

**SCHEDULE A**  
**FIRE APPARATUS SPECIFICATIONS**

**CUSTOM PUMPER**

# **SPECIFICATIONS INDEX**

SECTION 1	TECHNICAL REQUIREMENT
SECTION 2	CHASSIS
SECTION 3	PUMPING SYSTEM
SECTION 4	CONTROL PANEL
SECTION 5	WATER TANK
SECTION 6	ALUMINUM BODY
SECTION 7	ELECTRICAL SYSTEM
SECTION 8	FINISHING, PAINTING AND REFLECTIVE STRIPES
SECTION 9	EQUIPMENTS
SECTION 10	WARRANTIES
SECTION 11	REFERENCE PICTURE FOR PAINT SCHEME AND STRIPING

CUSTOM PUMPER

	<b>SPECIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>DETAILS</b>
<b>1.1</b>	<b>TECHNICAL REQUIREMENTS</b>			
1.1.1	The vehicle shall meet the NFPA 1901-2009 standard and ULC S515-13.			
1.1.2	A pump test shall be made at the apparatus manufacturer plant, and all costs incurred to perform this test shall be covered by the bidder.  The vehicle shall be tested and certified by ULC and a Pump data will be installed on the pump panel.			
1.1.3	This vehicle shall meet the Canadian Motor Vehicles Safety Standards (CMVSS) and Federal Motor Vehicle Safety Standards (FMVSS).			
1.1.4	All components used to manufacture the vehicle shall be brand new and of high quality.  All components and parts shall correspond to the best-recognized quality standards in the fire apparatus vehicle manufacturing industry.  When a part number is specified, no substitute shall be accepted.			
1.1.5	The vehicle should have no more than 375" in overall length and 128" in height.			
<b>1.2</b>	<b>DOCUMENTATION UPON DELIVERY</b>			
1.2.1	One (1) copy of chassis operation manuals.			
1.2.2	One (1) copy of chassis engine shop and parts manuals.			
1.2.3	One (1) copy of chassis transmission shop and parts manuals.			
1.2.4	One (1) digital copy of wiring, for the chassis and the body. The diagram shall be « As Built Wiring Diagrams ».			
1.2.5	Two (2) digital copies of the ULC or NFPA documentation (USB flash drive).			
1.2.6	One (1) copy of warranties, instruction and/or maintenance manuals of equipments added to the vehicle.			
1.2.7	Two (2) operation manuals of the truck, including operation of the pump, the foam system and a troubleshooting guide.			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>2.1</b>	<b>CUSTOM CHASSIS WITH TILT CAB</b>			
2.1.1	A "CUSTOM" chassis developed and designed for the application of a fire vehicle, by a recognized manufacturer in the market, and having dealers established in CANADA. YEAR : 2016 or more recent TYPE : Tilt cab, four door			
2.1.2	The chassis shall be designed for Canada. The apparatus shall be a pumper vehicle designed for emergency service use which shall be equipped with a permanently mounted fire pump.			
<b>2.2</b>	<b>CAB</b>			
2.2.1	The crew cab section will have a 10'' raised roof, with an overall cab height of approximately 110.00".			
2.2.2	The cab shall have successfully completed the preload side impact, static roof load application and frontal impact without encroachment to the occupant survival space when tested in accordance with ECE-29.			
2.2.3	The front fascia shall include a stainless steel front grille adorned with a waving Canadian flag graphic.			
2.2.4	Minimum of <b>60"</b> from the center of the front axle to the backwall of crew cab. Minimum <b>7''</b> of interior space behind the rear door and the rear wall.			
2.2.5	Minimum of <b>96"</b> of cab width.			

## CUSTOM PUMPER

	<b>SPECIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>DETAILS</b>
<b>2.3</b>	<b>VEHICLE DATA RECORDER</b>			
2.3.1	<p>The chassis shall have a Vehicle Data Recorder (VDR) system installed to meet NFPA 1901 requirements.</p> <p>The following data shall be monitored:</p> <ul style="list-style-type: none"> <li>-Vehicle speed;</li> <li>-Acceleration;</li> <li>-Deceleration;</li> <li>-Engine speed : RPM;</li> <li>-Engine throttle position : % of full throttle;</li> <li>-ABS Event : On/Off;</li> <li>-Seat occupied status : Yes/No by position;</li> <li>-Seat belt buckled status : Yes/No by position;</li> <li>-Master Optical Warning Device Switch : On/Off;</li> <li>-Time : 24 hour time;</li> <li>-Date : Year/Month/Day;</li> </ul>			
<b>2.4</b>	<b>ENGINE</b>			
2.4.1	Cummins L9 engine shall offer a rating of 450 HP at 2000 RPM. The torque rating shall be 1250 lb-ft at 1400 RPM.			
2.4.2	There shall be one (1) control for the diesel particulate regeneration.			
2.4.3	Manual high idle switch. Engine preset at 1250 RPM.			
2.4.4	Cummins exhaust brake integral with Variable Geometry Turbo.			
<b>2.5</b>	<b>COOLING</b>			
2.5.1	<p>A Horton fan clutch shall be provided. The fan clutch shall be constantly engaged when in the "Pump" position.</p> <p>A switch shall be provided on the instrument panel to turn the fan off when in "Pump". The fan clutch shall return to normal operation when either the override switch or ignition is turned off.</p>			
2.5.2	The cooling package shall include Extended Life Coolant (ELC). Freeze-up protection: -34°F (-37 °C).			

## CUSTOM PUMPER

	<b>SPECIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>DETAILS</b>
2.5.3	A heat exchanger shall be installed between the engine and the radiator. This shall allow the use of water from the discharge side of the fire pump to assist in cooling the engine.			
2.5.4	Rubber hoses shall be used for all engine coolant lines.			
<b>2.6</b>	<b>AIR INLET</b>			
2.6.1	Air intake with NFPA compliant ember screen.			
<b>2.7</b>	<b>EXHAUST</b>			
2.7.1	The exhaust system shall be mounted below the frame for pumper application. The system shall be mounted as not to reduce the depth of the R1 compartment in any way.			
<b>2.8</b>	<b>TRANSMISSION</b>			
2.8.1	Allison 5th generation, model EVS 3000.			
2.8.2	5-speed, with "Package 198".			
2.8.3	The transmission fluid shall be monitored electronically.			
2.8.4	The transmission shall include a cooler system.			
<b>2.9</b>	<b>PTO</b>			
2.9.1	Space intended for future installation on the side of the transmission.			
<b>2.10</b>	<b>DRIVELINE</b>			
2.10.1	All drivelines shall be equipped with Spicer 1710 universal joints.			
<b>2.11</b>	<b>FUEL SYSTEM</b>			
2.11.1	Fuel/water separator required. A valve shall be installed close to the primary filter to avoid fuel loss in the fuel pump when the filter has to be changed.			
2.11.2	A 65 gallon fuel tank shall be provided and mounted at the rear of the chassis.			
2.11.3	The fuel tank straps shall be constructed of STAINLESS STEEL.			
2.11.4	No fuel pump for repriming fuel system.			
<b>2.12</b>	<b>FRONT AXLE</b>			

## CUSTOM PUMPER

	<b>SPECIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>DETAILS</b>
2.12.1	DANA front axle shall be rated to 18,000 lb.			
<b>2.13</b>	<b>FRONT SUSPENSION</b>			
2.13.1	The front axle shall be furnished with shock absorbers.			
2.13.2	The parabolic front suspension spring capacity shall be rated at 18,000 lb.			
<b>2.14</b>	<b>STEERING</b>			
2.14.1	The steering wheel shall be 18.00" in diameter, have tilting and telescoping capabilities, and a 2-spoke design.			
2.14.2	The chassis shall have a front axle cramp angle of 50-degrees to the left and right.			
2.14.3	Power steering fluid level electronic indicator.			
<b>2.15</b>	<b>REAR AXLE</b>			
2.15.1	DANA rear axle shall have a rated capacity of 24,000 lb. A driver controlled differential lock shall be installed on the rear axle.			
2.15.2	The top speed of the vehicle shall be approximately 110 km/h (68 MPH) +/-3 Km/h.			
2.15.3	The axle ratio shall be 5.22.			
<b>2.16</b>	<b>REAR SUSPENSION</b>			
2.16.1	A multi-leaf spring suspension shall be provided. The rear suspension capacity shall be rated for 24,000 lb.			
2.16.2	An ONSPOT automatic tire chain shall be installed on the vehicle. There shall be one driver's side and one passenger's side chain unit. A 12V dashboard switch shall be provided so that the operator may engage the chains from the driver's seat. The switch must be lighted to indicate when the chains are engaged. The switch must come complete with a switch guard to avoid accidental engagement of the automatic chains. The switch guard must be properly labeled. A dashboard sticker with operating instructions must be provided.			
<b>2.17</b>	<b>TIRES</b>			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
2.17.1	Front tires shall be Goodyear G296 MSA 385/65R-22.5, 18 Ply, load range "J". Tire intermittent service rating load capacity shall be 20,000 lb per axle with a speed rating of 110 km/h when inflated to 120 psi.			
2.17.2	Rear tires shall be Goodyear, G622, 11R22.5, 16 Ply "H" tubeless. Capacity shall be 24,040 lb per axle with a speed rating of 112 km/h when inflated to 120 psi.			
2.17.3	Front and rear RealWheels LED AirSecure™ tire pressure sensors.			
2.17.4	All tires shall be balanced with Counteract balancing beads. The beads shall be inserted into the tire and eliminate the need for wheel weights.			
<b>2.18</b>	<b>WHEELS</b>			
2.18.1	Polished aluminum, ALCOA DURABRIGHT front wheels 12.25 x 22.5			
2.18.2	Polished aluminum (outside) ALCOA DURABRIGHT and steel (inside) rear wheels 8.25 x 22.5 with nylon insert guard between wheels.			
2.18.3	Wheels shall be polished.			
2.18.4	The front and rear wheels shall have chrome nut covers on each nut. The rear wheels shall have a "high hat" style chrome hub caps and the front wheels shall include chrome hub caps with axle hole for oil level check.			
<b>2.19</b>	<b>BRAKE</b>			
2.19.1	Meritor WABCO, anti-lock braking system shall be supplied.			
2.19.2	Front brakes shall be Model ADB22X™, disc type with 17.00" rotors.			
2.19.3	Rear brakes shall be drum, dimension 16.5" x 7.00", with automatic slack adjusters and dust shields.			
<b>2.20</b>	<b>AIR SYSTEM</b>			
2.20.1	Air compressor shall be a Cummins/WABCO with a capacity of 18.7 CFM.			
2.20.2	Manual petcock type drain valves shall be installed on all reservoirs of the air supply system.			



## CUSTOM PUMPER

	<b>SPECIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>DETAILS</b>
2.20.3	The air dryer shall be a WABCO System Saver 1200 IWT, with heater.			
2.20.4	The air system on the chassis shall be plumbed with color coded nylon tubing air lines.			
<b>2.21</b>	<b>FRAME</b>			
2.21.1	Each simple rail shall have yield strength of 110,000 psi.			
2.21.2	Frame components shall be treated with epoxy E-coat protection.			
<b>2.22</b>	<b>FRONT BUMPER</b>			
2.22.1	Painted steel front bumper. The exterior top flange of the front bumper shall be painted with a black LINE-X border.			
2.22.2	The bumper will be extended 22" from front face of cab. Fabricated "U" shaped channel shall support the weight of the bumper and provide the main strength in frontal crash. ¼" steel is formed into "C" shaped backing plates for mounting of the bumper and providing protection to the cab.  The front bumper will have a compartment with a hose capacity of 150' of 1¾" double jacket cotton-polyester hose with a nozzle. Drain holes will be provided in the bottom of hose bed.  Two (2) straps will be installed on the top to retain hoses.			
2.22.3	Two (2) air horns «EMERGENCY TONE» shall be recessed in the front bumper and controlled with two (2) push buttons, driver and officer.			
2.22.4	Two (2) chromed steel tow hooks shall be installed under the bumper and attached to the front frame members.			

CUSTOM PUMPER

	<b>SPECIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>DETAILS</b>
<b>2.23</b>	<b>CAB TILT</b>			
2.23.1	Lift controls shall be located on the right side of the pump panel or front area of the body, in a convenient location. An instruction plate shall be installed near the control.			
2.23.2	An incandescent NFPA compliant light shall be mounted under the engine tunnel for area work lighting on the engine. The light shall activate automatically when the cab is tilted.			
2.23.3	An access hatch shall be provided to allow engine oil level checking.			
<b>2.24</b>	<b>WINDOWS</b>			
2.24.1	According to manufacturer's standard.			
2.24.2	All cab entry doors shall contain a conventional roll down window.			
<b>2.25</b>	<b>CLIMATE CONTROL</b>			
2.25.1	Heater-defroster units shall be provided inside the cab. <ul style="list-style-type: none"> <li>- One (1) 43,500 BTU heater-defroster unit with 350 CFM of air flow.</li> <li>- Two (2) 44,180 BTU auxiliary heaters with 276 CFM (each unit) of air flow shall be provided inside the crew cab, one (1) in each outboard rear-facing seat riser.</li> </ul>			
2.25.2	The heater/defroster and crew cab heaters shall be controlled by a single integral electronic control panel. The heater control panel shall allow the driver to control heat flow to the front and rear simultaneously. The control panel shall include highly visible, progressive LED indicators for both fan speed and temperature.			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
2.25.3	<p>In addition to the standard heating system, a customized air conditioning system will be furnished inside the cab and crew cab on the roof interior cab. The condenser shall be mounted on the roof, outside, behind the lightbar.</p> <p>At minimum, 10 adjustable air outlets shall be strategically located on the cab. The air conditioner refrigerant shall be R-134A and shall be installed by a certified technician. For ease of operation, the control panel shall include variable adjustment for temperature and fan control and be conveniently located on the dashboard in clear view of the driver.</p>			
<b>2.26</b>	<b>INTERIOR</b>			
2.26.1	One (1) 12V, 15 amp, power point plug with rubber cover.			
2.26.2	The door panels shall include stainless steel mirror finish.			
2.26.3	Each front door shall include one (1) chromed handle.			
2.26.4	Each rear door shall include one (1) chromed handle.			
2.26.5	<p>Interior cab color shall be gray.</p> <p>The engine tunnel, not covered shall be painted to match to the interior cab color.</p>			
2.26.6	A 12 V wiring shall be located in the dashboard for future radio installation. An antenna wire shall also be installed on the roof and the wiring will be located near the 12 V wiring in the dashboard.			
<b>2.27</b>	<b>SEATS</b>			
2.27.1	A NFPA compliant seat belt monitoring system (SBMS) shall be provided.			
2.27.2	Air driver seat without SCBA rack, Seats Incorporated, 911 Series.			
2.27.3	Officer seat with SCBA rack, Seats Incorporated, 911 Series.			
2.27.4	One (1) rear facing seat (behind driver's seat) with SCBA rack, Seats Incorporated, 911 Series.			
2.27.5	No passenger, outboard position, rear facing seat.			
2.27.6	Two (2) ABTS rear seats with SCBA racks. The two (2) seats shall be front facing, positioned in center of the cab.			
2.27.7	All SCBA type seats in the cab will have an IMMI, Model SMARTDOCK, SCBA holder, except driver seat.			

## CUSTOM PUMPER

	<b>SPECIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>DETAILS</b>
2.27.8	All seating positions shall be furnished with three (3)-point shoulder type red seat belt including "ready reach" device.			
2.27.9	All seat upholstery shall be gray Turnout Tuff material.			
2.27.10	Five (5) helmet holders will be installed in rear part of the cab, three (3) on the rear cab wall and two (2) on the engine tunnel. All helmet storage brackets provided in the cab shall be Ziamatic model UHH-1.			
<b>2.28</b>	<b>CAB EXTERIOR</b>			
2.28.1	Windshield wiper control shall have high, low, and intermittent modes.			
2.28.2	Winshield washer tank can be filled without raising the cab.			
2.28.3	Exterior slip-resistant handrails.			
2.28.4	Retrac model #613423 "West coast" style mirrors, heated and remote controlled shall be installed on each side of the front cab doors. Convex mirrors shall be also heated and remote controlled.			
2.28.5	Full circular inner fender liners in the wheel wells shall be provided.			
2.28.6	Mud flaps shall be installed behind the front wheels and behind cab.			
<b>2.29</b>	<b>CHARGING SYSTEM</b>			
2.29.1	There shall be four (4) Group 31 batteries.			
2.29.2	Battery jumper studs shall be located in the front step.			
2.29.3	DELCO REMY, 320 amp, 12V alternator			
<b>2.30</b>	<b>ELECTRICAL POWER DISTRIBUTION</b>			
2.30.1	Kussmaul model 1200 battery charger/conditioner. The charger shall be connected to the vehicle batteries. It shall be located in the cab, behind the driver seat. A Kussmaul battery indicator shall be installed on the front driver side. Kussmaul Pump 12V air compressor to maintain air in the brake system. . It shall be located in the cab, behind the driver seat.			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
2.30.2	Install between front doors, above the wheel, one (1) 20 amp AUTO EJECT electrical receptacle with a red cover. It shall automatically eject the electrical plug when the starter button is released.			
<b>2.31</b>	<b>LIGHTS</b>			
2.31.1	Sides and front of cab shall include LED marker lights.			
2.31.2	Whelen 600 LED turn flashers shall be installed near the front emergency flashers.			
<b>2.32</b>	<b>OPTICAL WARNING DEVICE</b>			
2.32.1	A Whelen M2R LED flashing red light clearly labeled "Do Not Move Apparatus". In addition to the flashing red light, an audible alarm shall be included which shall sound while the light is activated.			
<b>2.33</b>	<b>BACKUP SAFETY DEVICE</b>			
2.33.1	PRECO, Model 1040, back-up alarm.			
2.33.2	A FEDERAL SIGNAL model CCD with night vision rearview camera shall be installed to the rear of the vehicle. The 7" color LCD monitor shall be installed close to the driver. A protective aluminum cover shall be installed above the camera.			
<b>2.34</b>	<b>INSTRUMENTATION</b>			
2.34.1	Instrumentation and gauges shall have metric measurements.			
2.34.2	Engine hour meter required.			

## CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>3.1</b>	<b>PUMP</b>			
3.1.1	A brand new pump WATEROUS CX rated at 1500GPM. The gearbox shall be a "C20" is capable of handling The pump shall be furnished with a maintenance free mechanical seal.  The mechanical seal shall be a non-contacting, non-wearing dual seal design.			
3.1.2	Pump shall be Class A and shall provide the following ratings at an altitude of less than 600 meters (2000 ft): <ul style="list-style-type: none"> <li>➤ 1500 GPM (1250 IGPM) - 100% of rating at 165 PSI.</li> <li>➤ 1500 GPM (1250 IGPM) - 100% of rating at 150 PSI</li> <li>➤ 1050 GPM (875 IGPM) - 70% of rating at 200 PSI</li> <li>➤ 750 GPM (625 IGPM) - 50% of rating at 250 PSI</li> </ul>			
<b>3.2</b>	<b>PUMP SHIFT</b>			
3.2.1	Pump shift shall be pneumatically-controlled and activated from inside.  All indicators lights and pump engagement shall be NFPA 1901-2009 compliant.			
<b>3.3</b>	<b>PRESSURE GOVERNOR</b>			
3.3.1	A Class 1 pressure governor «TPG» shall be installed on the operator control panel.  The pressure governor shall be calibrated by the manufacturer in «pressure/preset» mode at a pressure specified by the customer.			
<b>3.4</b>	<b>PRIMER</b>			
3.4.1	One (1) 12V positive displacement type rotary vane primer of a fluid-less design shall be provided for the fire pump priming system. The priming pump shall be same brand as the water pump.			
<b>3.5</b>	<b>ENGINE COOLER</b>			
3.5.1	Water flow from the fire pump shall be used to cool the engine coolant. The control, «¼ turn type» shall be located on pump panel and equipped with a ¾" valve.			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>3.6</b>	<b>DRAIN SYSTEM</b>			
3.6.1	A manual master drain valve shall be installed on the pump panel. The master pump drain assembly shall consist of a Trident Emergency bronze master drain with a rubber disc seal. The master drain shall have a rubber seal to prevent water from running out on the running board.  The master drain shall provide independent ports for low point drainage of the fire pump and auxiliary devices.			
3.6.2	An Innovative Control brand ¾" bleeder valve with lift-up handle shall be provided for each inlet and discharge. The drain shall be located at lowest point drainage of the fire pump.			
<b>3.7</b>	<b>PLUMBING</b>			
3.7.1	All fabricated piping shall be a minimum of Schedule 10 stainless steel for superior corrosion resistance and decreased friction loss.			
3.7.2	The pumping system shall have an Akron model 59 pressure relief valve.			
3.7.3	All the valves on the truck shall be AKRON 8800 series, except where other else specified.			
3.7.4	When flexibility is needed, a "Victaulic" fitting shall be installed.			
3.7.5	The pump and steel accessories shall be painted black. Stainless steel plumbing components are not painted.			
3.7.6	All discharges, except the 1½" and 2" discharges shall have a 30 degree chrome elbow.			
3.7.7	All 2½" discharges shall be equipped with a 2½" female chrome-plated reducer to a male 1½" with a 1½" chrome plug retained by a chrome chain.  All caps shall be Pressure Relieving hose cap NFPA compliant.			
3.7.8	The hoses threads on the vehicle shall be: 1½ ": NPSH 2½ ": BAT (2.990" X 8 tpi) ( AMA and BCT ) 6 ": NH			
3.7.9	All storz connections on the vehicle shall be 4'' on diameter, and all elbows and caps shall be anodized.			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS																								
<b>3.8</b>	<b>PUMP CONTROLS</b>																											
3.8.1	<p>Control handles for discharges that shall not be electric, shall be push-pull «T» style controls, Innovative Controls brand.</p> <p>The valve controller shall be a chrome push-pull locking "T" handle located at the pump operator`s panel and shall visibly indicate the position of the valves at all times. The control shall be located directly adjacent to one another and shall be mounted in line so they are in the same position when shut off. The control lever shall be connected directly to its respective valve by a 0.718" OD rod to form a direct linkage control system.</p> <p>Valve control with cables instead of rods will not be accepted.</p>																											
3.8.2	<p>All discharges and intake located at the sides and rear panels shall be provided with Innovative Controls brand, chrome bezel with color identification.</p> <p>These bezels shall be screwed into the panel without nuts at the back.</p>																											
3.8.3	<p>Color coded pump panel labels shall be in accordance with the town standard as follows:</p> <table border="1"> <thead> <tr> <th>Discharge</th> <th>Color</th> </tr> </thead> <tbody> <tr> <td>Preconnect #1</td> <td>Orange</td> </tr> <tr> <td>Preconnect #2</td> <td>Red</td> </tr> <tr> <td>Discharge #1</td> <td>Yellow</td> </tr> <tr> <td>Discharge #2</td> <td>White</td> </tr> <tr> <td>Discharge #3</td> <td>Blue</td> </tr> <tr> <td>Discharge #4</td> <td>Black</td> </tr> <tr> <td>Discharge #5</td> <td>Green</td> </tr> <tr> <td>Deluge/deck gun</td> <td>Silver</td> </tr> <tr> <td>Large-diameter hose</td> <td>Yellow with white border</td> </tr> <tr> <td>Front Bumper Discharge</td> <td>Brown</td> </tr> <tr> <td>Inlets</td> <td>Burgundy</td> </tr> </tbody> </table>	Discharge	Color	Preconnect #1	Orange	Preconnect #2	Red	Discharge #1	Yellow	Discharge #2	White	Discharge #3	Blue	Discharge #4	Black	Discharge #5	Green	Deluge/deck gun	Silver	Large-diameter hose	Yellow with white border	Front Bumper Discharge	Brown	Inlets	Burgundy			
Discharge	Color																											
Preconnect #1	Orange																											
Preconnect #2	Red																											
Discharge #1	Yellow																											
Discharge #2	White																											
Discharge #3	Blue																											
Discharge #4	Black																											
Discharge #5	Green																											
Deluge/deck gun	Silver																											
Large-diameter hose	Yellow with white border																											
Front Bumper Discharge	Brown																											
Inlets	Burgundy																											
<b>3.9</b>	<b>INTAKES</b>																											



CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
3.9.1	Two (2) 6" diameter suction ports with 6" NST male threads and removable zinc screens shall be provided, one (1) each side.			
3.9.2	One (1) 2½" suction intake shall be installed on the left side with a manual lever control integrated to the valve. It shall be equipped with a strainer and a chrome plug with a retaining chain. A ¾" bleeder valve assembly shall be installed for this intake.			
<b>3.10</b>	<b>DISCHARGES</b>			
3.10.1	Four (4) 2½" discharges, with 2½" valves and 30 degree chrome elbow shall be installed on each side and rear of the apparatus. These discharges shall be located as follows: Two (2) discharges left side with control on pump panel operator. One (1) discharge right side with control on pump panel operator. One (1) discharge, rear, left side with control on pump panel operator.			
3.10.2	Two (2) speedlay discharges shall be provided. Each speedlay section shall include one (1) 2" brass swivel above each hose compartment with a 1½" hose connection to allow the use of the hose from either side of the apparatus. The speedlay piping shall consist of two (2) 2" heavy duty hoses coming from the pump discharge manifold to the 2" swivel.			
3.10.3	One (1) discharge, 3" valve shall be installed on the top of the truck, for a deck gun, with the control on the pump panel. Flange #ANSI 150 shall be installed on this discharge.			
3.10.4	One (1) LDH, 30 degrees, 4" Storz discharge with a cap and a 3" valve shall be located on the right side with control on the pump operator's panel.			

## CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
3.10.5	<p>One (1) pre-connect outlet shall be located in the middle compartment's of the bumper. This outlet shall provide a 2" diameter valve and a 90 degree, 1½" swivel that shall exit in the middle of the compartment.</p> <p>There shall be a Class 1 automatic drain installed at all lowest points in the plumbing.</p>			
<b>3.11</b>	<b>TANK FILL AND TANK-TO-PUMP</b>			
3.11.1	<p>One (1) 2" valve to fill water tank shall be provided and installed.</p> <p>The adapter on the tank shall be in stainless steel.</p>			
3.11.2	The tank shall be connected to the pump with 4" piping and one (1) 3" valve. This pipe shall have a check valve, an anti-swirl mechanism to avoid pump cavitation and shall be connected to the tank.			
<b>3.12</b>	<b>FOAM</b>			
3.12.1	A FOAMPRO 2001 12-volt electric motor drive positive displacement foam concentrate pump, rated up to 2.5 gpm (9.5 L/min) @ 150 psi with operating pressures up to 400 psi (27.6 BAR),			
3.12.2	A foam tank gauge shall be installed on pump panel. The foam level indicator will be the same make and model as the water tank gauge.			
3.12.3	The system shall be capable of handling Class A foam. Operational tests shall be completed with PHOSCHECK WD-881 foam.			
3.12.4	A full flow stainless steel check valve shall be provided to prevent foam contamination of the fire pump and water tank as well as to prevent water contamination of the foam tank.			
3.12.5	The foam system shall be plumbed to the speedlays and preconnect discharges.			
3.12.6	The system shall be installed in a suitable, accessible location. The system must be installed and calibrated by the manufacturer before delivery.			
3.12.7	A label shall be placed near the foam concentrate tank fill opening that reads: "DO NOT MIX BRANDS AND TYPE OF FOAM"			
3.12.8	A system rating panel placard shall be installed near the foam controller.			

## CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>4.1</b>	<b>PUMP OPERATOR CONTROL PANEL</b>			
4.1.1	<p>Controls and gauges shall be located on driver side.</p> <p>The side intake/discharge pump panels shall be 14-gauge stainless steel with a brushed finish. Each panel shall be removable for easier maintenance access to plumbing components.</p> <p>Pump operator control panel shall be 14-gauge stainless steel with a brushed finish. The panel section shall be full hinged on one side for easier maintenance access to electrical components.</p>			
4.1.2	<p>Innovative Controls gauges reading in PSI. The 4½" pressure gauges shall be filled with interlube.</p> <p>There shall be one (1) 4½" diameter, 30"-0-400 psi (100-0-2800 kPa) gauge connected to the pressure manifold and another one (1) connected at the pump inlet in a single assembly with chrome bezel and colored labels.</p>			
4.1.3	<p>Innovative Controls gauges reading in PSI. The pressure gauges shall be filled with interlube.</p> <p>There shall also be one (1) 2½" diameter, 0/400 psi connected to each discharges.</p>			
4.1.4	A 4-lights CLASS 1 water level gauge shall be installed on the pump panel.			
4.1.5	A vacuum and pressure port for annual pump performance testings and checking the accuracy of pump panel gauges.			
<b>4.2</b>	<b>COLD PACKAGE</b>			
4.2.1	<p>A 42,000 BTU heater shall be installed in the pump compartment. This heater shall use the truck coolant system.</p> <p>The heater shall have two (2) fans.</p>			

\_\_\_\_\_ Fire Dept  
 CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
4.2.2	<p>A 2-section aluminum heat pan shall be installed below the pump house to prevent freezing and shall be removable without any tools.</p> <p>The heat pan shall have approximately 48'' wide x 72'' long and cover all the pump and plumbing. The front and the back of the heat pan shall be protected by an aluminum plate around the drive shaft.</p> <p>The clearance between ground and the heat pan shall be minimum 10''</p>			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>5.1</b>	<b>TANK</b>			
5.1.1	A 750 gallon (U.S.) booster tank and a 30 gallon (U.S.) foam tank shall be supplied. The booster tank shall be completely removable without disassembling or dismantling the apparatus body structure.			
5.1.2	The booster tank shall be entirely in ½" thick copolymer polypropylene with 3/8" tank baffles. The assembly shall be welded utilizing thermoplastic welding technology. The booster tank shall have lifting eyelets for facilitating removal of the tank should it become necessary			
5.1.3	The water/foam tank design shall be in accordance with NFPA 1901 requirements. The foam tank shall have one (1) air intake installed on the top of the foam tank. The tank shall provide two (2) openings, one (1) for the injection system supply and the second one to allow tank cleaning with a 1" hose with Class 1, model BV10, 1" valve.			
5.1.4	At the front, under the tank, there shall be a dirt collector with a 1½" drain and a 3" plug. The drain shall be installed at the bottom of the collector to allow fully draining of the tank. This drain control shall be on the operator pump panel, not in a compartment. The valve shall be enclosed in the heat pan assembly to prevent freezing.			
5.1.5	One (1) manual fill tower shall be located to the left forward area of the tank. The tower shall be 14"x14" and a 6" vent/overflow pipe shall be installed halfway-up the tower. This pipe shall empty behind rear wheels.			
<b>5.2</b>	<b>DIRECT TANK FILL</b>			
5.2.1	One (1) 2½" inlet for direct tank fill shall be installed at the rear, as low as possible and clearly labeled. This inlet shall be equipped with a 2½" valve less FIREMAN'S FRIEND device with a 30 degree 2½" diameter elbow with a treads connection, filter, cap and retention cable. Piping for the fill shall be routed through the rear wall and include a flow deflector to avoid the breaking of the tank when it is being filled.			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>6.1</b>	<b>GENERAL (BODY AND PUMP HOUSE)</b>			
6.1.1	<p>The aluminum used to build the body and pump house shall be 5052-H32 marine grade.</p> <p>The thickness of the aluminum shall be 3/16" for the bottom and the back of each compartment and for the front and back of the body. Only the wall between compartments shall be 1/8" thick.</p> <p>The aluminum tread plates shall be 3003-H22, 1/8" thick and shall meet NFPA slip resistance, when specified.</p>			
6.1.2	<p>All joints that may corrode or degrade by calcium and water infiltration shall be sealed by a continuous welding cord outside.</p> <p>Where there is a possibility of water infiltration between aluminum tread plates and painted aluminum, gray silicon sealer shall be applied.</p> <p>All joints and weldings shall be polished and free of sharp edges.</p>			
6.1.3	<p>The design of the body is such that the water tank of the truck shall not be visible outside. Any type of "WET SIDE" design shall be refused.</p>			
6.1.4	<p>All compartments shall be "sweep out" design, which means the floor is raised by at least 1" to avoid water infiltration.</p>			
6.1.5	<p>The aluminum components of the body, crew cab and pump house shall be manufactured by using CNC (Computer Numeric Control) machine tools. Each individual assembly part shall be cut and bended for an optimum precision.</p>			
<b>6.2</b>	<b>PUMPHOUSE</b>			
6.2.1	<p>A step shall be installed each side of the pump house, on its full width. The step shall have 11¾" in depth built from aluminum grip-strut.</p>			
6.2.2	<p>The top of the pump house shall be made of aluminum tread plates and shall meet ULC requirements.</p> <p>The front of the pump house shall be covered by tread plates. Between the cab and the pump house there shall be an access door to access to the pump without any tools.</p>			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
6.2.3	<p>The pump module shall have a total width of 26” and two upper storage areas. The lower transverse storage area shall accommodate two preconnected handlines (150’ of 1¾” hose with nozzle). The bottom of this compartment shall at approx 65” from the ground.</p> <p>The speedlay areas shall include two storage trays. The trays shall be constructed of smooth aluminum plate with an exterior sanded finish. The walls and floor of the tray shall be slotted to prevent the accumulation of water and allow for ventilation of wet hose.</p> <p>A protective strip of 0.125" UHMW Polyethylene shall be bolted to the bottom of outside edge speedlay tray. Two (2) 1” stainless steel rolls, one on each side, to facilitate the removal and insertion of the trays in this compartment. The speedlay side access shall have a restraint system consist of a vinyl tarp with Velcro along the entire perimeter.</p> <p>Pump service access doors shall be provided four (4) access to the pump. One (1) in L1, One (1) in R1, one (1) in the front pump house when the cab is open and one (1) on the top in front of the body. The doors shall be secured with tool-free hardware.</p>			
6.2.4	<p>A «P» shaped rubber gasket of about 1" shall be installed between the pumphouse and the body to avoid friction of the modules.</p>			
6.2.5	<p>The pumphouse shall be attached to the chassis with rubber insulation between the pump house and the chassis.</p>			
6.2.6	<p>An enclosed compartment shall be built above the pump side panels.</p> <p>Two (2) aluminum tread plates doors shall be built to give access to this compartment, one each side. The doors shall be equipped with a D-Ring handle. Doors shall open from the top and they shall be held in the open position with a gas cylinder.</p> <p>The compartment shall be lit by two (2) LED lights Amdor Lumabar, 12".</p>			
6.2.7	<p>The pumphouse shall have the same height as the body.</p>			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>6.3</b>	<b>BODY ATTACHMENT</b>			
6.3.1	<p>The main body shall be attached to the chassis frame rails with six (6) U-bolts.</p> <p>U-bolts shall be made of two (2) 5/8" diameter steel bolts and two (2) 1/2" thick x 2" width steel plates. There shall be insulation between U-bolts and body.</p> <p>The mounting shall allow easy removal of the body in case of major repair.</p>			
6.3.2	There shall be a rubber insulation to avoid contact between the aluminum body and the steel frame rails.			
<b>6.4</b>	<b>BODY</b>			
6.4.1	The wheel well shall have monohull fiberglass fenders.			
6.4.2	A "P" shaped fenderette shall be built from polished aluminum semi-circular moulding with a mirror finish.			
6.4.3	The wheel well outer side face shall be made of 3/16" aluminum thick and shall be painted the same color as the body.			
6.4.4	<p>The body shall have rubrails mounted along the sides and at the rear. The rubrail shall be C-channel in design and constructed of 3/16" thick aluminum extrusion. The rubrail shall be 2-1/4" height x 1-1/4" deep and shall extend beyond the body width to protect compartment doors and the body sides. The depth shall allow marker and/or warning lights to be recessed inside for protection.</p>			
6.4.5	<p>The body structure shall be made from aluminum extrusion 2" x 3" x 1/4" and 3" x 3" x 1/8".</p> <p>The body design shall allow the booster tank to be completely removable without disturbing or dismounting the apparatus body structure in case of repair.</p>			



CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>6.5</b>	<b>HOSE BED</b>			
6.5.1	<p>The hose bed shall be made above the water tank and shall have a width of at least 60", a length of at least 116" and a height of at least 14".</p> <p>The sides of the hose bed shall be made from aluminum tread plate.</p> <p>The hose bed floor shall be made of easily removable interlocking plastic tiles, minimum 5/8" thick.</p>			
6.5.2	<p>One (1) hose bed divider shall be constructed of 3/16" brushed aluminum plate with a reinforced aluminum base welded to the bottom. The rear end of the divider shall have a 3" radius corner and a handle shall be integrated to the divider.</p>			
6.5.3	<p>A black vinyl tarp shall cover the hose bed, retained by a Velcro strip fixed all around the hose bed. A hole shall be made around the fill tower, allowing opening of the fill tower cover freely.</p> <p>The tarp for the speedlays shall be made from the same black vinyl.</p>			
<b>6.6</b>	<b>COMPARTMENTS</b>			
6.6.1	<p>Each compartment seam shall be sealed using a permanent pliable silicone caulk.</p> <p>The walls of each compartment shall have openings for adequate ventilation.</p> <p>Each compartment shall have aluminum extrusion tracks for use with adjustable shelves. The tracks shall be vertically mounted and attached to the side and/or rear walls of the compartments.</p> <p>The flooring shall have drain holes to prevent the accumulation of water.</p> <p>The flooring shall be covered by plastic interlocking tiles 5/8" thick.</p>			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
6.6.2	<p>Compartments doors shall be roll-up type with anodized aluminum finish.</p> <p>Doors shall be AMDOR brand.</p> <p>Compartments lights switch shall be located at the top of the door. The switch shall be magnetic type AMDOR brand.</p> <p>An elastic strap shall be installed on each door, which opened, that are be over 76'' height above the ground.</p>			
6.6.3	<p>The top and the front of the compartments shall be covered by 1/8" thick aluminum tread plate.</p>			
6.6.4	<p>One (1) shelf shall be installed in each compartment <b>upper section</b> except in compartments above rear wheels.</p> <p>Each exterior shelve mentioned in this proposal should be built as specified in this section unless otherwise mentioned.</p> <p>Each shelve shall be as wide and deep as possible.</p> <ul style="list-style-type: none"> <li>• Maximum load capacity of at least 400 lb</li> <li>• Constructed of 3/16" aluminum, with a 2" lip and as deep as possible according to the size of the compartment.</li> <li>• Bottom of the shelves are covered by rubber tiles of at least 5/8'' thick.</li> </ul>			

	SPECIFICATIONS	YES	NO	DETAILS
6.6.5	<p>Each bottom compartment shall be equipped with a roll-out tray. Each roll-out tray mentioned in this proposal should be built as specified in this section unless specified brand and model are required or otherwise mentioned. Each tray shall be as wide and deep as possible.</p> <ul style="list-style-type: none"> <li>• Maximum load capacity of at least 400 lb when fully extended</li> <li>• Minimum exterior slide extension should be about 20".</li> <li>• Constructed of 3/16" aluminum, with a 2" lip and as deep as possible according to the size of the compartment.</li> <li>• Shall be maintained in open or close position with a gas cylinder or with self locking tray slides when cylinder installation is not possible.</li> <li>• Bottom of the shelves are covered by rubber tiles of at least 5/8" thick.</li> </ul> <p>All trays installed on the bottom of the compartments shall have two (2) aluminum runners with nylon cover installed near the center to avoid the tray from collapsing.</p>			
<b>6.7</b>	<b>LEFT SIDE COMPARTMENTS</b>			
	<b>(Front of rear wheels) – L1</b>			
6.7.1	The compartment door opening shall be approximately 26" wide x 13" deep x 61" height. This compartment is the pump panel operator.			
	<b>(Front of rear wheels) – L2</b>			
6.7.2	The compartment door opening shall be approximately 28" wide x 28" deep x 61" height.			
	<b>(Above rear wheels) – L3</b>			
6.7.3	The compartment door opening shall be approximately 58" wide x 28" deep x 22" height.			
	<b>(Rear of rear wheels) – L4</b>			
6.7.4	The compartment door opening shall be approximately 46" wide x 28" deep x 61" height.			
<b>6.8</b>	<b>RIGHT SIDE COMPARTMENTS</b>			
	<b>(Front of rear wheels) – R1</b>			

Fire Dept  
 CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
6.8.1	The compartment door opening shall be approximately 58" width x 28/14" depth x 61" height.			
	<b>(Rear of rear wheels) – R2</b>			
6.8.2	The compartment door opening shall be approximately 58" width x 14" depth x 22" height.			
	<b>(Rear of rear wheels) – R3</b>			
6.8.3	The compartment door opening shall be approximately 46" width x 28/14" depth x 61" height.			
<b>6.9</b>	<b>REAR COMPARTMENT :</b>			
6.9.1	The compartment door opening shall be approximately 39" width x 28" depth x 31" height.			
6.9.2	A storage compartment for pike poles and folding ladder shall be built left rear side under the hose bed. It shall contain one (1) 10' folding ladder and three (3) 6' pike poles with « D handles ». This compartment door shall be covered by chevron striping.			
<b>6.10</b>	<b>REAR ACCESS</b>			
6.10.1	A full wide step shall be built above the rear compartment made of aluminum tread plate meeting NFPA requirement.			
6.10.2	A tailboard step shall be provided at the rear of the body. The tailboard shall have 11 ¾" in depth.  The tailboard step shall be formed from 1/8" aluminum tread plate shall be in accordance with current ULC requirements and shall include three (3) grip strut inserts incorporated into the diamond plate.			
6.10.3	All handrails on body and pump compartment shall be 1¼" diameter with rubber insert, to provide a positive gripping surface.  Chrome plated end stanchions shall support the handrail. Plastic gaskets shall be used between end stanchions and any painted surfaces.  Drain holes shall be provided in the bottom of all vertically mounted handrails.  Handrails shall be provided to meet NFPA and ULC requirements.			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
6.10.4	Six (6) bright finished and aggressive grip, folding steps will be provided at the rear three (3) on each side to allow access to the hose bed. Each step will incorporate two (2) LED light, chrome bezel, to illuminate the stepping surface, below and above the steps. The steps can be used as a hand hold with built-in openings wide enough for a gloved hand. The step light shall be activated when the parking brake is set, or when the vehicle marker lights are activated.			
6.10.5	The rear tires shall have a set of black mud flaps mounted behind the rear chassis wheels.			
6.10.6	Two (2) heavy duty tow eyes made from steel having 2-1/2" diameter shall be mounted below the body at the rear of the vehicle to allow towing (not lifting).  The tow eyes shall be painted black.  There shall be a plate specifying the capacity of the assembly.			
<b>6.11</b>	<b>LADDER RACK:</b>			
6.11.1	A ladder compartment shall be built on the right rear side. It shall contain one (1) 14' hook ladder and one (1) 2-section 24' ladder. The ladders (not supplied) shall be Duo Safety brand.  This compartment door shall be covered by chevron striping.			
<b>6.12</b>	<b>6" SUCTION TUBE RACK</b>			
6.12.1	Two (2) compartments of about 12" height x 10" wide x 126" depth shall be built above left and right sides compartments. Each compartment shall contain one (1) 6" x 10' suction tube  Each compartment door shall be covered by chevron striping.			
<b>6.13</b>	<b>REAR WHEELS WELL OUTFITTING:</b>			
6.13.1	Four (4) compartments for SCBA cylinders shall be installed in the wheels well.  The rear left compartment shall contained one (1) cylinder whereas the three (3) others could each contain two (2) cylinders.  Every cylinder compartment shall be built with aluminum tubes and the bottom shall be covered with rubber mat according to the ULC/NFPA.			

\_\_\_\_\_ Fire Dept  
CUSTOM PUMPER

	<b>SPECIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>DETAILS</b>
	Every compartment shall have an aluminum door of the same color as the vehicle with a “compression type” latch. The doors shall be designed to avoid water and dust infiltration with reinforcement inside the door.			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>7.1</b>	<b>ELECTRICAL SYSTEM</b>			
7.1.1	<p>The electrical system shall meet CAN/ULC S515 and NFPA 1901 requirements.</p> <p>The electrical system shall include the following:</p> <ul style="list-style-type: none"> <li>a) The wiring in the body shall be securely fastened with stainless steel bolts attached to all each 8"-10";</li> <li>b) Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied;</li> <li>c) Adhesive device shall be not acceptable;</li> <li>d) Every electrical wiring shall be covered by a plastic split sleeve;</li> <li>e) Any electrical component that is installed in a exposed area shall be mounted in a manner that shall not allow moisture to accumulate in it;</li> <li>f) Heat shrink material and sealed connectors shall be used to protect exposed connections;</li> <li>g) A coil of wire must be provided behind an electrical appliance to allow them to be pulled away from mounting area for inspection and service work;</li> <li>h) All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.</li> </ul>			
7.1.2	The wiring of the body shall be color coded and number coded at each 3".			
7.1.3	<p>Every circuits added to the chassis shall be protected by internal electronic circuit breakers with transistor outputs. The system shall operate in accordance with the J1939 communication protocol.</p> <p>The system shall comprise three nodes of at least 8 inputs and 16 outputs, each node shall be protected by an individual breaker GROTE model 54-852PL. They shall be located to optimize the wiring, two (2) back into the compartments and one (1) in the pumphouse.</p> <p>The vehicle shall have one (1) programming plug installed near the multiplex node in the pumphouse.</p>			
7.1.4	The switches in cab and pump panel shall have an identification meets ULC and NFPA.			

## CUSTOM PUMPER

	<b>SPECIFICATIONS</b>	<b>YES</b>	<b>NO</b>	<b>DETAILS</b>
<b>7.2</b>	<b>WARNING AND EMERGENCY</b>			
7.2.1	Two (2) WHELEN M6 SERIES red light heads, shall be provided. The lights shall include chrome flanges. The lights shall be mounted facing forward of the apparatus, above the headlights.			
7.2.2	Four (4) WHELEN M6 SERIES red light heads, shall be provided. The lights shall include chrome flanges. <ul style="list-style-type: none"> <li>➤ Two (2) each side in the rear wheel well</li> <li>➤ Two (2) each corner of the front bumper</li> </ul>			
7.2.3	An LED red and clear/white lightbar WHELEN # FREEDOM IV-V - 72" shall be installed on the front of the cab roof.			
7.2.4	Two (2) LED beacon Whelen # L31H shall be supplied and installed on upper of the rear body.			
7.2.5	Headlights shall be alternative on high beam position.			
7.2.6	A Whelen 295SLSA1 electronic siren shall be mounted in the cab.			
7.2.7	The siren shall feature 100-watt output, with one (1) 100w speakers. A push button identified "Evacuation Alert" will be installed to the pump operator panel and plugged to the Mechanical siren			
7.2.8	The front bumper shall include a mechanical Q2B™ siren. The siren shall be installed on top of the front bumper; on the furthest outboard section of the bumper on the driver side. The siren shall be actuated by two (2) foot switches on the driver and officer sides. A momentary siren brake switch shall be provided in the switch panel on the dashboard.			
<b>7.3</b>	<b>LIGHTING</b>			
7.3.1	LED, GROTE model 47962 / 47963 clearance/marker lights.			
7.3.2	The center top rear marker lights shall be a GROTE model 253-4400-1 for marker light AND for brake light signal.			



CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
7.3.3	<p>Turn signal lights, brake-lights and reversing lights shall be WHELEN M6 type. There shall be a total of two (2) brake lights, two (2) back-up lights, two (2) turn signal lights and two (2) emergency lights mounted on a WHELEN # M6FCV4 rack.</p> <p>The rear part of the lights, visible from the compartment shall be entirely covered with a protective aluminum cover which shall protect the rear part of the light and the electrical wiring.</p> <p>Two (2) auxiliary turn signal lights, one each side, GROTE, model 47963, shall be installed recessed in the rubrail.</p>			
7.3.4	<p>One (1) white LED GROTE #60681 licence plate light mounted at the rear of the body.</p> <p>The plate shall be mounted with four (4) stainless steel bolts.</p>			
<b>7.4</b>	<b>AUXILIARY LIGHTS</b>			
7.4.1	<p>Two (2) 12" AMDOR, LUMABAR # AY-9700-012 LED lights shall be mounted under the control panel light shield, one (1) each side.</p> <p>These lights shall automatically turn on when the pump is engaged or when the "pump light" switch is on and when the park brake is set.</p>			
7.4.2	<p>One (1) Amdor AY9220-032 LED light shall be installed in the pumphouse and it shall be controlled by the "pump light" switch on the pump panel.</p>			
7.4.3	<p>Two (2) LED lights AMDOR LUMABAR compartment light strips shall be mounted in each body compartment.</p> <p>Lentgh of each light is the same as the door opening height (+/- 5").</p>			
7.4.4	<p>All perimeter lights under cab and body shall be Truck Lite 60 series LED lights, as follow:</p> <ul style="list-style-type: none"> <li>➤ Four (4) under cab steps</li> <li>➤ Two (2) under pumphouse steps</li> <li>➤ Two (2) under rear bumper</li> </ul> <p>The ground lighting shall be activated by the opening of a cab door, or when the parking brake is set and when the marker lights are turned on, or when the transmission is on reverse.</p>			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
7.4.5	<p>A LED TecNiq model E03 light shall be installed under each 6" inlet on pump panel for steps lighting.</p> <p>The lights shall turn on when the parking brake is set and the marker lights are turned on or with the pump light switch.</p>			
7.4.6	<p>One (1) LED light GROTE # 63F61 or JETCO # 300-3161F-8 shall be used for hose bed light and for the deck gun. It shall be installed in the front of the body.</p> <p>The hose bed light shall turn on when the parking brake is set and when the marker lights are turned on, or with the hose bed switch.</p>			
7.4.7	<p>Two (2) LED light GROTE # 63F61 or JETCO # 300-3161F-8 installed at the rear, upper body, close to the beacon warning lights.</p> <p>The rear light lights shall turn on when the parking brake is set and the rear lights switch is "on" or when the transmission is on reverse.</p> <p>The rear lights switch shall be waterproof and installed in a sealed aluminum box CAST PRODUCTS on the left rear side.</p>			
7.4.8	<p>Two (2) FRC model SPA900 LED scene lights shall be installed on the pump compartment.</p> <p>The airtight switch shall be located on the pump operator panel. These lights shall turn on when the parking brake is set.</p>			
7.4.9	<p>Two (2) FRC telescopic lights model EVOLUTION II #FCA530-V20, 20,000 lumens shall be installed on the pump compartment, behind the cab, on each side. The switch of each light shall be located on the pump panel, near the light base.</p>			

## CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>8.1</b>	<b>BODY FINISH DETAILS</b>			
8.1.1	All nuts and rivets installed on the apparatus shall be stainless steel unless a superior strength is required.			
8.1.2	Where dissimilar metals are to be mounted together, the mounting base material shall have an isolation barrier prior to assembly to prevent dissimilar metal reaction.			
8.1.3	All Caution, Warning, Danger and other safety related signs shall meet the requirement of the FAMA Standard Product Safety Signs for Automotive Fire Apparatus issued October 2015 or more recent.			
8.1.4	A rust preventive barrier, Sinto or Tectyl, shall be sprayed under the entire body before their installation on the chassis so that no area is left unprotected.			
8.1.5	The rear steel sub-frame structure shall be painted black.			
<b>8.2</b>	<b>BODY AND CHASSIS PAINT</b>			
8.2.1	The painting shall be conducted in accordance with best practices followed in the heavy equipment industry to ensure the best protection against corrosion and abrasion.			
8.2.2	Paint and primer used shall be of good quality and type « base Coat / Clear Coat ». The painting process shall be in accordance with the paint manufacturer.			
8.2.3	All removable parts such as brackets, lights, doors, and steps shall be removed before painting the body and shall be painted separately if required.			
8.2.4	The cab and body shall be painted red Pierce #90.			
8.2.5	The body compartments interiors shall have a Zolatone Gray Stone (20-64) finish.			
8.2.6	The exterior of the pump house shall have a smooth brushed finish.			
8.2.7	All shelves and trays inside compartments shall be painted, according to the color specified by the customer, with Zolatone paint.			
<b>8.3</b>	<b>LETTERING, STRIPING</b>			

## CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
8.3.1	<p>A reflective stripe, 6" wide with a «Z» and 2 other 1" wide stripes, each side, shall be installed according to the ULC standard:</p> <ul style="list-style-type: none"> <li>➤ At least 50 % of the total length of the vehicle</li> <li>➤ At least 25 % of the width of the front of the vehicle.</li> </ul>			
8.3.2	Maximum of the rear body surface (Except the roll up door) shall be covered by chevron stripes according to NFPA. The stripes shall be red and yellow-lime, 3M-983 brand, (models 72 and 21).			
8.3.3	A 3'' wide chevron type stripe shall be installed on each cab door and each crew cab door. The covering surface shall be at minimum 150 square inches.			
8.3.4	Designated Walking Areas of standing/walking surface on upper areas of apparatus. 1'' wide safety yellow on surface higher than 48'' excluding steps and ladders.			

\_\_\_\_\_ Fire Dept  
 CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>9.1</b>	<b>LOOSE EQUIPEMENT TO BE SUPPLIED BY BIDDER</b>			
9.1.1	Two (2) folding wheels chocks ZICO, 44" diameter tires with brackets shall be installed under L1 compartment.			
9.1.2	Two (2) 6" NH chrome caps for pump inlets.			
9.1.3	One (1) 2.50 lb D.O.T approved fire extinguisher with BC rating.			
9.1.4	One (1) emergency road safety kit.			
9.1.5	Three (3) road flares.			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
<b>10.1</b>	<b>WARRANTY</b>			
10.1.1	The warranty is effective upon delivery of the vehicle.			
10.1.2	One (1) year material and workmanship limited warranty (bumper-to-bumper).			
10.1.3	A Cummins five (5) year/160,000 km limited engine warranty will be provided.			
10.1.4	A TRW one (1) year limited steering gear warranty will be provided on the pump.			
10.1.5	The chassis manufacturer fifty (50) year custom chassis frame limited warranty will be provided.			
10.1.6	An Eaton five (5)-year/160,000 km parts and labor warranty will be provided for front axle.			
10.1.7	An Eaton five (5)-year/160,000 km parts and labor warranty will be provided for rear axle.			
10.1.8	A Wabco three (3) year parts and labor limited warranty on brake system ABS/ATC/RSC/ESC.			
10.1.9	Ten (10) year limited warranty on structural integrity custom cab and body.  This warranty will cover all the structural components of the body and cabin against defects in materials and workmanship. Excluded from this warranty is hardware, mechanical and electrical items or paint finish.			
10.1.10	Ten (10) year pro-rated limited warranty on the cab paint.  This warranty will cover the paint and perforations due to corrosion, delaminating and cracking under normal use of the vehicle.			
10.1.11	Five (5) year pro-rated limited warranty on the body paint.  This warranty will cover the paint and perforations due to corrosion, delaminating and cracking under normal use of the vehicle.			
10.1.12	Five (5) year/unlimited km parts and labor warranty will be provided for transmission.			
10.1.13	The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler).			

CUSTOM PUMPER

	SPECIFICATIONS	YES	NO	DETAILS
10.1.14	<p>Ten (10) year pump stainless steel plumbing components limited warranty.</p> <p>This warranty will cover all components of the pump except the valves against defects in materials and workmanship. Excluded from this warranty are the breakage caused by freezing.</p>			
10.1.15	<p>A WATEROUS TPP-5 warranty, <b>five (5)-year</b> parts and labor warranty will be provided. This Increase your coverage to include labor expenses to dismantle, remove and reinstall products or parts for a period of five (5) years.</p> <p>This warranty will cover all components of the pump except the valves against defects in materials and workmanship. Excluded from this warranty are the breakage caused by freezing.</p>			
10.1.16	<p>The water/foam tank parts and labor warranty shall be provided for life (25 years) against any manufacturing defects.</p>			