicle proposed and include any drawings which may assist the Victoria Airport Authority in its decision;
9. Returning this RFP without complete, in-depth detailed written specifications of the vehicle proposed is not acceptable and the proponents' proposal shall be rejected;
10. Proponents must indicate terms of payment and a detailed description of their billing procedures, and all costs must be clearly identified, detailed, submitted in US funds, and include all applicable foreign taxes and levies;
11. Proponents may include appendices to provide additional information in support of their proposal;
12. The successful Proponent may not assign the Agreement without written consent of the Victoria Airport Authority;
13. All references in this Request for Proposal shall be deemed to be the most recent amendments or replacements within the jurisdiction applicable;
14. The law applicable to this Proposal shall be in effect in the Province of British Columbia. Except for an appeal from a British Columbia Court to the Supreme Court of Canada, no action in respect to this Proposal shall be brought or maintained in any court other than that of the appropriate jurisdiction of the Province of British Columbia and;
15. The Victoria Airport Authority policies as well as applicable Federal and Provincial laws govern the method of payment.

## **DISCLOSURE OF INTEREST**

All Proponents shall, as a condition of supplying goods and services make full disclosure of any existing business relationships with any member or employee, or immediate relatives, of the Victoria Airport Authority.

1. If the Proponent is a private company, the Proponent shall make full disclosure of ownership of any shares by any of the above;
2. If the Proponent is a public company, the Proponent shall make full disclosure of ownership of any shares in excess of 10% by any of the above;
3. If the Proponent is a partnership, the Proponent shall make full disclosure of any partnership arrangement with any of the above;
4. The Proponent shall make full disclosure of any details of Directorships of any of the above;
5. The Proponent shall make full disclosure of any relationship with any employee or Director of Victoria Airport Authority who makes recommendations concerning the award of the Proposal, or any employee or elected official who may allot work to, or order supplies from, the successful Proponent;
6. Disclosure, if any, shall be made in writing at the time of submitting any Proposal and;
7. If the Proponent fails to disclose an interest, or if the interest is falsely or insufficiently reported, the Victoria Airport Authority reserves the right to terminate any Agreement of any kind.

## **FINANCIAL STABILITY STATEMENT**

Proposals shall provide enough detail to permit the Victoria Airport Authority to determine the Proponents financial position and stability from the documents received.

Every effort shall be made to include complete details of financial position, services available, and stability in the market place, providing assurance that the manufacturer will be able to deliver the vehicle on time, honour its warranty and provide parts and service ongoing in to the future.

## **PERFORMANCE BOND**

The successful proponent shall provide a performance bond in an amount equal to the value of the contract to the purchaser within ten (10) days of award of the contract. The bond must be originated through a company retained by the vehicle manufacturer that is licensed to bond in the Province of British Columbia, Canada and the purchaser will verify that the bond is valid upon receipt.

## **OBLIGATIONS OF SUCCESSFUL PROPONENT**

The successful Proponent shall indemnify, defend and save harmless the Victoria Airport Authority and all its employees and authorized representatives from and against any and all suits, actions, legal or administrative proceedings, claims, demands, damages, liabilities, interest, legal fees, costs and expenses of whatsoever kind or nature arising before, during or after the completion of the Contract and any manner directly or indirectly caused, occasioned, or contributed to whole or in part, by reason of act, error, omission or fault whether active or passive of the Proponent, sub-proponent, or anyone acting under its direction or control or on its behalf in connection with or incidental to the performance of the Agreement.

Unless otherwise provided, time shall be of the essence;

The successful Proponent shall comply with all requirements of those Federal, Provincial, Municipal, or other governmental bodies, agencies or authorities having jurisdiction and lawfully empowered to make and/or impose laws, by-laws, rules, orders or regulations with respect to the Proponents obligations.

The successful Proponent shall pay all royalties and patent license fees required for the; and against all, claims, demands, losses, costs, damages, actions, suits or proceedings out of the Proponent's performance of the Contract, which are attributable to an infringement or an alleged infringement by the Proponent and/or anyone whose acts it may be liable, of any patent or invention.

If the Victoria Airport Authority shall be prevented by permanent injunction from using any part, product or equipment, the Proponent shall substitute at no additional cost to the Victoria Airport Authority, such part, product or equipment equally suitable and subject to approval by the Victoria Airport Authority prior to installation of any substitute part, product or equipment.

The Victoria Airport Authority encourages the successful Proponent and suppliers to the successful Proponent to use environmentally friendly products.

The successful Proponent shall meet the needs of the Victoria Airport Authority as requested in the specifications and shall assist in reducing any impact to the environment.

**PROPOSALS UNDER SEAL AND IRREVOCABLE**

All Proposals shall be under seal.

1. In the case of a body corporate, the Proposal shall be under corporate seal of the Proponent;
2. In the case of an individual person, the Proposal shall be under the seal of that person and;
3. In case of an association of persons or a firm, each member of the association or firm shall affix his or her seal to the Proposal.

**RECEIVING PROPOSALS**

Proposals will be received in sealed envelopes, marked **2012 ARFF RIV Project 6208** until 4:30pm, Pacific Standard Time, **February 28, 2012**.

All proposals shall be addressed to Rick Robertson, Manager, Safety and Emergency Services, Victoria Airport Authority, 201-1640 Electra Blvd, Sidney BC, Canada, V8L 5V4.

Proposals received after the specified closing time and date will not be accepted and will be returned unopened to the proponent. Faxed or emailed proposals will not be accepted.

## FORM OF PROPOSAL

Project Title: **4x4 Rapid Intervention Vehicle – Project 6208**

Department: **Victoria International Airport Fire Service**

### SCOPE

This proposal covers an Aircraft Rescue and Fire Fighting (ARFF) Vehicle as described in the current National Fire Protection Association's (NFPA) Standard 414. This vehicle must meet, or exceed the minimum requirements of the current NFPA 412 and NFPA 414 Standards.

This **4x4** vehicle is intended for use in combating aircraft fires at a major airport, as well as having the capability of responding to other assignments necessary in airport operations.

This vehicle shall possess the mobility and fire suppression performance characteristics recommended for an RIV type ARFF vehicle, and shall be capable of maintaining these characteristics throughout a Canadian winter.

This vehicle will be required to remain outside, possibly for hours, in freezing temperatures while fire fighters assist with snow removal and other duties and will be expected to meet its primary fire suppression performance characteristics at any time during this period. However, there are provisions to plug the vehicle's winterization package into 120V AC outlets during this time.

The vehicle shall have a usable water capacity of **no less than 1135 litres**, (300 US gallons), a separate usable Aqueous Film Forming Foam (AFFF) tank with the capacity of 3% foam concentrate to support four (4) loads of water and a nitrogen expelled dry chemical system capable of holding and discharging 227kg (500lb) of Potassium Bicarbonate based dry chemical agent.

### MATERIALS

All materials not specified in this document, or in applicable referenced specifications or standards shall be of the highest quality currently used in commercial practice ARFF vehicle fabrication.

1. All metal parts and components normally in contact with fire fighting agents for extended periods of time shall be fabricated of materials resistant to the corrosive action of the fire fighting agents;
2. The use of dissimilar metals in contact with each other shall be avoided. Plating, spraying, insulating, or otherwise separating dissimilar metals to provide adequate and suitable abutting surfaces will be permitted and;
3. All materials subject to deterioration when exposed to weather or operational conditions normally encountered during service shall be protected in a manner that will not prevent or interfere with the performance specifications, or compliance to any applicable code or standard.

### DESIGN

All controls and special features required to provide safe operation of the vehicle and those required to meet specified performance parameters shall be identified and shown in drawings and photographs submitted with the proposal:

1. All parts and components shall be of such a size, material and strength so as to sustain the allowable loads placed upon them during operation;
2. The vehicle and its components shall be constructed so that all parts are built and mounted to withstand the strains, shocks, vibrations, and other detrimental conditions incident to operation, maintenance, shipping and storage of said parts;
3. All liquids, including fire fighting agents, coolants and lubricants shall not spill or leak under all operational conditions and;
4. All components of the fire fighting package, including the water tank, AFFF tank, pump and associated plumbing and piping shall be protected from freezing and the cab equipped with an auxiliary 120V AC heater.

## **GENERAL CONDITIONS FOR VEHICLES AND EQUIPMENT**

The unit offered under this Proposal shall be a new, standard production model of the latest design in current production:

1. Production materials shall be of good commercial quality for the intended service and shall be produced by use of current manufacturing standards and processes;
2. Materials shall be treated or designed to prevent rust, corrosion and wear as needed;
3. The Proponent shall satisfy the Victoria Airport Authority that it maintains a manufacturer's approved facility or branch;
4. This facility must be staffed with qualified service personnel and have provisions for storing a representative supply of original equipment manufactured and parts for the machine offered, as well as provisions for securing parts from the manufacturer within twenty-four (24) hours of request for those parts;
5. Proponents shall submit with their Proposal the latest printed specifications and any advertising on the unit they propose to supply;
6. The Proponent shall list on a separate schedule any variations from or exceptions to, any conditions or specifications of this Proposal. This sheet shall be labelled "Exception(s) to Specifications" and shall be attached to the Proposal;
7. Written specific guarantees to cover parts delivery, warranty repairs and machine availability shall be included in the Proposal;
8. The quality of the unit to be supplied, the conformity with regulations, the suitability to requirements, delivery terms and guarantee clauses shall all be taken into consideration and ;
9. Awards will be made based on the best value offered, as determined by the Victoria Airport Authority.

**MAINTAINABILITY**

**COMPLIES**

The design of the vehicle shall be such that it:

- 1. Uses the fewest number of different parts consistent with the specified performance requirements. \_\_\_\_\_
- 2. Permits maintenance with commercially available, general-purpose mechanics tools and equipment. Any special, unique or non-standard tools required to maintain, service or test the vehicle shall be identified and documented in the supporting literature and those special, unique or non-standard tools shall be supplied with the vehicle at no extra cost. \_\_\_\_\_
- 3. Limits the number of tools and variety of spare parts required for maintenance by such design practices as reducing the variety of bolt and fastener sizes, light bulb sizes, wire gauges, tubing and pipe sizes consistent with safety and performance requirements. \_\_\_\_\_
- 4. Uses quick disconnect plugs, receptacles, junction boxes, bus bars and multiple-line connectors in the vehicles electrical system, and readily detachable fittings throughout the hydraulic and pneumatic systems as practical. \_\_\_\_\_
- 5. All disconnect points, wiring, hydraulic and pneumatic lines shall be colour or number coded or otherwise function labelled. \_\_\_\_\_
- 6. Includes any pilots, guides, slides, carriages, or other features where such provisions ease the removal and installation or attachment of components. \_\_\_\_\_
- 7. Uses a fastener system to ease the disassembly and reassembly of all cabinets, bodywork and/or components that must be removed for maintenance access, repair or replacement. All screws, pins, bolts, and similar parts shall be installed to prevent loss of proper tightness, torque values or adjustments. \_\_\_\_\_
- 8. Attaching hardware for any component shall be easily removed, and shall not be swaged, peened, staked or otherwise permanently deformed. \_\_\_\_\_
- 9. All lubrication, hydraulic and pneumatic systems, tubing, piping, hoses, etc shall be located in protected positions, and securely attached to the frame or body structure, except where a through frame connector is necessary. \_\_\_\_\_
- 10. Operates using standard commercial lubricants readily available in the market place. Grease and oil seals shall be of a design and location to provide accessibility for inspection, service, and replacement.
- 11. All lubrication fittings shall be located in accessible, protected locations. \_\_\_\_\_
- 12. Any panels that must be opened to permit access to these fittings shall be hinged and secured with a positive type latch to prevent accidental opening. \_\_\_\_\_
- 13. All parts or assemblies requiring lubrication that are not readily accessible, or those located in such a manner as to be overlooked during servicing shall be fitted with extended fittings and safety chains shall attach filler caps to lubrication fill points wherever practical. \_\_\_\_\_
- 14. Locates drains, filler plugs, grease fittings, hydraulic and pneumatic line bleed points and checkpoints so they are readily accessible and do not require special or unique tools for proper servicing. \_\_\_\_\_

**COMPLIES**

15. Location of drains, filler plugs, grease fittings, hydraulic and pneumatic line bleed points and checkpoints shall not compromise any winterization package component or require the removal of any winterization package component to access. \_\_\_\_\_

16. Ensures that the installation of each major components, sub-assembly or critical part can only be installed in its correct and proper operating position. \_\_\_\_\_

17. Provides accessible connections, where required, to attach troubleshooting, analytical and diagnostic equipment to the various appropriate vehicle sub-systems. \_\_\_\_\_

**SAFETY FEATURES**

The vehicle shall conform to all applicable Canadian Federal and BC Provincial safety codes, as well as:

1. All spaces intended for occupancy, or in which work is to be performed during operation, servicing or maintenance shall be free of hazardous protrusions, edges, cracks or other elements that may cause injury to personnel. \_\_\_\_\_

2. Cab entrances and exits shall not be obstructed by component or equipment locations. \_\_\_\_\_

3. Safety features such as anti-skid steps, catwalks, deck plates, and handrails and guards shall be provided at all points where the protection of personnel is required. \_\_\_\_\_

4. All steps, catwalks and deck plates shall be constructed using a reverse punched, non-directional method, and the same material shall be installed on the top of the water and foam tanks. This material shall be able to withstand the loads imposed during normal service requirements. \_\_\_\_\_

5. All roof access steps shall have a minimum unobstructed toe room, or depth, of 15cm (5.9 in) from the front edge of the weight-bearing surface of the step. \_\_\_\_\_

6. All rotating, reciprocating or otherwise moving parts and all energized electrical components are to be either insulated, guarded, shielded or located in such a manner as to minimize hazard to personnel. \_\_\_\_\_

7. Pump engine maintenance access shall not be obstructed by components or equipment locations. \_\_\_\_\_

8. The design and arrangement of the cab components shall optimize operator visibility for vehicle control and fire fighting operations. \_\_\_\_\_

9. The vehicle body shall be constructed of welded extruded aluminum and shall be provided with adequate cross members, exclusive of pump engine supports and designed and constructed to support the gross weight of the body, water pump and pump engine, filled water and fire fighting agent tanks and all other equipment under specified operating conditions. \_\_\_\_\_

**COMPLIES**

- 10. The vehicle shall be equipped with front and rear bumpers mounted securely to the frame, and two (2) tow hooks shall be integrated on each of the front and rear frame rails, respectively. \_\_\_\_\_
- 11. All other frame mounted systems; components and equipment shall be protected from brush, stones, logs or other debris likely to be encountered during off-road operation. \_\_\_\_\_
- 12. The vehicle ride shall permit safe off-road operation at speeds up to 65kph (40 mph) without exposing the occupants or the vehicle to undue injury or discomfort and without subjecting the vehicle to undue damage. \_\_\_\_\_
- 13. All exterior fire fighting controls shall be mounted high enough to preclude the operator from stooping, but shall not be higher than 168cm (66 in) above ground level. \_\_\_\_\_
- 14. All interior fire fighting controls and related gauges and switches shall be mounted on a centre console and ergonomically positioned within easy reach of the vehicles' driver. \_\_\_\_\_
- 15. The cab shall feature secure mounting provisions for the latest version of the Panasonic Toughbook® laptop computer, model CF31AKR7JDM. The proponent is **NOT** required to supply the Panasonic Toughbook® laptop computer \_\_\_\_\_
- 16. The cab shall have all the necessary controls and warning systems within easy reach of the driver for the full operation of this vehicle. \_\_\_\_\_
- 17. All warning system lights, alarms and monitors shall have an integral test system. \_\_\_\_\_
- 18. In addition to the emergency lighting and siren packages listed below, the cab shall feature an electric air horn activated by the vehicle steering wheel horn button and by a floor foot operated button located within reach of the driver's left foot. \_\_\_\_\_
- 19. The vehicle shall be designed and constructed to withstand ambient temperatures ranging from -30°C to +40°C, (22°F to 104°F) with a relative humidity of 100%, as well as driven snow, sleet and rain. \_\_\_\_\_
- 20. The vehicle shall have a proven and demonstrated minimum side slope stability of 30°. The manufacturer shall provide certification signed by the company Chief Engineer for ARFF vehicles confirming the vehicle meets the 30° requirement based on an actual tilt table to SAE J2180 (1998) criteria. \_\_\_\_\_
- 21. The vehicle shall have a remote engine starter disable feature to prevent accidental starting from the cab while being serviced. \_\_\_\_\_

**MANDATORY BASIC REQUIREMENTS**

**COMPLIES**

The vehicle shall be based on a new 2012 Ford F550 4x4 SD Crew Cab 447 cm (176") wheel base dual rear wheel XLT chassis and shall include all safety, comfort and convenience features normally associated with this type of platform

\_\_\_\_\_

In addition, the vehicle shall:

1. Have a usable water tank capacity of no less than 1135 litres, (300 US gal). \_\_\_\_\_
2. Have a usable Aqueous Film Forming Foam (AFFF) tank with the capacity of 3% foam concentrate to support four (4) loads of water. \_\_\_\_\_
3. Have a nitrogen expelled dry chemical system capable of holding and discharging 227kg (500lb) of Potassium Bicarbonate based dry chemical agent. \_\_\_\_\_
4. Position all fire fighting package switches and control within easy reach of the Driver. \_\_\_\_\_
5. Include a winterization package that protects all fire fighting components and dry compartments from freezing temperatures for extended periods of time. \_\_\_\_\_
6. Include a 120V AC auxiliary cab heater. \_\_\_\_\_
7. Not exceed 7.8m (25.6 feet) in overall length. \_\_\_\_\_
8. Not exceed an overall height of 260cm (8.5 ft). \_\_\_\_\_
9. Meet or exceed all requirements of the current NFPA 412 and NFPA 414 standards, as applicable. \_\_\_\_\_
10. Be capable of carrying the total weight of the loaded vehicle through all types of terrain. \_\_\_\_\_
11. Be equipped with a V8 OHV direct injection intercooled turbo four-stroke Powerstroke® 6.7L diesel engine capable of meeting the Canadian Aviation Regulation 303.18(4) response requirements. \_\_\_\_\_
12. Be equipped with a six (6) forward speed Selectshift® automatic transmission with overdrive. \_\_\_\_\_
13. Be equipped with six (6) all terrain radial tires. \_\_\_\_\_
14. Meet or exceed current Canadian Motor Vehicle Standards (CMVSS) for this type of vehicle, including daytime running lights. \_\_\_\_\_
15. All hose fittings and nozzles shall be NSPH thread and all discharge and intake outlets shall be equipped with the appropriate sized Storz adapters. \_\_\_\_\_
16. Be delivered with accurate and detailed Operator's Manuals outlining every aspect of the vehicle and fire fighting package operation. \_\_\_\_\_
  - a) The above Operator's Manuals shall be printed in English and provide both metric and Imperial (SAE) measurements. \_\_\_\_\_
  - b) The above Operator's Manuals shall be provided in the form of two (2) printed hard copy bound manuals and one (1) readable CD in MS Word format. \_\_\_\_\_
  - c) All testing, certification and regulatory compliance documentation shall accompany the vehicle upon delivery. \_\_\_\_\_

**PERFORMANCE REQUIREMENTS**

**COMPLIES**

The fully loaded and equipped vehicle shall meet or exceed NFPA 414 standards and be capable of meeting the following requirements during daily operation and shall:

- 1. Accelerate from a standing start to 80kph (50 mph) on a dry paved surface within 25 seconds. \_\_\_\_\_
- 2. Be capable of maintaining the maximum allowable highway speed of 90kph (55 mph) on a typical dry paved highway for a minimum distance of 40 kilometres (25 miles). \_\_\_\_\_
- 3. Be capable of operating continuously for 40 kilometres (25 miles) at speeds up to 20kph (12.5 mph) over all types of terrain encountered in cross-country travel. \_\_\_\_\_
- 4. Ascend a smooth, dry paved road having a grade of 20% at a constant speed of no less than 13kph (8 mph). \_\_\_\_\_
- 5. Ascend, stop, start and continue ascending; and descend, stop, start, and continue descending a 20% grade at a speed of at least 3kph (1.8 mph) with extinguishing agent being discharged at maximum capacity from the turret without interruption. \_\_\_\_\_
- 6. Ascend and descend a dry, hard surface incline having a 50% grade at no less than 1.6kph (1 mph). \_\_\_\_\_
- 7. Operate in both directions on a 20% side slope with extinguishing agent being discharged in any direction at maximum capacity from the turret without interruption. \_\_\_\_\_
- 8. Negotiate pooled water to a depth of 5cm (2 in) for a distance of at least 46m ft) a speed of no less than 65kph (40 mph) without engine flooding or stalling, loss of steering control, loss of braking, or electrical system failure. \_\_\_\_\_
- 9. Have service brakes capable of meeting all NFPA 414 standards. \_\_\_\_\_
- 10. Have an emergency brake, applied and released by the operator, capable of stopping the vehicle per NFPA 414. \_\_\_\_\_
- 11. Have an emergency brake capable of holding the fully loaded vehicle on a 20% grade without assistance as per NFPA 414 standards. \_\_\_\_\_
- 12. Successfully perform an evasive manoeuvre test, compliant with NATO document AVTP 03-16W at a speed of 40kph (25 mph). \_\_\_\_\_
- 13. Successfully perform a "J" turn test as per NFPA standards. \_\_\_\_\_
- 14. The successful proponent shall provide written, signed proof of the vehicle's Ability to meet or exceed the above requirements. \_\_\_\_\_

**SUSPENSION AND WHEEL REQUIREMENTS**

**COMPLIES**

The fully loaded and equipped vehicle shall be capable of meeting the following requirements in daily operation and shall:

- 1. Have a wall-to-wall turning diameter of no greater than three (3) times the vehicle's overall length. \_\_\_\_\_
- 2. Have a suspension system with a capacity rating at least equal to that of the imposed load. \_\_\_\_\_
- 3. Feature wheels with identical offset, bolt patterns, size, tires, and be completely interchangeable. Rim contours and size shall conform to the current recommended practices of the Tire and Rim Association, Inc., for this type of vehicle and its intended service. \_\_\_\_\_
- 4. Have four (4) Alcoa polished aluminum exterior rims capable of withstanding the load and performance characteristics of the intended vehicle use. \_\_\_\_\_
- 5. Have two (2) painted steel inner rear rims, separated from the aluminum wheels with an appropriate nylon bushing to prevent electrolysis between the dual rear wheels . \_\_\_\_\_
- 6. Be equipped with Michelin steel belted 14 ply radial tires of appropriate size on all wheels including spares. \_\_\_\_\_
- 7. Be equipped with mud flaps of suitable size to reduce damage from stones and brush etc, at each wheel position. Total four (4). \_\_\_\_\_
- 8. Be equipped with rubber fenderettes at the front wheel locations. \_\_\_\_\_
- 9. Be equipped with aluminum checker plate wheel well liners at the rear wheel locations. \_\_\_\_\_
- 10. Be equipped with two (2) spare tires and wheels shall be provided, one securely mounted on the vehicle, the other shipped as loose equipment with the vehicle. \_\_\_\_\_
- 11. The above spare tire wheels shall be painted the primary exterior colour. \_\_\_\_\_

**INSULATION AND WATERPROOFING**

- 1. Thermal and acoustic insulation shall be provided as required to protect the occupants from excessive heat, cold or noise exposure. The type and amount of thermal insulation provided shall be consistent and compatible with the winter temperatures found on the Canadian West Coast. \_\_\_\_\_
- 2. Acoustic insulation shall comply with applicable standards and codes and reduce interior cab noise to the limits as defined by those standards and codes. \_\_\_\_\_
- 3. All insulating materials shall be of such a nature as to be unaffected by heat, cold, moisture or oil product invasion. \_\_\_\_\_
- 4. All components shall be so designed and protected that their normal functioning operation will not be impaired or impeded by heavy rain, freezing temperatures, accumulated snow, road splash, condensation internal leaks or spillage of fire fighting agents. \_\_\_\_\_

**ELECTRICAL SYSTEM**

**COMPLIES**

All electrical circuit wiring shall be in accordance with the recommended standards of the Society of Automotive Engineers (SAE) and:

- 1. All connections shall be made with lugs or terminals mechanically secured to the conductors. \_\_\_\_\_
- 2. Vehicle wiring shall be thoroughly secured in place and suitably protected against heat, oil and physical injury. \_\_\_\_\_
- 3. All circuits shall be protected with overload protection. \_\_\_\_\_
- 4. Each wire shall be numbered or colour coded to match a number or colour coded electrical schematic drawing that shall accompany the vehicle. \_\_\_\_\_
- 5. Standardized quick disconnect plugs shall be provided throughout the vehicle wherever possible for ease of maintenance in removing/installing components. \_\_\_\_\_
- 6. All function wiring harnesses shall be loomed. \_\_\_\_\_
- 7. Bundled or stranded wiring is **NOT ACCEPTABLE**. \_\_\_\_\_
- 8. Wiring shall be connected to no less than four (4) power distribution centres for ease of servicing, one for engine wiring, one for chassis wiring, one for the cab wiring and one for the 110v system. \_\_\_\_\_
- 9. Automatically re-setting circuit breakers shall be used wherever practical to protect electrical components. \_\_\_\_\_
- 10. Distribution and component electrical circuit box shall be supplied to mount and enclose all automatic re-setting circuit breakers, relay solenoids, flashers, etc. \_\_\_\_\_
- 11. The vehicle shall be provided with a 12v DC electrical system for vehicle lights and engine starting. \_\_\_\_\_
- 12. Dual heavy-duty alternators, with a minimum 320 amp output shall be provided to service the full operational electrical load. \_\_\_\_\_
- 13. A 5kw belt driven 120V AC generator shall be provided. \_\_\_\_\_
- 14. Two (2) weatherproof 20A outlets shall be installed in each centre side compartment. (One twist lock and one spade blade outlet per compartment). \_\_\_\_\_
- 15. All vehicle batteries shall be securely mounted and protected from physical injury, water spray and engine or exhaust heat. \_\_\_\_\_
- 16. All vehicle batteries shall be protected from freezing as part of the winterization package. \_\_\_\_\_
- 17. A remote voltmeter, capable of showing the condition of the batteries shall be mounted in the vehicle cab. \_\_\_\_\_
- 18. A Boston switch (or approved equivalent) shall be mounted in the cab to prevent the vehicle being started from the cab during maintenance. \_\_\_\_\_
- 19. A 20A Super Kussmaul, or equivalent, on-board battery charger with 12v output shall be installed on the vehicle. \_\_\_\_\_

- 20. The vehicle shall be equipped with an electronic 97-decibel rated back-up alarm located under the rear bumper. This alarm shall sound whenever the transmission is shifted into reverse. \_\_\_\_\_
- 21. The vehicle shall be equipped with an electronic engine hour meter located in the vehicle cab. \_\_\_\_\_
- 22. The vehicle shall be equipped with an electronic pump engine hour meter located In pump compartment. \_\_\_\_\_
- 23. The vehicle shall be equipped with hands free Bluetooth® technology. \_\_\_\_\_

**VEHICLE CAB**

**COMPLIES**

1. One vehicle ignition key shall be securely fastened to the dashboard in such a manner as to allow full function, while preventing removal from vehicle. \_\_\_\_\_
2. Shall have provision for all emergency and scene lighting switches, compartment lights switches, fire package controls and vehicle operating controls, etc. \_\_\_\_\_
3. All switches shall be installed within easy reach of either the driver, either dash centre console mounted, all switches shall be function labelled. \_\_\_\_\_
4. Rocker-style switches and all switch wires shall be of a sufficient length to permit ease of servicing and maintenance. \_\_\_\_\_
5. Each switch shall have an integral indicator light to show when switch is in the "ON" position. \_\_\_\_\_
6. Have seating for two crewmembers, including the driver in the front, complete with integral three point seat belts with automatic retractors. \_\_\_\_\_
7. The above cabinet shall have an adjustable shelf at the top and have 12V power to accommodate two (2) Pelican 9410 rechargeable flashlights on top. \_\_\_\_\_
8. Two (2) white/red dome lights mounted on either side of the vehicle cab. Each dome light shall incorporate both red and white bulbs, and be user selectable. \_\_\_\_\_
9. Two (2) 45cm (18 in) flexible mount map lights shall be installed, one located on each side of the dashboard. \_\_\_\_\_
10. In addition to the normal and expected instrumentation, light switches and operating controls, the vehicle cab shall incorporate:
  - Master electrical switch on floor by the driver's seat; \_\_\_\_\_
  - Emergency light switches; \_\_\_\_\_
  - Work/Scene light switches; \_\_\_\_\_
  - Pump start and stop switches; \_\_\_\_\_
  - Pump pressure selection switch; \_\_\_\_\_
  - Water/AFFF/Dry Chemical selector switches; \_\_\_\_\_
  - Siren foot switch; \_\_\_\_\_
  - Bumper turret controls with auto deploy controls; \_\_\_\_\_
  - Bumper turret controls with side to side auto oscillate controls; \_\_\_\_\_
  - Separate operator controlled switch for bumper turret light; \_\_\_\_\_
  - Generator start/stop controls; \_\_\_\_\_
  - Where applicable, all switches shall be back lighted, momentary or On/Off type with appropriate function labelling; \_\_\_\_\_
11. Feature two (2) outside mounted remote-control heated rear-view mirrors. \_\_\_\_\_
12. Feature two (2) outside mounted wide-angle convex mirrors. \_\_\_\_\_

**COMPLIES**

- 13. Incorporate a Forward Looking Infrared (FLIR) system, complete with camera and minimum 25cm (10 in) flat screen monitor. This system shall be a FLIR Systems Patrol IRB, or approved equal, featuring pan, tilt, zoom capabilities, mounted as high as possible on the rear vehicle body. \_\_\_\_\_
- 14. Incorporate a Safety Vision Model SV-CLCD rear vision system, or equivalent, complete with a minimum 18cm (7 in) colour monitor. \_\_\_\_\_
- 15. Incorporate a Safety Vision (no exception) DVD scene recorder and colour camera, activated when the red emergency lighting is switched on. The camera shall include operator selectable pan, tilt and zoom controls. \_\_\_\_\_
- 17. Incorporate a means of switching between FLIR and colour cameras on the same 25cm (10 in) flat screen monitor as in Item 14. \_\_\_\_\_
- 18. Incorporate gauges to monitor pump pressure, turret discharge, and dry chemical vessel and discharge pressures and water and AFFF tank levels etc. \_\_\_\_\_
- 19. Indicator lights with integral audible alarm shall be mounted in the cab within the operators field of vision to indicate an open compartment door, when the park brake is released and/or the transmission is shifted from neutral. \_\_\_\_\_
- 20. Incorporate two (2) Motorola model WPLN4208B Impress® radio battery chargers, mounted on the back of the centre console. \_\_\_\_\_
- 21. Incorporate two (2) additional, fused 12V leads within the centre console for future use. \_\_\_\_\_

**VEHICLE LIGHTING SYSTEM**

**COMPLIES**

The vehicle's lighting system, including reflectors and clearance lights shall be the manufacturers current standard, provided the equipment meets or exceeds the applicable Canadian Motor Vehicle Safety Standards (CMVSS).

\_\_\_\_\_

The lighting system shall include, but not be limited to:

1. Two (2) or more halogen headlights with upper and lower driving beams and daytime running lights. \_\_\_\_\_
2. Daytime running lights shall incorporate a "wig-wag" system activated by the "emergency lights" switch. \_\_\_\_\_
3. Two (2) LED taillights and two (2) LED stoplights mounted on either side of the rear vehicle, recessed into the body or rear bumper to provide maximum protection from physical damage, without interfering with their visibility. The taillights and stoplights may be integrated into a single unit. \_\_\_\_\_
4. LED turn signals and four-way emergency flashers. All electronic flasher units shall emit an audible sound when activated. \_\_\_\_\_
5. Two (2) halogen backup lights mounted one on either side of the rear vehicle. \_\_\_\_\_
6. Two (2) high intensity (HID), switched driving lights shall be mounted on a brush bar on the front of the vehicle to aid in night time and inclement weather driving. \_\_\_\_\_
7. The above lights shall feature a wide angle beam projection to aid in night time runway inspections. \_\_\_\_\_
8. The above brush bar shall be chrome or stainless steel to match the vehicle's front bumper and be purpose built to protect the bumper turret and HID lights. \_\_\_\_\_
9. Non-glare LED compartment lighting for each compartment and storage area. This lighting shall illuminate the compartment when the door is opened and the vehicle master switch located in the cab is in the "on" position. \_\_\_\_\_
10. Adequate lighting for all steps. \_\_\_\_\_
11. Adequate top deck lighting for servicing/recharging the water and AFFF tanks. \_\_\_\_\_
12. Four (4) 7.6cm (3 in) diameter round blue LED lights shall be incorporated into the body; one at each cab door and one on each bumper in such a manner as to flash when the transmission is in neutral and the park brake is applied. \_\_\_\_\_
13. Each of the lights identified above shall be accompanied with a self-adhesive sign, white lettering on a red background, reading "Safe To Approach When Light Is Flashing". \_\_\_\_\_
14. User selectable under cab and under body lighting shall be provided in such a manner as to provide sufficient lighting for night operations when the transmission is in neutral and the park brake is applied. \_\_\_\_\_
16. These 4" diameter LED NFPA approved lights shall be provided in appropriate locations and be sealed against weather and road elements. They shall be mounted in such a manner as to be readily accessible for service and repair. \_\_\_\_\_

**VEHICLE BODY**

**COMPLIES**

The modular vehicle body shall be constructed of flat painted 0.3157cm (1/8 in) aluminum alloy panels designed to provide the lightest weight consistent with strength, heat and corrosion resistance requirements of the Canadian West Coast.

\_\_\_\_\_

Diamond plate or checker plate aluminum construction is **NOT** preferred and these products may only be used in high wear areas or as indicated within this document.

\_\_\_\_\_

**No** dissimilar metals shall be welded in place at any location on the apparatus body.

\_\_\_\_\_

The body shall:

1. Have all metal panels bolted or welded to the support structures, with ease of maintenance and/or replacement considered in their design. Sheet metal screws or pop rivets shall not be used in the construction of the vehicle body.

\_\_\_\_\_

2. Have all vehicle body and panels designed to permit normal flexing and movement for the type of service application.

\_\_\_\_\_

3. Incorporate rigid, integral steps for ascending, descending or servicing the vehicle's fire fighting package, as required.

\_\_\_\_\_

4. All vehicle body steps, walkways, running boards, etc. shall be reverse punched non-skid design and shall include stainless steel or aluminum kick plates for appearance and long life.

\_\_\_\_\_

5. Include extruded aluminum handrails and grab rails with a slip resistant finish where required to ensure the safety of personnel working on the top deck.

\_\_\_\_\_

6. Be equipped with a 24' Little Giant (no exceptions) ladder and approved mounting hardware, installed on the top of the vehicle body.

\_\_\_\_\_

7. A reinforced roof to accommodate the Command Light Shadow SL445 lighting identified as item 7 on Page 23.

\_\_\_\_\_

8. Rubber mud flaps, of appropriate size shall be supplied and installed for both front and rear wheel assemblies.

\_\_\_\_\_

9. Where applicable, flared rubber fender extrusions shall be incorporated to help deflect water and debris away from the vehicle sides, doors and other spaces where build up may encourage corrosion.

\_\_\_\_\_

10. Two (2) pre-cast aluminum wheel chocks shall be supplied and appropriate holders affixed in a compartment on the driver's side.

\_\_\_\_\_

11. Incorporate the maximum number of storage compartments on either side, designed to utilise the maximum available space without interfering with the integrity of the vehicle body.

\_\_\_\_\_

12. Incorporate weatherproof storage for two (2) SCBA assemblies in the vehicle body.

\_\_\_\_\_

13. Incorporate a flush mounted 20A 120v Super-Kusmaul auto-eject shoreline system at the left rear of the vehicle to permit power connection for the 120v battery charger and other 120v powered equipment as required.

\_\_\_\_\_

14. Paint finish to match primary cab colour. PPG Safety Green #DCC 47010.

\_\_\_\_\_

15. Incorporate lettering and striping identified as items 11 and 12 on Page 34.

\_\_\_\_\_

**COMPARTMENTS**

**COMPLIES**

1. All compartment shall be designed in such a manner as to be protected from the weather and road elements wherever practical. \_\_\_\_\_
2. The centre compartments on each side shall be completely waterproof and dry. \_\_\_\_\_
3. The center compartments on each side shall feature 120V AC and 12V DC outlets for electric tools and a laptop computer. \_\_\_\_\_
4. The left centre compartment shall incorporate one complete mounted Scott 4.5 AP75 SCBA (no exceptions) assembly with carbon fibre bottle and one mounted spare Scott 4.5 AP75 SCBA carbon fibre bottle. \_\_\_\_\_
5. All compartments shall have height adjustable, removable shelving with slide-out trays wherever practical and at least one compartment shall be of sufficient size to house a rescue saw with a 35.5cm (14 in) blade on a slide out tray. \_\_\_\_\_
6. Compartment doors shall be unpainted fire service type aluminum roll-up doors and shall be properly sealed to keep out dirt and moisture. **Hinged doors are NOT ACCEPTABLE.** \_\_\_\_\_
7. All compartments shall incorporate individually switched compartment lighting in each compartment and under any shelves, activated when the compartment door is opened and the vehicle master switch is "on". \_\_\_\_\_
8. A flashing indicator light and audible alarm shall be mounted in the cab to warn of an open compartment door when the transmission is placed in gear. \_\_\_\_\_
9. Each compartment shall incorporate a self-drainage system and interlocking rubber matting on the floor of the compartment and the adjustable, removable shelving. \_\_\_\_\_
10. All compartments shall be of a "sweep-out" style and of the largest practical dimensions possible to provide maximum storage capacity. \_\_\_\_\_
11. A minimum 30m (100') dual agent hose reel and Hydro-Chem nozzle assembly shall be provided in a compartment on the right side of the vehicle. \_\_\_\_\_
12. The hose reel assembly shall incorporate vertical and horizontal steel rollers to aid in hose deployment and prevent hose chafing. \_\_\_\_\_
13. The vehicle compartments shall be finished aluminum to prevent scuffing, chipping, peeling or any other form of pre-mature finish wear. **Painted or other applied compartment finishes are NOT ACCEPTABLE.** \_\_\_\_\_

**WORK/SCENE LIGHTING**

**COMPLIES**

In addition to the standard vehicle lighting system, the vehicle shall incorporate the following work and scene lighting:

- 1. One (1) High Intensity Discharge (HID) light mounted on the bumper turret in such a manner as to follow the turret throughout its operating envelope. \_\_\_\_\_
- 2. Two (2) fixed HID wide angle driving lights mounted on front bumper. \_\_\_\_\_
- 3. Two (2) flush mounted halogen scene lights, mounted on each upper front corner of the vehicle body sides. \_\_\_\_\_
- 4. Two (2) flush mounted halogen scene lights, mounted on each upper rear corner of the vehicle body sides. \_\_\_\_\_
- 5. A Command Light Shadow SL445 (4 x 500W heads) extendable lighting system shall be installed on the top deck to provide adequate scene lighting in dark or inclement weather conditions. \_\_\_\_\_
- 6. The above lighting system shall be controlled remotely from outside the vehicle using a hand-held device with 7.5m of cable and be pre-connected to the on-board belt driven generator. Storage provisions for the remote and its cable shall be located within a vehicle compartment immediately behind the driver's door. \_\_\_\_\_
- 7. The Command Light Shadow SL445 shall feature a green rotating beacon or strobe light mounted on top to indicate an Incident Command vehicle. \_\_\_\_\_
- 8. A 12V electric self-rewinding extension cord reel with 60m (200') of #12 45amp 120V three conductor weatherproof wiring. The reel shall be mounted in the rear compartment of the vehicle and the extension cord shall be hard-wired through a circuit breaker to the on-board belt driven generator. \_\_\_\_\_
- 10. The reel shall feature a rewind system wired to the vehicle 12V system and operable whether the generator is running or not. The reel shall incorporate a roller system designed to prevent chafing and premature cord wear during deployment and rewinding of the cord. \_\_\_\_\_
- 11. A lighted weatherproof junction box containing two (2) 20A 120V straight blade and two (2) 20A 120V twist lock receptacles shall be attached to the end of the reel mounted extension cord with storage provisions for the junction box located within the electrical reel compartment. \_\_\_\_\_

**EMERGENCY RESPONSE LIGHTING**

**COMPLIES**

All emergency response lighting shall be installed as per most current NFPA standards and shall include:

- 1. Adequate **RED** LED strobe emergency lights to provide 360° visibility from the air as well as the ground, shall be mounted as high as possible on the vehicle body assemblies. \_\_\_\_\_
- 2. Two (2) forward facing **RED** LED strobe “wig-wag” emergency lights, shall be flush mounted at eye-level, one on either side of the lower front grill above the front bumper. \_\_\_\_\_
- 3. Two (2) rear facing **RED** LED strobe “wig-wag” emergency lights, shall be flush mounted at eye level, one on either side of the lower rear above the rear bumper. \_\_\_\_\_
- 4. One (1) **RED** LED strobe “intersection” lights, shall be mounted on each front fender and flush mounted on each rear side panel of the body. \_\_\_\_\_
- 5. Two (2) rear facing **RED** LED strobe “wig-wag” emergency lights, shall be flush mounted as high as practical on either side of the rear body. \_\_\_\_\_
- 6. All the above emergency lighting shall be activated via a single switch mounted within the driver’s reach. \_\_\_\_\_
- 7. In addition, an **AMBER** LED strobe beacons shall be mounted on the vehicle body roof for non-emergency identification. This beacon shall be switched independently of the Emergency Response Lighting system. \_\_\_\_\_

**COMMUNICATIONS AND EMERGENCY RESPONSE EQUIPMENT**

**COMPLIES**

The vehicle shall:

- 1. Employ adequate radio interference suppression to provide positive understandable voice radio communications under all operating conditions. A copy of testing results shall accompany the vehicle at the time of delivery. \_\_\_\_\_
- 2. Incorporate a Federal Signal PA300 (no exceptions) electronic siren/pa system with noise cancelling microphone, capable of providing Hi/Lo, Yelp and Wail sound selection. In addition to the hand operating controls, this system shall incorporate a foot switch to activate the siren on the floor of the driver's area. \_\_\_\_\_
- 3. Incorporate two (2) radios and antennas, one for Air Traffic Control communication and one for Fire Department inter-vehicle use. The Victoria Airport Authority will supply pre-programmed radios with external speakers to be installed by the successful proponent. \_\_\_\_\_
- 4. Incorporate Set-Com (no exceptions) interactive cordless headsets and voice activated boom microphones for driver and officer seating positions. \_\_\_\_\_
- 5. Incorporate a centre console to house the siren/pa, radios and fire fighting controls. \_\_\_\_\_

**FIREFIGHTING PACKAGE**

The firefighting package shall include, but not be limited to, a water pump, water tank, AFFF concentrate tank, dry chemical secondary agent with dual agent hose line and bumper turret featuring Elkhart Hydro Chem technology, 38cm (1.5") pre-connect side discharge connections and all appropriate piping, gauges and valves. \_\_\_\_\_

- 1. The water tank capacity shall not be less than **1135L (300 US gallons)**. \_\_\_\_\_
- 2. The AFFF concentrate tank capacity shall be no less than **151L (40 US gallons)**. \_\_\_\_\_
- 3. The dry chemical vessel shall have a capacity of no less than **227kg (500lb)**. \_\_\_\_\_
- 4. The dry chemical secondary agent shall be a Fire Combat (no exceptions) System with 30m (100ft) of dual agent hose line on a 12V DC self-winding reel. \_\_\_\_\_

**WATER PUMP**

The water pump shall be a fire service rated pump with a **MINIMUM** rated capacity of 1892lpm (500 gpm) that meets or exceeds NFPA 414 standards.

The pump shall be capable of delivering the percentage of the rated discharge at the pressures indicated below:

- 100% of rated capacity at 1034kPa (150lb) net pressure,
- 70% of rated capacity at 1379kPa (200lb) net pressure, and
- 50% of rated capacity at 1724kPa (250lb) net pressure \_\_\_\_\_

The water pump shall be designed and mounted in a manner that permits removal of the main pump body without disturbing the pump engine or other main chassis mounted components. \_\_\_\_\_

***Proponents may choose to include optional pricing on any high pressure, multi-stage pumps available at the time of construction within their proposals, provided they meet or exceed NFPA 414 standards and are capable of discharging water/AFFF at the rated volumes specified above.***

In addition, the water pump shall be certified by the manufacturer as to its suitability in this vehicle at the specified performance and shall:

1. Be constructed of materials resistant to salt water. \_\_\_\_\_
2. Be driven by a separate diesel engine, permitting full pump operation and simultaneous operation of the vehicle itself. "Pump and Roll" capability. \_\_\_\_\_
3. **PTO driven pumps are NOT ACCEPTABLE.** \_\_\_\_\_
4. Be designed in such a manner as to permit pump engine start-up at any speed and in any gear. \_\_\_\_\_
5. Be gravity primed from the water tank. \_\_\_\_\_
6. Incorporate an automatic pressure relief valve to prevent water hammer. \_\_\_\_\_
7. Incorporate a thermal protection relief device capable of automatically introducing cooler water into the pump when water or internal pump temperatures exceed 49°C (120°F). \_\_\_\_\_
8. Provide a minimum discharge rate of 1893lpm (500US gpm) at 1657kPa (240 psi). \_\_\_\_\_
9. Provide the maximum discharge flow rate tolerance mandated by NFPA, in the total discharge capacity. \_\_\_\_\_
10. Include an AFFF "around the pump" proportioning system capable of constantly delivering foam at operator selectable rates of 3% or 6%. \_\_\_\_\_
11. Incorporate foam system controls mounted on the pump panel and in the cab within easy reach of the driver. \_\_\_\_\_
12. Incorporate a separate electrical system independent of the chassis system. \_\_\_\_\_
13. Provide a heat exchanger system for the engine cooling system that shall not permit the water from the fire pump to mix with the engine coolant. \_\_\_\_\_
14. Be capable of providing a turret straight stream, or dispersed, water/AFFF foam pattern throughout the range of performance specified by NFPA 414. \_\_\_\_\_
15. Be equipped with a pressure governor and all-in-one monitoring module mounted on the pump panel. \_\_\_\_\_
16. Incorporate a 65mm (2.5") intake relief valve preset at 862kPa (125psi) on the suction side of the pump. \_\_\_\_\_
17. The above valve shall have an adjustment range of 517-2068kPa (74-300psi) and shall automatically reset as excessive pressure drops to within the preset range. \_\_\_\_\_
18. The discharge side of the above valve shall be plainly identified as such and tagged "**DO NOT CAP**". \_\_\_\_\_
19. Incorporate a pump monitoring panel capable of providing the ability to hold a steady discharge pressure within 206kPa (30psi) by controlling engine speed or hold a specified engine RPM to provide the operator's preferred discharge rate. \_\_\_\_\_

**COMPLIES**

- 20. Incorporate LED displays and indicators used to provide pump discharge and Intake pressures and engine RPM. \_\_\_\_\_
- 21. Incorporate LED displays and indicators shall be used to provide water tank capacity, AFFF tank capacity, engine coolant temperature, pump temperature, engine oil pressure and vehicle battery voltage levels. \_\_\_\_\_
- 22. Incorporate permanent labels in both metric and SAE measurements for all LED displays identified above. \_\_\_\_\_
- 23. Have all the above controls and displays located on the front of the pump control module within easy reach of the operator. \_\_\_\_\_
- 24. Provide permanent labels for all pump controls as to function and normal operating positions. \_\_\_\_\_
- 24. Be of a modular design to incorporate easy, one piece removal from the vehicle chassis without disturbing or removing other main vehicle components. \_\_\_\_\_
- 26. Be equipped with a separate pump hour meter. \_\_\_\_\_
- 27. Be equipped with a permanent data plate indicating rated flow at "capacity and "pressure" test pressures together with the engine RPM required to deliver those capacities and pressures. \_\_\_\_\_

**WATER and FOAM TANK LEVEL GAUGE**

The apparatus body shall feature lighted LED water and AFFF tank level indicators on either side of the vehicle body and in the vehicle cab. Each indicator shall have electronically controlled lights activated by tank sensors, and indicate Full,  $\frac{3}{4}$ ,  $\frac{1}{2}$ ,  $\frac{1}{4}$  and empty. \_\_\_\_\_

**PIPING, COUPLINGS, and VALVES**

- 1. All piping, couplings, connections and valves used in the firefighting package shall be designed and mounted in a manner to protect against physical damage during daily use of this vehicle in its intended role. \_\_\_\_\_
- 2. All piping, couplings, connections and valves used in the firefighting package shall be of a material designed to protect against corrosion from the elements found on the West Coast of Canada. \_\_\_\_\_
- 3. All piping, couplings, connections and valves used in the firefighting package shall be insulated, wrapped or heated to protect against freezing temperatures. \_\_\_\_\_
- 4. The suction system shall be designed for efficient flow at the desired pumping rates. \_\_\_\_\_
- 5. There shall be a valve controlled drain at the lowest point of the system for draining all of the liquids from the system when desired. The valve shall be designed in such a manner as to permit its operation from a location other than underneath the vehicle. \_\_\_\_\_
- 6. Flexible exposed plumbing to the drains shall be heavy duty wire braid hose for long service life. \_\_\_\_\_
- 7. Fixed piping shall be galvanized steel securely mounted and provided with flexible couplings in areas of stress as required. \_\_\_\_\_

**COMPLIES**

- 8. Victaulic type couplings shall be provided to facilitate removal of piping if required. \_\_\_\_\_
- 9. All valves shall be a quick opening type, be serviceable in-line, and be selected for ease of operation and freedom from leakage. \_\_\_\_\_
- 10. All system piping shall be tested on the suction side for leakage, and all water and AFFF foam discharge piping shall be tested and certified to 1½ times the system's highest operating pressure. \_\_\_\_\_
- 11. All valves and switches, etc associated with the vehicles systems shall be identified and labelled as to function and normally open or closed in such a manner as to resist corrosion or loss. \_\_\_\_\_
- 12. An adjustable means of pressure regulation shall be provided to maintain working pressures from 1035kPa to 2070kPa (150psi to 300psi) at normal pumping RPM. \_\_\_\_\_
- 13. All flexible wire braid reinforced hoses, including drain hoses and pressure gauge connections, shall have a minimum burst pressure of 6902kPa (1000psi). \_\_\_\_\_
- 14. Sealed LED water and foam tank indicators shall be mounted on each side, in addition to those mounted in the cab. \_\_\_\_\_
- 15. One (1) gated 65mm (2.5 inch) Storz discharge connection shall be mounted in a compartment on left side of the vehicle body. \_\_\_\_\_
- 16. One (1) gated 38mm (1.5 inch) NPSH threaded discharge connection shall be mounted in a compartment on left side of the vehicle body. \_\_\_\_\_
- 17. Liquid filled 65mm (2.5 inch) discharge pressure gauges shall be fitted to, and mounted near, each 65mm (2.5 inch) Storz discharge connection. \_\_\_\_\_

**WATER TANK and FILL CONNECTIONS**

The water tank shall be an industry standard polypropylene tank capable of carrying a minimum of 1135L (300 US gallons) of usable water, and shall be properly baffled against water movement during normal operation of the vehicle. \_\_\_\_\_

**THE WATER TANK SHALL BE WARRANTED FOR THE SERVICE LIFE OF THE VEHICLE.** \_\_\_\_\_

In addition, the water tank shall:

- 1. Be separate and distinct from the vehicle body and chassis and be easily removable as a unit. \_\_\_\_\_
- 2. Be mounted in a manner that will not transfer the torsional strains of off-road driving from the chassis to the tank. \_\_\_\_\_
- 3. Be resistant to deterioration by water common to the purchaser's location. \_\_\_\_\_
- 4. Be resistant to chemical and galvanic corrosion. \_\_\_\_\_
- 5. Be equipped with a readily removable manhole cover over the tank sump. \_\_\_\_\_
- 6. Incorporate an anti-swirl baffle system and low point drain. \_\_\_\_\_

**COMPLIES**

7. Incorporate a top water fill hatch-type opening complete with removable screen, large enough to facilitate tank inspections. \_\_\_\_\_
8. Provide sufficiently sized outlets and suction piping to permit the minimum required discharge rates from all discharge outlets. \_\_\_\_\_
9. Adequately vented to the atmosphere to permit rapid and complete filling without any pressure build up, and to permit agent discharge at the maximum design flow rates without danger of tank collapse. \_\_\_\_\_
10. Incorporate a compartment enclosed 6cm (2.5 in) direct tank fill connection where it can be easily reached from the ground. \_\_\_\_\_
11. These connections shall incorporate one-way valves to prevent water loss when a connection or disconnection is made, and be capable of re-filling the water tank in less than two (2) minutes. \_\_\_\_\_
12. Permit a minimum intake pressure flow of 551kPa (80psi) at the tank fill connections. \_\_\_\_\_
13. Incorporate an integral overflow system to prevent tank damage when filling. \_\_\_\_\_
14. The entire pumping system shall be equipped with a thermostatically controlled dump valve designed to protect against pressure build-up due to heat caused by pumping without discharging any liquid. \_\_\_\_\_
15. Two (2) 7.6m x 6cm (25 ft x 2.5 in) refill hoses with STORZ couplings shall be provided. \_\_\_\_\_

**AFFF LIQUID CONCENTRATE TANK**

The AFFF liquid concentrate tank shall be an industry standard polypropylene tank capable of carrying a minimum capacity of **151L (40 US gallons)** AFFF concentrate to support four complete water tank loads mixed at a rate of 3 parts of concentrate to 97 parts water. \_\_\_\_\_

**THE AFFF CONCENTRATE TANK SHALL BE WARRANTED FOR THE SERVICE LIFE OF THE VEHICLE.** \_\_\_\_\_

In addition, the AFFF concentrate tank shall:

1. Be separate and distinct from the vehicle body and chassis and be easily removable as a unit. \_\_\_\_\_
2. Be flexibly mounted in a manner that will not transfer the torsional strains of off-road driving from the chassis to the tank. \_\_\_\_\_
3. Be resistant to chemical and galvanic corrosion. \_\_\_\_\_
4. Be equipped with a readily removable manhole cover over the tank sump. \_\_\_\_\_
5. Incorporate an anti-swirl baffle and low point drain. \_\_\_\_\_
6. Incorporate a top AFFF concentrate fill hatch-type opening complete with removable screen, large enough to facilitate tank inspections. \_\_\_\_\_

7. Provide sufficiently sized outlets and suction piping to permit the minimum required discharge rates from all discharge outlets. \_\_\_\_\_
8. Adequately vented to the atmosphere to permit rapid and complete filling without any pressure build up, and to permit agent discharge at the maximum design flow rates without danger of tank collapse. \_\_\_\_\_
9. Incorporate a compartment enclosed 38mm (1.5 inch) tank fill/drain connection on each side of the vehicle that can be easily reached from the ground. \_\_\_\_\_
10. These connections shall incorporate one-way valves to prevent concentrate loss when a connection or disconnection is made. \_\_\_\_\_
11. Incorporate an integral overflow system to prevent tank damage when filling. \_\_\_\_\_
12. All AFFF concentrate tank piping, fittings and valves shall be as outlined in the water tank section above. \_\_\_\_\_

**NOTE: AFFF CONCENTRATE IS NOT REQUIRED THROUGH THIS RFP.**

**DRY CHEMICAL SECONDARY AGENT SYSTEM**

The vehicle shall incorporate a secondary Potassium Bicarbonate compatible dry chemical system consisting of, but not limited to, a pressure vessel capable of holding 227kg (500 lb) of agent, a means of discharging this agent, and appropriate piping and valves to permit simultaneous discharge of the agent via entrainment through the bumper turret, as well as through a side compartment mounted hose reel.

This system shall:

1. Meet or exceed all the requirements as outlined in NFPA 414. \_\_\_\_\_
2. Have a capacity of 227kg (500 lbs) dry chemical. \_\_\_\_\_
3. Include one (1) fully charged nitrogen cylinder, capable of discharging the entire 227kg (500 lb) of agent, mounted on the vehicle in a protected position. The VAA will provide the proponent with the type, make and model of nitrogen cylinders in use to remain consistent with existing supply. \_\_\_\_\_
4. Provide two (2) integral pressure gauges indicating nitrogen pressure. One (1) gauge shall be located at the nitrogen cylinder, and one (1) gauge shall be located in the vehicle cab. \_\_\_\_\_
5. Include one (1) spare, fully charged, nitrogen cylinder to be shipped as loose equipment. \_\_\_\_\_
6. Include a refill opening on the top of the vehicle allowing the dry chemical system to be filled through the top of the pressure vessel without the need to remove any piping or accessories. \_\_\_\_\_
7. Include a dry chemical sphere refill funnel with the vehicle. \_\_\_\_\_
8. Include a minimum 30m (100') dual agent hose reel assembly in the rear compartment. \_\_\_\_\_
9. The hose reel assembly shall incorporate vertical and horizontal steel rollers to aid in hose deployment and prevent hose chafing. \_\_\_\_\_

**COMPLIES**

- 10. Provide a minimum discharge rate of 2.5kg (5.5 lb) per second. \_\_\_\_\_
  
- 11. Equipped with electric rewind provisions and a manual rewind override system. \_\_\_\_\_
  
- 12. Incorporate all controls necessary for operating the dry chemical system and the water/foam discharge will be included in a location near the hosereel to permit operating the system from the exterior of the vehicle. \_\_\_\_\_
  
- 13. Incorporate an Williams Hydro-Chem (or approved equivalent) type nozzle capable of discharging agent as per NFPA 414 standards. \_\_\_\_\_
  
- 14. Include a permanent type identification plate, clearly indicating extinguishing agent type, capacity in kilograms and pounds, full weight in kilograms and pounds, empty weight in kilograms and pounds, operating pressure and hydrostatic test data (month-day-year). \_\_\_\_\_
  
- 15. Provide a safe means to allow the nitrogen cylinder to be changed by a single person without any heavy lifting. \_\_\_\_\_

**NOTE: DRY CHEMICAL AGENT IS NOT REQUIRED THROUGH THIS RFP.**

**BUMPER TURRET**

**COMPLIES**

1. The vehicle shall be equipped with an electric bumper turret capable of producing a continuous discharge flow of 568 litres per minute (150 gpm). \_\_\_\_\_
2. The bumper turret shall feature an auto deploy mode. \_\_\_\_\_
3. Provide a Williams Hydro-Chem (or approved equivalent) non-aspirated combination fog and straight stream nozzle constructed of durable, lightweight material and having an electric pattern section from straight stream to wide fog controlled by a 12v DC motor. \_\_\_\_\_
4. Incorporate dry chemical discharge capability through entrainment using the Williams Hydro-Chem nozzle, controlled by a console mounted joystick, accessible by the driver. \_\_\_\_\_
5. Provide a minimum dry chemical discharge rate of 7.26kg (16.0 lb) per second. \_\_\_\_\_
6. The nozzle shall be capable of providing a discharge pattern infinitely variable from straight stream to fully dispersed. \_\_\_\_\_
7. The nozzle shall be optimized for AFFF and D/C production with the resulting foam conforming to the standards and properties specified in NFPA 412. \_\_\_\_\_
8. All water/AFFF foam patterns shall be pre-set to a maximum operating pressure of 1657kPa (240psi), with a driver operated means of reducing this flow to conserve agent. \_\_\_\_\_
9. 12V high intensity discharge (HID) lights shall be attached to the turret assembly in sufficient quantity to provide superior night time vision. \_\_\_\_\_
10. The light shall rotate and elevate with turret movement to provide full illumination of the water/foam discharge stream. \_\_\_\_\_
11. All controls for turret and nozzle operation are to be located on the centre console within easy reach of the driver. \_\_\_\_\_

**Note: The foam produced by either roof turret, bumper turret, hose lines or under-truck nozzles shall have at least the minimum expansion ratio and drain time specified by NFPA 412 aspirated and non-aspirated nozzles where applicable.**

**EXTERIOR PUMP PANEL**

**COMPLIES**

1. There shall be some means of manually opening and controlling the discharge of both turrets from the left side of the vehicle in the event of a failure of the controls inside the cab. \_\_\_\_\_
  
2. A full feature structural panel shall be incorporated on the left side of the vehicle, and incorporate both 100mm (4 in) and 65mm ( 2 ½ in) STORZ inlets for suction purposes from a hydrant, as well as both 65mm (2 ½ in) and 38mm (1 ½ in) gated discharge outlets with controls and gauges. \_\_\_\_\_

**PRE-CONNECTED HOSE LINES**

1. One (1) gated 38mm (1.5 in) NPSH threaded discharge connection shall be mounted in a compartment on one side of the vehicle body. \_\_\_\_\_
  
2. A slide-out tray capable of holding 90m (300 ft) of pre-connected 38mm (1.5 in) rubber jacketed hose shall be installed in this compartment. \_\_\_\_\_
  
3. Flow to these hose lines shall be through a safety interlock system controlled from the compartments and in the cab, that will only allow the hose to be charged after all the hose has been deployed. \_\_\_\_\_
  
4. A cab-mounted indicator light shall be employed to advise the driver when a hose line is deployed from a compartment. \_\_\_\_\_
  
5. The operating pressure of the hose lines shall be regulated at 1034kPa (150psi). \_\_\_\_\_

**PAIN T AND FINISH**

**COMPLIES**

1. All parts of the vehicle shall be cleaned, treated and primed prior to assembly. \_\_\_\_\_
2. To ensure proper paint adhesion to aluminum components, all components shall be pre-treated prior to painting using an aluminum conversion process with a chromate etch. \_\_\_\_\_
3. After the vehicle is completely assembled, except for bright trim, the entire unit shall be sanded, primed, puttied and filled, water sanded and painted the specified colour(s) using lead and chromate free polyurethane paint. \_\_\_\_\_
4. The paint thickness shall be 3.5 mils. \_\_\_\_\_
5. The finished paint shall be free of "orange peel", runs, sags, overspray and all other defects. \_\_\_\_\_
6. The vehicle shall be painted and striped to match existing fleet livery. \_\_\_\_\_
7. The primary vehicle colour shall be PPG Safety Green #DCC 47010. \_\_\_\_\_
8. The secondary (upper cab) vehicle colour shall be PPG White #DCC 91215. \_\_\_\_\_
9. The vehicle exterior shall be clear coated after painting. \_\_\_\_\_
10. Lettering, numbering and striping specifics shall be provided by the VAA. \_\_\_\_\_
11. 15cm (6 in) Scotchlite reflective blue striping shall be affixed to the sides of the vehicle as specified by the VAA. \_\_\_\_\_
12. The rear of the **body only** shall be stripped in reflective "Diamond Grade" chevrons as per NFPA 1901. The rear rollup door shall not be stripped. \_\_\_\_\_
13. Available chevron colour samples shall be provided in the bid tender package. \_\_\_\_\_
14. The rear rollup door and rearmost side doors shall feature the vehicle number "8" decal as designed by the VAA. \_\_\_\_\_
15. All decals and vehicle numerals shall be designed by the VAA and supplied and affixed by the successful proponent. \_\_\_\_\_

**MISCELLANEOUS DETAILS**

**COMPLIES**

1. All switches, valves and control handles, etc shall be identified as to function and normal operating position. ie: normally open or closed. \_\_\_\_\_
2. All switch and valve identification, legends, operating instructions and nameplate shall be either engraved plastic in contrasting colours or non-corrosive metal. \_\_\_\_\_
3. All switch and valve identification, legends, operating instructions and nameplates shall be in English and shall not become degraded by weathering or use. \_\_\_\_\_
4. All switch and valve identification, legends, operating instructions and nameplates shall be permanently attached in the appropriate location. \_\_\_\_\_
5. Nameplates shall be provided showing make, model and serial numbers and other such data to positively identify the item in question. \_\_\_\_\_
6. Information plates shall provide important operating, servicing or safety instructions for the vehicle and equipment. \_\_\_\_\_
7. All safety and hazard warnings or cautions shall be of contrasting colours, of sufficient size and located in conspicuous areas to be readily seen under normal conditions. \_\_\_\_\_

**WARRANTIES, CERTIFICATIONS and DOCUMENTATION**

**COMPLIES**

The successful Proponent shall furnish the following publications in accordance with standard commercial practices applicable to this vehicle, including body and special fire suppression equipment, as furnished under the contract:

- 1. All warranties, test documents, certifications, repair and service manuals Pertaining to the vehicle, equipment, and option equipment shall be in English and supplied with the vehicle at the time of delivery. \_\_\_\_\_
- 2. Operator's manual with lubrication charts (10 paper, 2 CD-ROM). \_\_\_\_\_
- 3. Parts manual (2 paper, 2 CD-ROM). \_\_\_\_\_
- 4. Maintenance/Service manual (2 paper, 2 CD-ROM.) \_\_\_\_\_
- 5. These manuals shall cover the complete vehicle and shall be in accordance with the standards and requirements of NFPA 414. \_\_\_\_\_
- 6. All parts manuals must reference Proponent part numbers to indicate a dedication to parts support and inventory to accommodate 48-hour support. In addition, proponent references shall be provided upon request. \_\_\_\_\_

**WARRANTY**

The above vehicle shall carry a minimum one (1) year bumper-to-bumper warranty with the exceptions listed below:

- Five (5) years on engine and drive train; \_\_\_\_\_
- Five (5) years on the suspension system; \_\_\_\_\_
- Two (2) years on the water pump; \_\_\_\_\_
- Lifetime warranty on the water and foam tanks. \_\_\_\_\_

**UNIT DELIVERY**

Unit delivery shall be no later **December 31, 2012** after receipt of a signed order.

The vehicle shall be fully tested against the various compliance standards prior to delivery and will be fully serviced and operational upon delivery. The successful bidder shall supply copies of all test results upon delivery of the vehicle. \_\_\_\_\_

**QUALITY ASSURANCE**

The nature of the Aircraft Rescue and Fire Fighting Service requires that Proponents building equipment for such service must be responsible and possess the ability to perform successfully under the terms and conditions of a proposed purchase. Therefore, consideration shall be given to such matters as Proponent integrity, compliance with public policy, record of past performance and financial and technical resources.

The Proponent must assume full and complete responsibility for all component parts of the entire vehicle, even where portions of the vehicle or its components are sub-contracted.

This responsibility shall include design, construction, inspection, performance testing and servicing. The Victoria Airport Authority will ensure the Proponent's policy and ability to remain capable of furnishing parts and technical assistance for the normal service life of the vehicle.

The Proponent shall also be responsible for assuring the vehicle itself, and its fire suppression system meet the required performance criteria. All major components shall have the manufacturer's approval and recommendation for this type of service, and the manufacturer's ratings shall not be exceeded by actual imposed loads.

**PREPARATION FOR DELIVERY**

**COMPLIES**

The vehicle and its accessories, spare parts, tools and any optional equipment shall be packaged in such a manner as to insure safe delivery to the Victoria Airport Authority.

\_\_\_\_\_

**PRE-CONSTRUCTION CONFERENCE**

A proponent’s representative shall attend a pre-construction conference at the Victoria International Airport at the Proponent’s expense, to finalize all details of this project, after the contract is awarded and prior to construction beginning.

\_\_\_\_\_

**PRE-DELIVERY INSPECTION**

Two representatives of the Victoria Airport Fire Service shall travel to the factory to perform a final vehicle inspection and testing prior to delivery.

\_\_\_\_\_

All travel expenses incurred for the above inspection and conferences including airfare, accommodations, meals and car rentals shall be the sole responsibility of the proponent.

\_\_\_\_\_

**MAINTENANCE TRAINING**

Maintenance training at the proponent’s facility shall be provided for two (2) Victoria International Airport mechanics. The training shall be at least 32 hours in duration, and shall extensively cover the logic and operation of the pump, pump engine, electrical and agent systems of the vehicle including a comprehensive review of the schematic of those systems, troubleshooting, diagnostics, disassembly and repair of all components, excluding the engine and transmission.

\_\_\_\_\_

All travel expenses incurred for the training including airfare, accommodations, meals, tuition and car rentals shall be the sole responsibility of the proponent.

\_\_\_\_\_

**FIRE PACKAGE TRAINING**

A proponent’s representative shall provide a minimum of 8 hours training at the Victoria International Airport, at the proponent’s expense, for each of the fire crews to a maximum of 24 hours per crew, to ensure familiarization with the operation of the vehicle and its fire suppression package.

\_\_\_\_\_

This familiarization shall take place within the 30-day acceptance period following delivery of the vehicle.

\_\_\_\_\_

**SUBSTITUTIONS**

Any substitutions to the preceding pages shall be identified, and any alternatives clearly defined in writing, on a separate piece of paper, and shall become part of this Proposal.

\_\_\_\_\_

**SUGGESTION/MODIFICATIONS**

The Victoria Airport Fire Service anticipates and expects proponent input as to the best location for mounting ancillary equipment. Any and all suggestions and/or modifications shall be identified, and any alternatives clearly defined in writing, on a separate piece of paper, and shall become part of this Proposal.

\_\_\_\_\_

The Victoria Airport Fire Service reserves the right to add or delete equipment based on the above proponent input, and any additions or deletions shall be identified, and any alternatives clearly defined in writing, on a separate piece of paper, and shall become part of this Proposal.

\_\_\_\_\_

**LOOSE EQUIPMENT**

**COMPLIES**

The following loose equipment shall be supplied with the vehicle. Mounting positions shall be determined and approved by the VAA prior to installation.

Two (2) adjustable hydrant wrenches, mounted; \_\_\_\_\_

Two (2) sets of two (2) 1½" x 2½" hose spanners with mounting brackets; \_\_\_\_\_

Two (2) sets of two (2) 2½" STORZ hose spanners with mounting brackets; \_\_\_\_\_

One (1) 8' handle pike pole, mounted; \_\_\_\_\_

One (1) 24" bolt cutter, mounted ; \_\_\_\_\_

One (1) Houligan tool, mounted ; \_\_\_\_\_

Two (2) Akron PL500 (or approved equivalent) portable emergency scene lights, intrinsic, weatherproof, mounted; \_\_\_\_\_

One (1) Scott 4.5 AP75 spare carbon fibre bottle, mounted; \_\_\_\_\_

Three (3) Scott 4.5 AP75 spare carbon fibre bottles, loose \_\_\_\_\_

Two (2) 38mm (1½") Akron 1720 Turbo-Jet nozzles with NPSH coupling. \_\_\_\_\_

Two (2) Elkhart Brass 2½"-1½" gated "Y" valves; \_\_\_\_\_

One (1) 6 lb. axe with serrated blade, non-wedge type, fibreglass handle, mounted. \_\_\_\_\_

Six (6) 15m x 38mm (50' x 1½") Mercedes Textile "Future-Line" hose with NPSH couplings – Red in colour. \_\_\_\_\_

Two (2) 15m x 65mm (50' x 2½") Mercedes Textile "Future-Line" hose with Storz couplings – Red in colour. \_\_\_\_\_

**All loose equipment mounting locations shall be determined and approved by the VAA prior to installation.** \_\_\_\_\_

The Proponent confirms it has obtained and carefully examined all documentation pertaining to this Request for Proposal issued by the Victoria Airport Authority and any addenda issued in connection therewith, and undertakes and agrees that:

1. If awarded the contract, the Proponent shall supply the vehicle and all goods and services on the date set out in the Contract Document.
2. Except as otherwise specified or as arising by reason of the provision of the Contract Document, no person(s) whether natural or body corporate, other than the Proponent has or shall have any interest or share in this proposal or in the proposed contract which may be completed in respect thereof.
3. There is no collusion or arrangement between the Proponent and other actual or prospective Proponent in connection with proposals submitted for this project. The Proponent has no knowledge of the contents of other proposals and has made no comparison figures or agreement or arrangement, express or implied with any other party in connection with the making of the proposal.
4. This proposal is a special instrument as the Proposal's deed and it shall not be withdrawn after the official opening. The proposal shall be valid for a period of 30 days after the opening date.
5. The acceptance of the proposal by the Victoria Airport Authority shall be made only by notice in writing from the CEO and President of the Victoria Airport Authority, addressed to the successful Proponent at the address given in this Form of Proposal, and if the Proposal Documents are so worded, may accept either in whole or for any part of the project on which the proposal is made.
6. If, for any reason whatsoever, the Proponent fails or defaults in respect of any matter or thing which is an obligation of the Proponent under the terms of this proposal, the Victoria Airport Authority, at it's option, may consider the Proponent has abandoned the offer made or the contract, if the offer has been accepted, where upon acceptance, if any, of the Authority shall be null and void and the Victoria Airport authority may seek an alternate solution of it's choosing.
7. The Victoria Airport Authority reserves the right to cancel this Request for Proposal if the proposals do not meet the Authorities requirements or preferences.

Executed at \_\_\_\_\_, in the Province of \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, 2012 AD, under the seal of the Proponent as a specialty instrument.

**NOTE:** If the Proponent is a corporation, in addition to signature, affix corporate seal. The Proponent must sign with his/her name, if a natural person makes the proposal, the name shall be typed or clearly printed below the signature.

\_\_\_\_\_  
Corporate Name, if Proponent is a Corporation

Per: \_\_\_\_\_

If the Proponent is carrying on business under a firm name and is NOT incorporated, the members of the firm must sign below the firm name and their names must be typed or clearly printed below the signatures.

Per: \_\_\_\_\_

Mailing Address of Proponent:

\_\_\_\_\_  
Street City

\_\_\_\_\_  
Province/State Postal Code Telephone Fax

\_\_\_\_\_  
Name of Proponent

\_\_\_\_\_  
Initials of Signing Officer