Township of Algonquin Highlands

Fire Services
1123 North Shore Road
Algonquin Highlands, ON K0M 1J1
Phone: 705-489-2379

TENDER No. FS-18-01
ONE (1) NEW 2019 FIRE TANKER

The Township of Algonquin Highlands is inviting bids for One (1) 2019 New Fire Tanker.

Name of Firm

Address | Postal Code

Telephone Number | Facsimile Number

Name of Person Signing for the Firm (Print) | Signature

Position of Person Signing

This form to be completed and returned with Tender submission.

SEALED TENDERS plainly marked:
"FS-18-01 TENDER FOR ONE (1) NEW 2019 FIRE TANKER"
will be received by, Mr. Mike Cavanagh, Fire Chief
or by mail **UNTIL:3:00 p.m., LOCAL TIME, Tuesday, May 1, 2018.**

BID SUMMARY

Tender for One (1) New 2019 Fire Tanker as per attached specifications.

Company Name: _____

Manufacturer: _____

Net Price: $_____

Add 13% H.S.T. $_____

Total Tender Price: $_____

H.S.T. #_____

Delivery Date: _____

I,_____ , am an authorized officer of
(Print Name)

_____
(Company name)

with authority to bind this company within the terms and conditions of this Tender.

_____ _____
(Signature) (Title)

Company Address: _____

Phone Number: _____ Fax Number :_____

Email address: _____

INDEX OF SPECIFICATIONS

TERMS AND CONDITIONS

1. Tender Requirements:

All tenders shall be submitted in a sealed envelope and clearly marked "**2019 Fire Tanker FS-18-01**".

Tenders must be delivered/mailed to:

Township of Algonquin Highlands
1123 North Shore Road
Algonquin Highlands, Ontario, K0M 1J1
Attention: Mike Cavanagh, Fire Chief

2. Tender Closing and Opening:

Tenders must be received no later than **3:00 p.m.** local time on **May 1st, 2018.** On the closing day, commencing at 3:15 p.m. local time, the envelopes will be opened and the tenders will be read and recorded publicly. The tenders will be evaluated and scored by the Fire Chief. A report to Council for consideration and approval may be required.

3. Right to Accept or Reject Tenders:

The Township of Algonquin Highlands reserves the right to accept or reject any and all tenders. **"The lowest or any tender shall not necessarily be accepted."** Tender award is subject to the Township of Algonquin Highlands Council approval. Tender prices shall be valid for acceptance for sixty (60) days following the closing date.

4. Cancellation of Contract

The Township shall have the right, which may be exercised from time to time, to cancel the contract if the tendered vehicle cannot be delivered or is not delivered to the satisfaction of the Township. In the event of such cancellation, the Township shall not incur any cost or liability for loss of anticipated profit by the company. This Contract cannot be assigned without the written consent of the Township. An assignment into Bankruptcy of any party under this contract will be treated as terminating the contract.

5. Delivery Location:

The new Fire Tanker shall be delivered to the Algonquin Fire Services at 1095 North Shore Rd, Algonquin Highlands, Ontario.

6. Payment Terms:

Payment shall be made within thirty (30) days after delivery of the tendered Fire Tanker and or an acceptable invoice, whichever is later and subject to the tendered vehicle performing to the satisfaction of the Township. Should the tendered vehicle not be equipped as specified or if it fails to perform to the satisfaction of the Township, the successful bidder shall have thirty (30) days to remedy the deficiency. If after thirty (30) days the tendered vehicle is found to still be in an unacceptable condition, the Township reserves the right to return the tendered vehicle and cancel this agreement at no cost to the Township.

7. Documents to Include with Bid

a) A 10% bid bond and a letter of intent stating that a performance bond equal to 50% of the value of the contract shall be issued if the contract is awarded to the bidder;

b) Proof of public liability and product liability insurance for a total amount of $10,000,000;

c) A company resolution authorizing a duly authorized representative to sign the bid;

d) An Underwriters' Laboratories of Canada (U.L.C.) certificate;

e) A Canada Motor Vehicle Safety Standards (C.M.V.S.S.) certificate;

f) A copy of ISO Certification 9001:2008;

g) A Canadian Welding Bureau certificate for aluminum certifying that the bidder complies with the CSA W47.2;

h) A Canadian Welding Bureau certificate for steel certifying that the bidder complies with the CSA W47.1;

i) The lifetime warranty supplied by the tank manufacturer;

j) CAD Drawings (left side, right side, back) bearing the signature, the number, and the seal of an engineer having at least five years of experience in the manufacturing of fire trucks;

k) An example of the electrical diagram will be provided at the delivery of the vehicle;

l) A sample of the electrical wiring with colour codes, functions and numbers;

m) A V-Mux Multiplex training certificate shall be supplied by the Weldon Company. Also the bidder shall supply a customer's list (25 customers minimum) using this multiplex system;

n) A list of 10 references for recent deliveries of vehicles;

o) Manufacturer shall be a member of the Fire Apparatus Manufacturer Association (FAMA) and should provide a copy of the certificate;

p) The completed specification sheet as well as the bid summary sheet.

For inquiries or questions, please contact:

Mike Cavanagh
Fire Chief
Telephone: (705) 766-0010
Email: mcavanagh@algonquinhighlands.ca

SECTION -2- **CHASSIS SPECIFICATION**	**Complies**	**Notes**
2. The vehicle chassis shall be a 2019 Freightliner, M2-112, 6X4, 2 doors. The chassis shall be put into service and operate in the country of Canada (CAN) and shall meet the regulatory requirements of the same. The entire chassis specifications shall be provided with bid.		
2.1. **GROSS VEHICLE WEIGHT RATING (GVWR)** 2.1.1. The gross vehicle weight rating (GVWR) of the chassis shall be 66,000 pounds.		
2.2. **WHEEL BASE (WB) AND CAB TO AXLE (CA)** ▪ The chassis wheel base shall be 206". ▪ The chassis cab to axle (CA) shall be 141".		
2.3. **FRAME** 2.3.1. The frame shall be constructed of (120,000 PSI) 11/32"x 3½"x 10-15/16" high strength low alloy steel running parallel rails with 1/4" C-channel inner frame reinforcement.		
2.4. **DIESEL ENGINE** **EPA 2010 / CARB EMISSION CERTIFICATION** 2.4.1. The chassis engine shall be six (6) cylinders Detroit Diesel DD13. The engine shall offer a rating of 410 horse power at 1625 RPM and shall be governed at 1900 RPM. The torque rating shall feature 1550 foot pounds of torque at 975 RPM. The engine shall include the following components: ▪ Mechanical air inlet restriction gauge ▪ Automatic high idle speed control ▪ 12V DC starter motor ▪ Element cartridge oil filter ▪ Engine mounted fuel filter		
2.5. **AUXILIARY BRAKE SYSTEM** 2.5.1. A Jacobs engine compression brake shall be supplied with an On/Off switch and three (3) level selector switch in the cab.		

2.6. **RADIATOR** 2.6.1. The radiator shall be equipped with an overflow tank, a visual level indicator and high quality silicone hoses.		
2.6.2. The coolant shall be certified down to a temperature of -40° C (centigrade).		
2.7. **AUTOMATIC TRANSMISSION** 2.7.1. The transmission shall be an Allison 4000 EVS_P. It shall have the fire truck application package, lock-up in 4th speed and PTO provision.		
2.7.2. Synthetic transmission oil shall be used.		
2.8. **TOP SPEED** 2.8.1. The top speed of the vehicle shall be 60 MPH as per NFPA 1901-2009.		
2.9. **FRONT AXLE** 2.9.1. The front axle shall be a Detroit DA-F-20.0-5. The weight capacity for the axle shall be rated to 20,000 pounds. The axle shall be set back.		
2.10. **FRONT SUSPENSION AND SHOCK ABSORBERS** 2.10.1. The front suspension shall include 20,000 pounds taper leaf springs and intensive use shock absorbers.		
2.11. **FRONT TIRES AND WHEELS** 2.11.1. The two (2) front tires shall be Michelin XZA2 425/60R22.5, 20 plies mounted on aluminum Alcoa 22.5"x 9.00" front wheels with chromed steel lug nut covers and hub covers.		
2.12. **REAR AXLE** 2.12.1. The rear axle shall be a Meritor RT-46-160p. The weight capacity for the axle shall be rated to 46,000 pounds. The rear axles shall have full axle lock up and an inter axle lock. All axles' locks shall have dash mounted controls.		

2.13. **REAR SUSPENSION AND SHOCK ABSORBERS** 2.13.1. The rear suspension shall be a Hendrickson Firemaax EX rated to 48,000 pounds and include intensive use shock absorbers.		
2.14. **REAR TIRES AND WHEELS** 2.14.1. The (8) rear tires shall be Michelin XDN2 11R22.5, 16 plies mounted on aluminum Alcoa 22.5"x 8.25" front wheels with chromed steel lug nut and hub covers.		
2.15. **TIRE PRESSURE INDICATOR** 2.15.1. Each tire shall be equipped with a tire pressure indicator. The indicator shall turn green when the tire is properly inflated and shall turn red when tire pressure 10% from optimal pressure.		
2.16. **AUTOMATIC DRAIN VALVE** 2.16.1. One (1) Bendix DV-2 heated automatic drain valve shall be installed.		
2.17. **BRAKE SYSTEM** 2.17.1. A Wabco 4S/4M ABS air brake system with traction control and enhanced stability control shall be provided. The ABS system shall have an electronic microprocessor. Each wheel shall be controlled individually.		
2.18. **AIR BRAKE SYSTEM COMPONENTS** ▪ Brake chambers, spring 30/30 type long stroke; ▪ Parking brake; ▪ Gauge air pressure; ▪ Security valve below 85 PSI for air accessories. ▪ The parking brake shall be designed for intensive use and shall engage via mechanical spring force; ▪ Front and rear brakes shall be equipped with automatic slack adjusters; ▪ Air pressure gauge ▪ Air lines shall be made of colour coded reinforced nylon.		

2.19. **AIR COMPRESSOR** 2.19.1. The air brake system shall be equipped with one (1) BW BA-921 19.0 CFM air compressor with air tanks drain valves.		
2.20. **AIR DRYER** 2.20.1. The brake system shall include one (1) heated Bendix AD-9 air dryer with heater.		
2.21. **FRONT AIR BRAKES** 2.21.1. The front air brakes shall be Meritor 16.5" x 6" Q+ Cast Spider, double anchor, fabricated shoes with brake chamber and dust shield.		
2.22. **REAR AIR BRAKES** 2.22.1. The rear air brakes shall be Meritor 16.5" x 7" P-Cam, double anchor, cast shoes with brake chamber.		
2.23. **STEERING AND POWER-STEERING** 2.23.1. The cab shall include an 18" - 4 spoke tilting and telescopic steering wheel. The hydraulic power steering pump shall be a TRW-THP-60.		
2.24. **EXHAUST SYSTEM** 2.24.1. The cab shall include single, horizontal, aluminized steel, right side mounted exhaust system with tip in front of rear wheels.		
2.24.2. There shall be one (1) control for regeneration inhibit installed on dash board.		
2.25. **STANDARD 12 VOLTS ELECTRICAL SYSTEM** ▪ Electrical fuse, SAE; ▪ The halogen headlights shall be long lasting and equipped with the (DRL) feature; ▪ Two (2) single electric horn; ▪ Parking light; ▪ Five (5) cab marker lamps LED on top face of cab; ▪ Dome lamp activated by door opening ▪ Windshield wipers system with intermittent control; ▪ Light in cab when ignition is on;		

▪ Heater; ▪ Air-conditioning system; ▪ 12 Volts outlet on dash board.		
2.26. **ALTERNATOR** 2.26.1. The charging system shall include a DR 12 volts 275 Amp 40-SI brushless pad type alternator with remote battery voltage sensor.		
2.27. **BATTERY SYSTEM** 2.27.1. The battery system shall include three (3) Alliance 1231, Group 31, 12 Volts, 3375 CCA total and shall be securely mounted under the cab. If under cab mount is not possible on top of the body in a weather tight box, with suitable remote posts available to charge or boost the batteries will be acceptable provided locations are approved in the prebuild meeting.		
2.28. **FUEL TANK** 2.28.1. There shall be one (1) 60 U.S gallon (227 litres) fuel tank mounted under the cab on left side.		
2.29. **FRONT BUMPER AND GRILLE** 2.29.1. A polished chrome steel front bumper shall be provided and a chromed plastic grill shall be provided.		
2.30. **FRONT BUMPER TOW HOOKS** 2.30.1. Two (2) removable front tow hooks stored on the chassis frame.		
2.31. **DOOR GLASS AND WINDSHIELD** 2.31.1. The glass utilized for doors and windshield shall include standard automotive tint. The door windows shall roll up and down manually utilizing a crank style handle on the inside of the door.		
2.32. **REAR CAB WINDOW** 2.32.1. The rear cab window shall be deleted.		

2.33. **CAB INTERIOR** ▪ Standard gray vinyl interior ▪ Moulded door panel with high quality inserts; ▪ Interior grab handles; ▪ Doors activated LH and RH dual reading light forward cab roof; ▪ Insulated black vinyl floor mats; ▪ Two (2) Sun visors.		
2.34. **DRIVER SEAT** 2.34.1. The driver seat shall be a 911 model. It shall be equipped with air suspension, high back with integral headrest, orange three point shoulder harness with lap belt and NFPA 1901-2009 compliant sensor.		
2.35. **OFFICER SEAT** 2.35.1. The officer seat shall be a 911 model. It shall be equipped with a high back with integral headrest, orange three point shoulder harness with lap belt and NFPA 1901-2009 compliant sensor.		
2.36. **MIRRORS** 2.36.1. Two (2) dual West Coast bright finish heated mirrors with Led lights and LH-RH remote shall be supplied. Two (2) 8" bright finish convex mirrors shall be mounted under primary mirrors. A RH down view mirror shall be provided.		
2.37. **AIR HORN** 2.37.1. The chassis shall include (2) 25" air horns connected to air system and located on each side of the engine hood. The air horn activation shall be accomplished by a foot switch on the driver side and dash mounted push button the officer side. The dash mounted switch will be labeled correctly.		
2.38. **EMBER SEPARATOR** 2.38.1. The engine air intake system shall include an ember separator air intake filter as per NFPA latest edition.		

2.39. **CAB SUSPENSION** 2.39.1. The cab suspension shall be air type suspension.		
2.40. **FRONT CAB STORAGE BOX** 2.40.1. The vehicle shall be equipped with a storage box (center console) located between the two front seats. The design of the storage box will approved by the Fire Department at the prebuild meeting.		
2.40.2. The storage box shall include a compartment for document storage.		
2.40.3. The storage box shall be made of aluminium and shall be painted with anti-scratch black Zolatone type coating. The product shall be applied in four steps. Sanding and cleaning, base primer, first monochrome layer and finishing layer to give a camouflage aspect that will dissimulate any scratches.		
2.41. **INSTRUMENTATION** 2.41.1. Instrumentation and controls shall be mounted in the driving compartment and shall be identified and visible to the driver while seated as follows: ▪ An engine hour meter is required; ▪ Air cleaner restriction gauge; ▪ Speedometer; ▪ Tachometer; ▪ Odometer; ▪ Oil pressure indicator or gauge; ▪ Coolant temperature indicator or gauge; ▪ Transmission temperature indicator or gauge; ▪ Voltmeter; ▪ Hazard indicator light; ▪ Air pressure gauge, if applicable; ▪ Turn signal control and indicator lights; ▪ Headlight/DOT light switch; ▪ High beam headlight switch and indicator; ▪ Fuel level gauge(s); ▪ Master ignition switch; ▪ Heater/defroster controls; ▪ Warning lights and siren switches; ▪ Master electrical load switch; ▪ «Battery on» indicator light;		

▪ Windshield wipers and windshield washer control; ▪ PTO-engaged indicator, if applicable; ▪ Height of vehicle sign.		
SECTION -3- PUMP SYSTEM		
3. DARLEY PUMP PSP 1050 IGPM (5000 LPM) SINGLE STAGE 3.1.1. The pump shall be Darley power take-off (PTO) PSP 1250-3 gear transmission. **It shall be equipped with a mechanical seal**.		
3.1.2. The pump shall be of a size and design to mount on the chassis rails of commercial chassis, and have the capacity of 1050 (imp) gallons per minute, NFPA-1901 rated performance.		
3.1.3. The pump shall be ULC (Underwriters Laboratories of Canada) and N.F.P.A. (National Fire Protection Association) approved.		
3.1.4. The entire pump shall be assembled and tested at the pump manufacturer's factory.		
3.1.5. The pump shall be driven by a drive line from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance.		
3.1.6. The entire pump, both suction and discharge passages, shall be hydrostatically tested to a pressure of 500 PSI. The pump shall be fully tested at the pump manufacturer's factory to the performance spots as outlined by the latest NFPA Pamphlet No. 1901. Pump shall be free from objectionable pulsation and vibration.		
3.1. **AUTOMATIC AIR PRIMING PUMP** 3.1.1. The automatic air priming pump shall be a Trident Emergency Products 3 barrel, compressed air powered, high efficiency, multi-stage, venture based AirPrime System. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. ½" (12.7mm) airlines shall connect the air tanks to the primer. A single panel mounted control		

	will activate the priming pump and open the priming valve to the pump. The control shall be located on the pump panel.		
3.1.2.	An additional primer control valve shall be provided to prime the 6" suction line plumbing. The Trident Emergency Products remote priming valve shall activate using the same air that powers the AirPrime system when the coinciding panel valve is depressed. Priming the remote suction line evacuates air from that line and minimizes cavitation during remote suction operations. The valve control is to be co-located next to the main priming valve control on the pump operator's panel.		
3.1.3.	An additional air tank, minimum 5 gallons, shall be provided in the system to facilitate more air storage for priming operations. This tank will have a check valve between it and the air brake tanks to allow this tank to drain completely.		
3.2.	**PRESSURE CONTROL MECHANISM**		
3.2.1.	A Fire Research Pump Boss pressure sensor governor shall be provided for the electronic engine. It shall include a remote mountable control head. The Pump Boss shall regulate the pump pressure and monitor all essential engine parameters. LED readouts shall display RPM, KPA, pump discharge and intake pressure, engine oil pressure, engine temperature and battery voltage. An audible alarm shall also be part of the system.		
3.3.	**DRAIN**		
3.3.1.	The pump shall be drained completely by a rotary master drain located at the lowest point and operated from the pump panel.		
3.4.	**AUXILIARY COOLING SYSTEM**		
3.4.1.	A heat exchanger cooling system with a control at the pump panel shall be installed so as to permit use of water from the discharge side of the fire pump to cool the liquid circulating through engine system.		

3.5.	**PUMP COOLER**		
3.5.1.	A by-pass control shall be also installed at the pump panel to prevent pump overheating when all the outlets are closed. There shall be a 1/2 inch (12.7 mm) line running from the pump to the water tank to assist in keeping the pump water from overheating. A quarter turn on/off valve shall be installed on the operator's panel.		
3.6.	**THERMAL RELIEF VALVE**		
	A Hale thermal relief valve TRV-L 120 with indicator light shall be installed to prevent pump overheating.		
3.7.	**PUMP PLUMBING**		
3.7.1.	All plumbing shall be made of stainless steel. The components like elbows, tee, flanges, etc., shall be all stainless cast products. It shall have welded sub-assemblies and join together by victaulic couplings and flanges bolted directly to the valves. No threaded type connection shall be accepted.		
3.7.2.	A "Victaulic" connection shall be used to allow flexion of the piping and to facilitate the service.		
3.7.3.	The 2½" diameter piping or higher shall be equipped with ¾" drain with control on the side panel.		
3.7.4.	Every 2" diameter valve and over shall have a 22^{o} to 30^{o} down elbow.		
3.7.5.	Every 3" diameter valve and over shall be equipped with a slow close device, except the tank suction valve.		
3.7.6.	All inlet and discharge shall be threaded to: 6" – NH thread 4" – Storz 2 1/2" – CSA thread 1 1/2' – NPSH thread		
3.7.7.	Every control shall be identified by a colour and number code. Each handle shall have a recess to flush mount the name plate.		

3.8.	**VALVE DESCRIPTION** ▪ Tank suction : 3" Akron valve model 8830 ▪ Tank fill : 2½" Akron valve model 8825 ▪ Pump inlet : 2½" Akron valve model 8825 ▪ 2½" pre-connects outlet : 2½" Akron electric valve model 8625 w/9323 valve actuator ▪ Pump panel discharges (2): 2½" Akron valve model 8825 ▪ 4" Storz outlet : 3" Akron electric valve model 8630 w/9323 valve actuator		
3.9.	**CONNECTION BETWEEN PUMP AND WATER TANK**		
3.9.1.	The tank to pump valve shall be a 3" full flow ball valve with built-in check valve between the pump body and tank valve. The control shall be located on the pump panel.		
3.9.2.	The piping and valve shall allow a nominal flow of 1900 liters per minute during 80% of the tank capacity.		
3.9.3.	One (1) 2½" tank fill shall be provided with control at pump panel.		
3.10.	**6" SUCTION**		
3.10.1.	One (1) 6" suction inlet on left side shall be supplied. An air operated butterfly valve shall be supplied. The suction shall have an adapter SFSA-460 30°, 6"NH @4" Storz with cap.		
3.11.	**2 ½" SUCTION**		
3.11.1.	One (1) 2 ½" (65mm) suction inlet on the left side shall be supplied. The suction shall have a chrome plug with cable retainer.		
3.12.	**PRESSURE RELIEF VALVE**		
3.12.1.	An Elkhart model 40-20 adjustable automatic pressure relief valve installed on the pump and on the supply side of the valve to bleed off pressure from a connected hose to the valve intake, shall be installed on each valve intake		

having a connection size of 90mm (3½") or larger. Control will be located behind an access door at the right side pump panel.		
3.13. **2½" DISCHARGES** 3.13.1. Two (2) 2½" discharge ball valves shall be supplied with chrome caps and retaining stainless cables. One discharge shall have a chrome 2 ½" to 1 ½" reducer with chrome cap. All discharge shall be controlled on the pump operator panel.		
3.13.2. Discharge valves shall be located as specified : ▪ Two (2) 2½" on the left panel.		
3.14. **REAR 2½" PRE-CONNECT DISCHARGE** 3.14.1. One (1) 2½" pre-connect with 2½" electric discharge valve with 9323 valve controller and rotating type elbows shall be mounted in the rear hose bed on the right side. The control shall be located at the pump panel. 2½" hydraulic hose stainless steel and Victaulic couplings shall be used.		
3.15. **REAR 4" STORZ DISCHARGE** 3.15.1. One (1) 4" Storz electric discharge with 9323 valve controller, Northline coupling model SFSA 430 30^{o} elbows with chrome caps and retaining chains shall be installed at the rear of the vehicle on the right side with control at the pump panel. The valve and the piping shall be 3".		
SECTION -4- **PUMP OPERATORS PANEL**		
4. The pump operator panel shall be located on the left side of the vehicle in the (L1) compartment.		
4.1. The pump operator panel shall be made of 14 gauge polished stainless steel.		
4.2. The pump operator panel shall be made in three sections. The bottom section shall incorporate the drain valve, the mid-section, the controls and the gauges on the top section. All		

	sections shall be bolted on the pump compartment to allow easy removal. The superior section shall be vertically hinged with two (2) latches in order to facilitate the service.		
4.3.	All pressure gauges shall be resistant to corrosion and shall be silicon filled. They shall display pressure in KPA and PSI and shall have a colour coded bezel and corresponding identification plate.		
4.4.	The 2½" discharges on the pump operator panel shall be horizontally controlled and the others discharges shall be «push-pull» controlled.		
4.5.	All discharges shall be controlled from the pump operator panel.		
4.6.	The pump operator's panel shall include the following controls and gauges. ▪ One (1) Pump Boss pressure Governor with two additional indicator lights one for check transmission warning and one for pump engagement indicator; ▪ Two (2) Fire Research water level electric indicator, one (1) #WLA300-A00 model (tankvision) located on control panel, one (1) #WLA280-A00 model (Maxvision) located at rear of the vehicle; ▪ One (1) pressure and one (1) vacuum test plug; ▪ One (1) engine auxiliary cooler valve; ▪ One (1) pump engagement indicator light; ▪ Two (2) primer controls, 1 for pump, 1 for 6" intake ▪ One (1) pump to tank by-pass valve; ▪ One (1) drain at every location needed to assure a complete drainage (all the drains shall be located in the bottom of the side panel); ▪ One (1) 4½" dual scale silicone pressure gauge -30 @ 0 @ 400 PSI, -100 @ 0 @ 2800 KPA; ▪ One (1) 4½" dual scale silicone vacuum gauge – 30 @ 0 @ 400 PSI, -100 @ 0 @ 2800 KPA.		

	▪ One (1) 2½" dual scale silicone pressure gauge 0 @ 400 PSI, 0 @ 2800 KPA for each discharge; ▪ One (1) tank fill control; ▪ One (1) tank suction control; ▪ One (1) switch for lights on control panel; ▪ One (1) pump compartment heater fan switch; ▪ One (1) rotating master drain; ▪ One (1) ULC acceptance plate.		
4.7.	Each suction and outlet shall be equipped with a ¾" drain ¼ turn. The drains shall be identified on the handle aligned in the bottom of the control panel. All drain controls shall be identified by a number and a colour code.		
4.8.	**PUMP HEATER**		
4.8.1.	One (1) 22673 B.T.U. heater shall be installed in the pump compartment. The control for the heater shall be located on the control panel.		
4.8.2.	One (1) aluminum heat pan shall be installed under the pump compartment. It shall have two easily removable panels.		
4.8.3.	The heat pan shall be closely cut around the following accessories: exhaust system, drive shaft, air tank, etc.		
4.8.4.	The pump compartment will be closed in as best as possible to facilitate heating of the pump in freezing temperatures		
	SECTION -5- **ALUMINUM BODY**		
5.	**GENERAL**		
5.1.1.	The apparatus body shall be constructed in order to meet federal, provincial laws and CAN/ULC-S515-13 standard.		
5.1.2.	The angle of departure shall be a minimum of 10° when the vehicle is fully loaded.		
5.1.3.	The maximum body height shall be equal to or less than 122”		

5.2.	**BODY CONSTRUCTION**		
5.2.1.	The body shall be made of aluminum sheet and extrusion. It shall be modular type.		
5.2.2.	The aluminum sheet shall be 5052H32 type for a better corrosion resistance. The aluminum tread plate shall be 3003-H22. Aluminum tread plate used horizontally shall be 3003-H22-NFPA (non slip)		
5.2.3.	The main panel shall be made of 3/16" thick aluminum and 1/8" for compartment dividers.		
5.2.4.	The top and side of main panel shall be made of 3" x 3" x 3/16" extrusion with slot for the insertion of sheet.		
5.2.5.	The aluminum body shall be fully welded on all the outside joints to eliminate water and salt retention.		
5.2.6.	When completed, the compartments shall form an integrated body fully welded and sealed.		
5.2.7.	The top of the compartment shall be covered with 3003-H22 aluminum tread plate.		
5.3.	**SIDES, FENDERS AND LINERS**		
5.3.1.	The side fenders shall be red painted aluminum.		
5.3.2.	Stainless steel fender crowns will be provided around the rear wheel openings. A rubber welting will be provided between the body and the crown to seal the seam and restrict moisture from entering. A dielectric barrier will be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.		
5.3.3.	A removable 1/8" aluminum liner shall be installed around the rear wheels to protect the body.		
5.4.	**COMPARTMENT VENTILATION**		
5.4.1.	A vent shall be embossed directly through the back wall of each compartment. Each compartment shall be vented independently		

and shall not vent into an adjacent compartment.		
5.5. **REAR BODY** 5.5.1. The rear smooth aluminum of the body below the hose bed shall be painted for the application of chevrons.		
5.5.2. A full recessed step covered with 3003-H22-NFPA aluminum tread plate shall be made above the rear dump valve. The tailboard shall incorporate "grip-strut" to allow for drainage as well as superior anti-slip footing.		
5.5.3. A lateral recessed portion between the back of (R4) and (L4) compartments shall made and covered with 3003-H22 aluminum tread plate for the installation of the dump valve below the recessed step.		
5.6. **TAILBOARD** 5.6.1. A NFPA non-slip checker plate full-width tailboard shall be provided at the rear of the tanker body. The tailboard shall be at minimum 30cm (12") deep, in line with the width of the rear dump valve. The complete tailboard assembly shall be bolted to the body using 6mm (1/4") nylon spacers to allow for drainage and removal if damaged. The tailboard shall incorporate "grip-strut" to allow for drainage as well as superior anti-slip footing. The tailboard shall be suitably reinforced using aluminum channel extrusion welded under the entire length of the rearmost compartment plus tailboard depth. In addition, angle extrusion shall be welded between the inner 2 channels to support the tailboard at center.		
5.7. **BODY INSTALLATION** 5.7.1. The tank shall be mounted on chassis with a spring system in order to eliminate tank torsion.		
5.7.2. The body shall be mounted on chassis by steel support with spring system.		
5.7.3. A fibre reinforced rubber slat shall be installed between components made of different materials in order to prevent galvanic reactions.		

5.8.	**RUB RAILS**		
5.8.1.	A "U" rub rail made of aluminium anodised extrusion 6061-T6 shall be installed on each side of the body.		
5.8.2.	A nylon washer shall leave a gap with the body in order to eliminate salt and water retention.		
5.8.3.	A reflective white stripe and clearance position light shall be installed in the rub rails.		
	SECTION -6- **DOORS COMPARTMENT**		
6.	Compartment doors (L1)(L4)(R1)(R4) shall be equipped with Amdor brand roll-up doors complete with the following features; ▪ 1" aluminum double wall slats with continuous ball & socket hinge joint and recessed dual durometer slat seal; ▪ Double wall reinforced bottom panel with stainless steel lift bar latching system; ▪ Bottom panel flange with cut-outs for ease of access with gloved hands; ▪ Reusable slat shoes with positive snap-lock securement; ▪ Smooth interior door curtain to prevent equipment hang-ups; ▪ Once-piece aluminum door track/ side frame; ▪ Top gutter with non-marring seal; ▪ Non-marring recessed side seals with UV stabilizers to prevent warpage; ▪ Dual leg bottom seal, with all wear component material to be Type 6 Nylon.		
6.1.	A 30 amp. magnetic switch two contacts shall be used for lights control.		
6.2.	The doors (L2)(L3)(R2)(R3) shall be overlap box type door.		
6.3.	The overlap box type doors shall be made off 5052H32 aluminum panel.		
6.4.	Ventilation hole located at the bottom of the reinforcement will prevent the condensation and eliminate water in case of infiltration.		

6.5.	Each overlap box type door shall have one stainless steel Austin Hardware D-Ring door latch. The door latch shall be complete with a 1.3cm (1/2") diameter stainless steel striker. No screws shall be visible from the exterior and the latch shall be fixed in place without the use of screws or other hardware that penetrates the aluminum door. A gasket shall be provided between the stainless latch and the aluminum door.		
6.6.	The door shall be bolted to the body by using a stainless steel piano hinge. Each door shall be assembled with nuts and bolts		
6.7.	A rubber isolation shall be installed full length on the hinge between the door and the hinge and between the hinge and the rubber.		
6.8.	The overlap box type doors shall have a gas shock to hold the door open.		
6.9.	The sealing of the door shall be assured by using one high quality open center moulding on all the perimeters of the door. Special caulking will be used to prevent infiltration between hinge, body, and door.		
6.10.	The door will be equipped with a gas shock mechanism permitting to hold the door in the open position.		
6.11.	**AMDOR LUMA BAR COMPARTMENT LIGHTING**		
6.11.1.	All compartment lighting will be comprised of the Amdor Luma Bar LED system without exception or substitution. The Amdor Luma Bar system utilized will include the following key features: ▪ Wide angle 120° surface mount LED installed on a printed circuit board for shock and vibration resistance ▪ Lighting will be enclosed within a high impact polycarbonate enclosure; ▪ Output will exceed NFPA 1901 compartment lighting standard; ▪ Draw not to exceed 130 mA per foot /forward voltage of 20mA per LED; ▪ 21" boards will be connected in series using a high grade Molex connector;		

▪ Lighting system will include the patented ability to aim the printed circuit board for differing applications and compartment layouts; ▪ System will provide the option to utilize an extruded aluminum retainer for installation.		

SECTION -7-

DIMENSIONS OF THE COMPARTMENTS

The following compartments shall be provided;

Location	Qty	Openings Dimensions			Conformity	Specifications
		Width	Height	Depth	Yes	
Left side						
Ahead of the rear wheel	1 (L1)	66"	38"	14" 28"		
Above the rear wheel	1 (L2)	52"	18"	14"		
Above the rear wheel	1 (L3)	52"	18"	14"		
Behind the rear wheel	1 (L4)	32"	38"	14" 28"		
Right side						
Ahead of the rear wheel	1 (R1)	66"	38"	14" 28"		
Above the rear wheel	1 (R2)	52"	18"	14"		
Above the rear wheel	1 (R3)	52"	18"	14"		
Behind the rear wheel	1 (R4)	32"	38"	14" 28"		

SECTION -8-

EQUIPMENT LOCATION BRACKETS /TRAYS/SHELVES

8.1. **SUPPORTS FOR EQUIPMENT** ▪ One (1) electrically powered Ziamatic PTS – HA access system shall be mounted on the left side of the vehicle. It shall carry one (1) FDT 3500USG portable tank and two (2) 6" x 10' suction hoses. An aluminum tread plate shall cover the portable tank; ▪ One (1) electrically powered Ziamatic LAS – 975 access system shall be mounted on the		

	right side of the vehicle. It shall carry one (1)24' 2-sections, one (1)-14' roof ladders and two (2) 4" x 10' suction hoses; ▪ Two (2) axe brackets; ▪ Two (2) pike pole brackets; ▪ One (1) crowbar bracket; ▪ Four (4) brackets Zico KD-LP-SFPHS for breathing apparatus installed in the compartment 2x (R2) and 2x (R3).		
8.2.	**SLIDING TRAYS**		
8.2.1.	The sliding tray will be able to support a minimum weight of 500 lbs. It shall have an open and close holding device. Qty: 3 — Location: (L4) (R1) (R4)		
8.3.	**ADJUSTABLE SHELVES**		
8.3.1.	The shelf will be bolted to an aluminum track which will permit the up and down adjustment. Each compartment shall have an aluminum track. Qty: 3 — Location: (L4) (R1) (R4)		
	SECTION -9- **WATER TANK 2800 I.G.**		
9.	**CONSTRUCTION**		
9.1.1.	The tank shall be made of polypropylene. It shall have a capacity of 2800 I.G. and conform to CAN/ULC-S515-04. A life time warranty shall be supplied by the tank manufacturer. A copy of the warranty shall be provided with the document bid.		
9.1.2.	The tank will be constructed of ½" thick non-corrosive stress relieved copolymer polypropylene thermoplastic.		
9.1.3.	The tank shall be so designed to be completely independent of the unit body and compartments.		
9.1.4.	All transverse swash partition shall be fabricated of 3/8" thick copolymer polypropylene minimum and shall extend to just under the cover. The longitudinal swash partition shall be fabricated 3/8" thick		

	copolymer polypropylene minimum and shall extend from the floor of the tank through the cover.		
9.1.5.	In cases where overall height of the tank exceeds 40", reinforcement shall be installed on tank bottom to allow for more positive welding and provide greater strength.		
9.1.6.	All swash partitions shall be designed in such a manner as to reduce the water surge to a minimum for greater vehicle stability while still providing maximum air and water flow throughout the tank.		
9.1.7.	All swash partitions shall inter lock with one another and shall be welded to the walls of the tank as well as to each other as per CAN/ULC-S515-04. All joints and seams shall be nitrogen welded and shall undergo high frequency voltage testing during fabrication of the tank. With tandem axle, the rear floor of the water tank shall be reinforced.		
9.1.8.	All tank fill couplings shall be equipped with a flow deflector to break up the stream of water entering the tank capable of withstanding sustained fill rate up to 3750 L.P.M.		
9.2.	**FILL TOWER**		
9.2.1.	The tank shall be equipped with a manual fill tower combined with vent and ¼" polypropylene removable screen.		
9.2.2.	The fill tower shall be constructed of ½" copolymer polypropylene with minimum dimension of 10" x 14" and shall have a hinged type cover. Inside the fill tower approximately half way from the top shall be fastened a vent overflow pipe.		
9.2.3.	The vent overflow pipe shall be a minimum 6" polypropylene, designed to run through the water tank and discharge behind the rear axle.		
9.2.4.	The fill tower shall be located in the middle left side of the tank.		

9.3.	**TANK COVER**		
9.3.1.	Standard tank cover shall be fabricated of ½" copolymer polypropylene in three pieces recessed 3/8" from the top of the tank.		
9.3.2.	All covers shall be welded to both the outer walls and longitudinal partitions for maximum integrity. Copolymer polypropylene solid stock shall be installed through each cover and shall serve as both anchorage location for lifting eyes and reinforcing the rigidity of the cover under fast filling conditions. The floor of the hose body compartments shall have 200lb/ft² capacity.		
9.4.	**SUMP BOX**		
9.4.1.	The tank shall have one (1) sump and shall be constructed of ½" copolymer polypropylene and be located in the left front quarter of the tank. An anti swirl plate shall be installed on all tanks approximately 2" above the sump box.		
9.4.2.	The sump box shall have a 3" N.P.T. threaded outlet on the bottom and shall be used as a combination clean-out and drain with 2 ½" utility type ball valve.		
9.5.	**MOUNTING**		
9.5.1.	The tank shall rest on the body cross members and may require additional support so as not to allow for more than 520 square inches of unsupported area of the tank floor, and if the tank height exceeds 38" the unsupported area of the tank floor shall be reduced to not more than 390 square inches. The tank must be completely isolated from the supporting cross members with the use of rubber strips with minimum thickness and width dimension of ¼" x 2" and a minimum Rockwell Hardness of 60 durometer.		
9.6.	**TANK ATTACHMENT**		
9.6.1.	The tank shall be attached by a flexible system to allow frame torsion.		
9.7.	**TANK DRAIN**		
9.7.1.	A 3" opening shall be installed on the sump for tank cleaning.		

9.8.	**REAR DUMP VALVE**		
9.8.1.	One Stainless steel 10" x 10" square model Newton 1060-34 with a swivel 6012SW-34 to be able to discharge water on left, rear and right side shall be mounted at rear of the vehicle. The swivel shall be equipped with an extension 4036-34. The dump valve shall be electrically opened and closed with one (1) control switch mounted on the driver's side and one (1) control switch mounted on the officer's side of the rear body panel. The switches shall be a toggle style switches installed inside of protective covers.		
9.9.	**REAR TANK FILL 4" STORZ 30°**		
9.9.1.	One rear 4" Storz 30° tank fill without valve shall be located on rear right side. The tank fill shall have a stainless steel check valve integrated to the side of the water tank. The check valve will have a lifetime warranty by the valve manufacturer. A drain shall be provided on the tank fill.		
	SECTION -10- **PAINT AND REFLECTIVE STRIPPINGS**		
10.	**PAINT**		
10.1.	Automotive high quality paint shall be used.		
10.1.1.	The vehicle shall be red in colour, one tone as per the department standard colour. Please provide red paint samples, paint colour to be approved by Fire Department.		
10.1.2.	All the accessories shall be installed, adjusted and removed before the paint is applied. All components shall be painted separately to ensure complete paint application for corrosion protection.		
10.1.3.	The body shall be prepared, cleaned and painted as per industry and paint manufactures standard.		
10.1.4.	The inside of the compartment and the overlap box type door shall be coated with a high scratch resistant Zolatone product. This product shall have a four step application; sanding and cleaning, base coat, monochrome		

coat and the camouflage coat to hide potential scratches.		
10.2. **UNDERCOATING** The complete undercarriage, wheel wells, sub-structure and under body/chassis shall be treated with a coating specifically developed for vehicle corrosion protection.		
10.3. **REFLECTIVE STRIPES** 10.3.1. A 150mm (6") white reflective stripe shall be affixed to the perimeter of the vehicle to comply with NFPA 1901. The striping shall include the 25% requirement for the front the vehicle. The Fire Department shall approve the location of the reflective stripe at the preconstruction meeting.		
10.3.2. Reflective striping chevrons red and yellow colour shall be applied on a minimum of 90% of the rear surface where aluminum tread plate has not been used. 3M Diamond Grade Cubed; Red (colour code 4090) and Yellow-Green (colour code 4083) 150 mm (6") reflective striping. The striping shall be in an apex shape from the center of the rear sloping in a downward 45-degree angle towards the left and right sides of the body.		
10.3.3. Reflective striping to be approved by the Fire Department.		
SECTION -11- **ELECTRICAL SYSTEM**		
11. **GENERAL** 11.1. All electrical equipment shall be conformed to modern automotive practice. C.M.V.S.S. (Canada Motor Vehicle Safety Standards), CAN/ULC-S515-13 and NFPA 1901-2009 latest edition.		
11.1.1. Warning devices signalling the call for the right-of-way or stopping shall be conform to CAN/ULC-S515-13.		
11.1.2. The apparatus shall be equipped with a multiplex electrical system. Electrical boxes, breakers and relays shall not be accepted.		

11.1.3. All electrical components shall be water resistant and shall be designed to operate in heavy moisture conditions.		
11.1.4. All 12 Volt electrical wire shall be GXL automotive type.		
11.1.5. All wiring connections shall be made with GM type connectors. Dielectric grease shall be applied on each connector to protect from moisture and corrosion.		
11.1.6. A thermo retractable sleeve shall be used on each wire to wire connection.		
11.1.7. All wiring shall be thoroughly secured, suitably supported and protected with loom against heat, oil and physical injury.		
11.1.8. A rubber grommet shall be used to protect any electrical wire passing through the body wall.		
11.1.9. All wires shall be colour and number coded. Also the function of each wire shall be printed every 6". A sample shall be supplied with the tender.		
11.1.10. A master battery cut-off switch shall be installed in the cab. The cut-off shall be connected directly on the batteries. Green “battery on” pilot light visible from driver’s position required.		
11.2. **V-MUX MULTIPLEX SYSTEM** 11.2.1. The electrical system shall be Weldon V-Mux multiplex.		
11.2.2. The multiplex electrical system shall be installed on the vehicle as per the recommendations of the Weldon Company.		
11.2.3. The multiplex electrical system shall include three (3) « input/output » nodes minimum. They shall be located in order to minimize the length of the electrical harness.		
11.2.4. The Fire Department shall approve the location of any V-Mux node. Node locations shall be clearly marked by an engraved Warning label that indicates the node number and location and message to not mount equipment in the		

location of the node. All nodes shall be easily accessible for repair or replacement.		
11.2.5. The system shall include a diagnostic software connection at proximity of the driver.		
11.3. **WELDON VISTA IV DISPLAY** 11.3.1. All electrical and accessory controls shall be located on the Vista IV display touch screen. The display shall be mounted on a swivel support located on the center console between the officer's and the driver's seats.		
11.4. **DATA RECORDING SYSTEM** 11.4.1. The vehicle shall have a Weldon Vehicle Data Recorder system installed with a Weldon Occupant Restraint Indicator # 6204-0000-00. The system shall be designed to meet NFPA 1901 and shall be integrated with the Weldon Multiplex electrical system. The following information shall be recorded: ⁾ Vehicle Speed ⁾ Acceleration ⁾ Deceleration ⁾ Engine Speed ⁾ Engine Throttle Position ⁾ ABS Event ⁾ Seat Occupied Status ⁾ Seat Belt Status ⁾ Master Optical Warning Device Switch Position ⁾ Time ⁾ Date 11.4.2. Each portion of the data shall be recorded at the specified intervals and stored for the specified length of time to meet NFPA 1901 guidelines and shall be retrievable by connecting a laptop computer to the VDR system.		
11.5. **SEATBELT WARNING** 11.5.1. A Weldon seat belt warning system, integrated with the Vehicle Data Recorder system, shall be installed for each seat within the cab. The system shall provide visual and audible warning when any seat is occupied (sixty pounds		

minimum), the corresponding seat belt remains unfastened, and the park brake is released.		
11.5.2. Once activated, the visual and audible indicators shall remain active until all occupied seats have the seat belts fastened. The dash shall include a display on the Weldon Vista screen(s) indicating the occupancy of each seat.		
11.6. **REAR VIEW CAMERA** 11.6.1. One (1) Weldon rear view camera #6500-0000-00 shall be installed at the rear of the vehicle. The display shall be integrated in the Vista IV screen and shall be activated when the truck is shifted to the reverse gear position. An aluminum or stainless steel guard shall be installed over the camera to prevent physical damage.		
11.7. **SIREN AND SPEAKER** 11.7.1. One (1) Federal PA300 MSC electronic siren shall be installed in the cab and 100 watts Federal DynaMax / ES 100 waterproof speaker shall be securely located in the front chassis bumper (flush mounted) complete with a stainless steel “Electric F” faceplate cover.		
11.8. **DOOR OPENED AUDIO AND VISUAL ALARM** 11.8.1. An audio and visual alarm shall be activated when a cab door is not firmly closed or an apparatus cabinet door is not closed. This will be displayed on the Vista IV screen with a schematic of the vehicle and the corresponding door.		
11.9. **BACKUP ALARM** 11.9.1. An electronic audible back-up alarm Grote 73250 shall be provided and activated when the truck is shifted to the reverse gear position.		
11.10. **INTERIOR CAB LIGHTING** 11.10.1. The interior cab lighting shall be according to the chassis manufacturer standard.		

11.11. **LIGHTBAR** 11.11.1 One (1) Whelen model F4N0VLED Freedom IV Linear-LED NFPA Lightbar, 60" lightbar shall be mounted on the chassis cab roof.		
11.12. **FRONT WARNING LIGHTS** 11.12.1. Two (2) Whelen M6 Series Model # M6RC red warning lights within a chrome bezel shall be mounted on the fascia of the cab.		
11.13. **INTERSECTION WARNING LIGHTS** 11.13.1. Four (4) Whelen M6 Series Model # M6RC red warning lights within a chrome bezel shall be mounted, one (1) on each front cab side and one (1) on each rear side in the wheel wells of the vehicle.		
11.14. **REAR WARNING LIGHTS** 11.14.1. Two (2) Whelen M6 Series Model # M6RC red warning lights within a chrome bezel shall be mounted at rear of the vehicle.		
11.15. **REAR BEACONS** 11.15.1. Two (2) Whelen L31HRFN Super LED beacons red shall be mounted, one each side, at rear on top of the vehicle.		
11.16. **HEADLIGHTS** 11.16.1. The cab front shall include (2) rectangular halogen headlamps with "Daytime Running" light feature.		
11.17. **TURN SIGNALS** 11.17.1. The turn signals shall be according to the chassis manufacturer standard.		
11.18. **CLEARANCE AND IDENTIFICATION LIGHTS** 11.18.1. The roads lights shall conform to the C.M.V.S.S. regulations. On front: (supplied with the chassis) ▪ Three (3) identification lights; ▪ Two (2) clearance lights; On side: ▪ Two (2) red clearance lights LED;		

▪ Two (2) red reflectors; ▪ Two (2) amber clearance lights LED; ▪ Two (2) amber reflectors. On rear: ▪ Three (3) red identification lights LED; ▪ Two (2) red clearance lights LED; ▪ Two (2) red reflectors; ▪ One (1) LED light for licence plate.		
11.19. **REAR ROAD LIGHTS** 11.19.1. The roads lights shall be conform to the CMVSS regulations. All the lights shall be installed in a triple aluminum casting. ▪ Two (2) Whelen Series 600 LED turn signal with arrow directional lights 60A00TAR shall be mounted at rear of the apparatus. ▪ One (1) additional Whelen Series 500 LED turn signal shall be mounted on each side if the overall length of the vehicle is over 33'. ▪ Two (2) Whelen Series 600 Min. LED brake/tail/turn lights 60R00BRR shall be mounted at rear of the apparatus. ▪ Two (2) Whelen Series 600 LED back-up lights 60C00VCR shall be provided at rear of the apparatus. They should be activated when truck is shifted into reverse.		
11.20. **SCENE LIGHTS** 11.20.1. Six (6) scene lights FRC SPA900-Q70 LED shall be installed on the vehicle. Four (4) scene lights shall be installed in the upper portion at the front and rear of the left and right side of the body. Two (2) scene lights shall be install at the rear. The lights shall be activated by a switch incorporated into the Vista IV and a switch at the rear of the vehicle. The two rear scene lights shall be activated when the vehicle is reverse. The two rear lights shall have guards in place to prevent breakage from deploying hose, guards to be approved by the Fire Department.		

11.21. **ENGINE COMPARTMENT LIGHT** 11.21.1. One (1) twelve inch Luma Bar H20 LED light shall be installed under the chassis hood to illuminate the engine.		
11.22. **GROUND LIGHTS AND CAB STEP LIGHT** 11.22.1. A Luma Bar H20 ground light and cab step light shall be supplied at the following location: ▪ One (1) mounted in the middle step located at each door which shall be activated with the opening of the respective; ▪ One (1) mounted under each cab step which shall be activated with the opening of the respective; ▪ One (1) mounted under (L1) (L4) (R1) (R4) compartments; ▪ Two (2) mounted under the step at the rear of the vehicle. The lights shall be activated automatically when the parking brake is applied and the chassis clearance lights are on.		
11.23. **BATTERY CHARGER, COMPRESSOR AND AUTO - EJECTS** 11.23.1. One (1) Super Kit Kussmaul model 091-187-12-Remote-B1-S-Kit. Kit will include one (1) Auto Charge 1200, one (1) Auto Pump 120 volts air compressor, one (1) Super Auto-Eject 20 amp and a remote bar graph shall be mounted on the vehicle. The Super Auto-Eject and remote bar graph shall be installed at proximity of the driver's door, location to be approved by Fire Department.		
SECTION -12- **FINISHING**		
12. **FOLDING STEPS** 12.1.1. Eight (8) Trident folding steps with LED lights incorporated shall be installed at the rear of the vehicle in order to facilitate the access to the main hose bed. The maximum height between each step is 18".		

12.2. **PLASTIC FLOORING** 12.2.1. ¾" thickness plastic flooring shall be installed on the bottom of each compartment, shelf, and sliding tray.		
12.2.2. ¾" thickness plastic flooring shall be installed on the main hose bed floor.		
12.3. **VINYL TARPAULIN** 12.3.1. One (1) vinyl tarpaulin shall be installed over the main hose bed. The attachments of the tarpaulin shall be with Velcro. The main hose bed tarpaulin shall have a vertical section closing the rear hose bed opening. The Velcro on the body shall be attached to a series of aluminum plate of 12" to be able to squeeze the Velcro between the body and the plate for a better holding of the Velcro.		
12.4. **REAR TOW HOOKS** 12.4.1. Two (2) rear chromed tow hooks shall be provided at rear of the vehicle.		
12.5. **HANDRAILS** 12.5.1. NFPA and ULC approved extruded aluminum handrails with knurled finish to provide improved grip, and not less than 11/4" (32mm) outside diameter shall be provided. There shall be two (2) vertical handrails and two (2) horizontal handrails located on each side and below the main hose bed.		
12.6. **MUDGUARD** 12.6.1. A mudguard shall be located at rear of the front and rear wheels.		
12.7. **CORROSION PROTECTION** 12.7.1. The accessories shall be installed on the vehicle with a special precaution against corrosion.		
12.7.2. The compartment doors shall be installed, adjusted and well-sealed to prevent entry of water and dust.		

12.7.3. An isolation product shall be installed wherever two different materials are in contact. A nylon washer shall be used with stainless steel screw.		
12.7.4. The complete undercarriage, wheel well, liner and from the inside bottom of the body up to the top of the tank shall be treated with a rubber guard coating.		
SECTION –13- **TESTS, APPROVALS AND MANUALS**		
13. The vehicle shall be constructed following ULC/CAN-S515-13 latest edition and NFPA 1901-2016 latest edition.		
13.1. A U.L.C. test shall be conducted at the manufacturer facility. The U.L.C. inspection and all costs related to the test shall be paid by the manufacturer.		
13.2. The Fire Truck builder shall be certified by the Canadian Welding Bureau standard W47.1 and W47.2. A copy of the certificates shall be included with the tender documents.		
13.3. The following manuals shall be supplied when the truck will be delivered: ▪ Two (2) chassis driver's manuals and maintenance manuals; ▪ Two (2) engine operator's manuals; ▪ Two (2) transmission operator's manuals.		
13.4. The following information shall be supplied on USB drive when the truck will be delivered: ▪ Two (2) pump operation manuals; ▪ Two (2) pump maintenance and parts manuals; ▪ Two (2) electrical as built wiring diagrams; ▪ Two (2) manuals of the Fire Pack components.		

SECTION -14- **EQUIPMENT**			
	The following basic equipment shall be supplied and installed on the vehicle: ▪ Two (2) suction hoses for 6"x 10'; ▪ One (1) BS60 6" strainer; ▪ One (1) 24', 2-section ladder ▪ One (1) 14' roof ladder ▪ One (1) 6 lb flathead axe, FLY-6 ▪ One (1) 6 lb pickhead axe, PHY-6 ▪ One (1) 6' pike pole, UL6 ▪ One (1) 8' pike pole, UL8 ▪ One (1) crowbar; ▪ One (1) 3500 USG, 22oz. vinyl, Fold-a-tank portable tanks with aluminum frame and Easy lift liner handles; ▪ Two (2) folding wheel chocks Zico SAC-44-E with support Zico SQCH-44-H.		
SECTION -15- **PERMANENT NAME AND INFORMATION PLATE**			
15.	A plate shall show the height of the completed fire fighting apparatus in metres, the length of the completed fire fighting apparatus in metres, and GVWR in kilograms.		
15.1.	A plate, which is permanently affixed in the driving compartment shall provide the quantity and type of the following fluids used in the vehicle; ▪ Engine oil; ▪ Engine coolant; ▪ Chassis transmission fluid ▪ Drive axle(s) lubrication fluid ▪ Air conditioning refrigerant ▪ Air conditioning lubrication oil ▪ Power steering fluid ▪ Cab tilt mechanism fluid ▪ Transfer case fluid ▪ Equipment rack fluid ▪ Air compressor system lubricant ▪ Generator system lubricant ▪ Front tire cold pressure ▪ Rear tire cold pressure		

15.2.	A label shall be mounted on the tank fill opening indicating the type of fuel to be used.		
15.3.	Hazard light sign required that reads: «DO NOT MOVE APPARATUS WHEN LIGHT IS ON. »		
15.4.	A warning label shall be located on the vehicle at the rear step areas and at any cross walkways to prohibit riding in or on these areas while the vehicle is in motion.		
	SECTION -16- **GENERAL**		
16.	**WARRANTIES AND SERIVCE**		
16.1.	A complete list of the warranties including details and duration shall be provided. All service details including providers and locations shall be provided. The list shall include, but is not limited to, the following: ▪ Supplied equipment. ▪ Paint (minimum 10 years). ▪ Structural body (minimum 15 years parts and labour). ▪ General warranty for the entire apparatus (minimum one year).		
16.2.	Warranty Claim Compensation The Builder shall compensate the Township for any and all costs with regards to any warranty claim that requires the apparatus to be returned to the Builder's facility or other service provider outside the geographical area of the County of Haliburton, Ontario, Canada. Compensation shall cover fuel, wages for two (2) Fire Service employees (at the current wage rate), normal expenses and accommodations if required.		
16.3.	Paint Warranty All body preparation, paint primer, paint and associated work shall have a warranty of ten (10) years including but not limited to, defect due to product or workmanship, corrosion and /or reaction of dissimilar metals. The intent of this warranty request shall include the Township initiating a paint warranty claim at the		

	first signs of corrosion such as but not limited to: paint bubbling, paint lifting or surface finish discolouring.		
16.4.	**MEETINGS AND INSPECTIONS** ***Pre-Construction and Chassis Inspection*** A pre-construction meeting shall be held at the manufacturer's facility or by other acceptable arrangements prior to the start of any construction of the rescue unit. Expenses for required personnel to attend this meeting shall be the responsibility of the successful bidder. ***Mid-Production/Pre Paint*** A mid-production inspection of the partially completed rescue Unit shall be conducted at the manufacturer's facility or by other acceptable means. Expenses for required personnel to attend this meeting shall be the responsibility of the successful builder. ***Final Inspection*** A final inspection of the fully completed Rescue Unit shall be conducted at the manufacturer's facility. Expenses for required personnel to attend this meeting shall be the responsibility of the successful bidder.		
16.5.	**DELIVERY** The completed Fire Tanker shall be delivered to the Algonquin Highlands Fire Services, 1095 North Shore Rd, Algonquin Highlands, Ontario, K0M 1J1 Please indicate the expected delivery date of the completed and tested Fire Tanker: Delivery Date:		

16.6.	**BUILDERS RECOMMENDATIONS** The Builder may provide recommendations to improve the safety and/or the efficiency of the Fire Tanker. Recommendations can be forwarded to the Fire Chief on the Builder's letterhead and shall indicate the reason for the suggested change and how the change would affect the price, if accepted by the Fire Chief.		

Please add any additional notes: