FORM A: BID
(See B8)

1. Contract Title — SUPPLY AND DELIVERY OF A 3500 IMPERIAL GALLON FIRE RESCUE TRUCK TANKER

2. Bidder

_____
Name of Bidder

_____
Usual Business Name of Bidder as it appears on Invoice (if different from above)

_____
Street

_____
City Province Postal Code

_____
Email Address of Bidder

_____
Facsimile Number

(Mailing address if different)

_____
Street or P.O. Box

_____
City Province Postal Code

_____
GST Registration Number (if applicable)

The Bidder is:

(Choose one)

☐ a sole proprietor

☐ a partnership

☐ a corporation

carrying on business under the above name.

3. Contact Person — The Bidder hereby authorizes the following contact person to represent the Bidder for purposes of the Bid.

_____
Contact Person Title

_____
Telephone Number Facsimile Number

_____
Email Address

4. Definitions — All capitalized terms used in the Contract shall have the meanings ascribed to them in the General Conditions and D3.

5. Offer

The Bidder hereby offers to perform the Work in accordance with the Contract for the price(s), in Canadian funds, set out on Form B: Prices, appended hereto.

6. Commencement of the Work

The Bidder agrees that no Work shall commence until he/she is in receipt of a notice of award from the Award Authority authorizing the commencement of the Work.

7. Contract

The Bidder agrees that the Bid Opportunity in its entirety shall be deemed to be incorporated in and to form a part of this offer notwithstanding that not all parts thereof are necessarily attached to or accompany this Bid.

8. Addenda

The Bidder certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract:

No. _____ Dated _____

_____ _____

_____ _____

9. Time

This offer shall be open for acceptance, binding and irrevocable for a period of sixty (60) Calendar Days following the Submission Deadline.

10. Signatures

The Bidder or the Bidder's authorized official or officials have signed this

_____ day of _____ , 20_____ .

Signature of Bidder or
Bidder's Authorized Official or Officials

_____

_____
(Print here name and official capacity of individual whose signature appears above)

_____

_____
(Print here name and official capacity of individual whose signature appears above)

FORM B: PRICES
(See B9)

SUPPLY AND DELIVERY OF A 3500 IMPERIAL GALLON FIRE RESCUE TRUCK TANKER

UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	QUANTITY	UNIT PRICE
1.	3500 Imperial Gallon Fire Rescue Truck Tanker	16026	Each	1	

_____
Name of Bidder

FORM N: DETAILED SPECIFICATIONS 16026

1.0 DESCRIPTION-

1.1 **Description-** These specifications describe a **3500 Imperial Gallon Fire Rescue Truck Tanker** and other equipment and features as specified herein.

1.2 The **3500 Imperial Gallon Fire Rescue Truck Tanker** shall be a new 2016 model year or newer.

1.3 The **3500 Imperial Gallon Fire Rescue Truck Tanker** and all other items/components shall be the manufacturer's latest model. The equipment shall be furnished complete and ready for operation. Any parts or accessories not specifically mentioned, but which are required to complete and place the equipment and associated attachments in successful operation shall be furnished as though specifically mentioned in these specifications. The equipment and associated attachments, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.

1.4 It will be the responsibility of the Bidder to inform the City of any errors or omissions in these specifications, for under this Contract the Contractor shall be held responsible for the satisfactory operational function of the equipment.

2.0 SAFETY STANDARDS

2.1 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.

2.2 The complete **3500 Imperial Gallon Fire Rescue Truck Tanker and all of its components and attachments** shall comply with the applicable regulations.

2.3 The **3500 Imperial Gallon Fire Rescue Truck Tanker must comply with current (NFPA) National Fire Protection Association Standard latest revisions**, form an integral part of these specifications and any conflict with the specifications shall be brought to the attention of the Contract Administrator in Clause D4 of the Supplemental Conditions.

2.4 All applicable SAE standards form an integral part of the **3500 Imperial Gallon Fire Rescue Truck Tanker** specifications and shall have precedence in any conflict concerning minimum acceptable standards.

2.5 The **3500 Imperial Gallon Fire Rescue Truck Tanker and all associated equipment** shall comply with the applicable standards:

- (NFPA) National Fire Protection Association Standard latest revisions
- Highway Traffic Act
- Canadian Motor Vehicle Safety Standards
- Transport Canada
- National Safety Mark, NSM
- Manitoba/Winnipeg Safety and Health Act, Parts 12, 22
- Canadian Standards Association
- Society of Automotive Engineers
- Under Writers of Canada –ULC
- All welding shall conform to the CSA/CWB Standards W47.1-03 and W59-03.
- City of Winnipeg Lighting Visibility Standard = http://winnipeg.ca/matmgt/pdfs/PublicWorksEquipLightingVisibility.pdf

2.6 In Canada, Modification to new vehicle can only be done at facilities that are recognized by Transport Canada. All of these facilities must have a National Safety Mark from Transport Canada. Transport Canada National Safety Mark is a label that indicates that the modifications are compliant with all current Canadian Motor Vehicle Safety Standards (CMVSS).

STATE (NSM) #- _____

2.7 The vehicle shall be complete with a current Manitoba Safety Sticker affixed to the driver's side window.

3.0 SERVICE FACILITY & QUALIFICATIONS OF MANUFACTURER

3.1 For the purpose of warranty repairs and service support, the Contractor shall have an authorized service facility located within 25 kilometres of the City of Winnipeg Fire Department Emergency Mechanical Services Branch located at 2546 McPhillips Street, Winnipeg Manitoba (no exceptions). The facility or a portion thereof, shall be dedicated to the service and maintenance of the 3500 Imperial Gallon Fire Rescue Truck Tanker being offered. Further to B11, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator. _____

3.2 All components of the 3500 Imperial Gallon Fire Rescue Truck Tanker requiring regular scheduled servicing or lubrication shall be easily accessible. The design and construction of the 3500 Imperial Gallon Fire Rescue Truck Tanker shall be such that the removal of drive train components including, but not limited to, the engine, transmission and transfer case, can be accomplished without dismantling the 3500 Imperial Gallon Fire Rescue Truck Tanker body. _____

3.3 The manufacturer of the 3500 Imperial Gallon Fire Rescue Truck Tankers shall have five (5) years continuous experience manufacturing Emergency Response Vehicle. The manufacturer shall have in effect a complete and documented quality control program ensuring compliance with all applicable standards. _____

3.4 A list of at least five (5) references for Emergency Response Vehicle. shall be included. The list shall include the fire department's name, location, contact person, telephone number and the length of time the Emergency Response Vehicle have been in service. The manufacturer of the Emergency Response Vehicle shall have successfully demonstrated the operation of the type of Emergency Response Vehicle being offered in cold weather (-40°C) conditions. _____

1. _____
2. _____
3. _____
4. _____
5. _____

3.5 The Contract Administrator shall determine if the service facility meets the required qualifications. _____

4.0 INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

4.1 Where requested to do so, all items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall state "yes" for compliance or state deviation,** or give reply where requested to do so. Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

4.2 Each Bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of Bid.**

5.0 INTENDED USE/OPERATION -

5.1 The intended/operation use of this vehicle will be for the following:

- First being the ability to carry a 3500 Imperial gallons of water and two (2) portable water tanks to working fires outside of the water district specifically for firefighting operations.
- The second intended use, is to provide a vehicle that can effectively and continuously shuttle water from a fire hydrant or alternative water source to a fire ground scene located outside of the water district. In terms
- Operational criteria, this vehicle will form a major component to achieving ***Superior Tanker Shuttle Service*** (STSS) a fire fighting certification standard for fire operations outside of areas serviced by fire hydrants or by local alternative sources of water.

6.0 MAKE/MODEL-

6.1 **State** make and model of Vehicle and Body being Bid-

6.2 Chassis-_____

6.3 Body-_____

7.0 SUB-CONTRACTORS-

7.1 The Bidder shall list all of their subcontractors (Sub-Contractor name, contact, address, phone #, fax, e-mail address)

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

7.2 When required, the Contractor shall assign the warranty to the City of Winnipeg to improve logistics, unnecessary down time, regarding warrantable failures. _____

CHASSIS SPECIFICATIONS

8.0 GVWR /WEIGHT DISTRIBUTION-

8.1 The complete **3500 US Imperial Gallon Fire Rescue Truck Tanker** shall not exceed the chassis manufactures limits for gross vehicle weight ratings (GVWR), axle and tire loads. The Bidder shall provide weight distribution documentation with their Bid Submission. _____

8.2 **Weigh scale ticket** – The Contractor shall provide a certified weigh scale ticket upon delivery of the completed unit. The scale ticket shall include front and rear axle weights including two (2) operators, full of liquids, and all equipment and any attachments. _____

9.0 Chassis - The chassis shall be carefully inspected for compliance to the required specifications and to assure that it is ready for vehicle construction. _____

9.1 Chassis must be provided from **a local Winnipeg major truck distributor** No "home-made" proprietary truck chassis will be accepted.

9.2 **State make & model-** _____

10.0 WEIGHTS-

10.1	**GVWR**	72,000 lbs.	_____
10.2	**FRONT GVWR**	20,000 lbs.	_____
10.3	**REAR GVWR**	52,000 lbs.	_____
10.4	**GCWR**	Gross Combined Weight Rating, **state-**	_____
10.5	**GAWR**	Gross Actual Weight Rating, **state-**	_____
10.6	**Tare Weight-**	**State** actual Tare Weight-	_____

11.0 DIMENSIONS-

11.1	**WHEELBASE** -	As required for an approx. approx. 23 ft., 3500 Imperial Gallon tanker body measurement. **State WB**-	_____
11.2	**CAB TO AXLE** -	As required for an approx. 23 ft., 3500 Imperial Gallon tanker body measurement. **State CA**-	_____
11.3	**AFTER FRAME** -	As required for an approx. 23 ft., 3500 Imperial Gallon tanker body measurement. **State AF**-	_____

12.0 ENGINE-

12.1	Type	Must meet current EPA Standards. Cummins diesel **Tier IV Final** -Engines shall be warranted to use biodiesel at a B10 blend level (10% biodiesel to 90% ultra low sulphur diesel), where the biodiesel will meet product specification ASTM D 6751 to ensure fuel quality.(Emergency Service Vehicle) rated **state** model-	_____

12.2	Horsepower	400-450 hp gross (Emergency rated high output horsepower)	_____
12.3	Torque	1500-1550 lbs-ft (Emergency rated high output torque)	_____
12.4	Compression Brake	Required	_____
12.5	Engine shut down	Low oil pressure / high water temperature	_____
12.6	Anti-idling	Programmable anti-idling shut down, to be determined at a pre-production meet with the successful Bidder.	_____
12.7	Air intake warmer	required	_____
12.8	Fuel Shut-off	Electric solenoid type	_____
12.9	Air Intake/Air Cleaner	Side of hood air intake with NFPA compliant Ember screen and fire retardant dry type standard filter element	_____
12.10	Air intake restriction	Dash mounted restriction indicator	_____
12.11	Oil drain plug	Magnetic type	_____
12.12	Oil filter	Full flow, spin-on type	_____
12.13	Fuel filter	Spin-on type	_____
12.14	Fuel/water separator	Heated Drainable, mounted under hood, located to be protected from road spray and not to impede with body installation. **State** location-	_____
12.15	Fuel line primer pump	required	_____
12.16	Block heater	Immersion type, 1500 Watt w/ covered recessed male plug, located under driver's side door	_____
12.17	Coolant	Extended Life coolant, antifreeze to -60°F	_____
12.18	Coolant filter	required	_____
12.19	Coolant hoses	Make Greenline Pt# G302-075 or equivalent. Coolant Tees shall be metal	_____
12.20	Fan Drive	thermostatically controlled, automatic type	_____
12.21	Air compressor	Air compressor required with 18-19 cfm	_____
12.22	Fan Clutch	On/Off engine fan clutch with fan control dash Switch indicator light	_____

13.0 <u>ELECTRICAL SYSTEM</u>-

13.1	Electrical system	VMUX Multiplexed electrical system-	_____

13.2	Alternator	Delco Remy 275 Amp with remote battery voltage sense	
13.3	Starter	Delco Remy 39 MT with over crank protection and thermal protection	
13.4	Circuit breakers	Auto-reset, readily accessible	
13.5	Batteries	Three batteries (3), 12-volt, group 31, 3375 CCA combined capacity, must be maintenance free batteries. Battery Shut off Switch mounted in cab .	
13.6	Battery Box	Under cab or frame mounted c/w enclosure. Not to impede with body installation. Shall be easily accessible to the operator, **state** location-	
13.7	Remote boost terminal	Remote battery boost terminal, protected from road spray and covered. Shall be easily accessible to the operator **state** location-	
13.8	Marker lights	LED Cab marker lights. If cab marker lights are not available than marker lights in an exterior sun visor will be acceptable.	
13.9	Accessory switches	Twelve (12) programmable multiplex dash mounted rocker switches required. All switches complete and wired for body installation, labelled and backlit.	

14.0 EXHAUST SYSTEM-

14.1	Exhaust System	The tailpipe configuration must be compatible for use with a “Plymovent” automatic exhaust disconnection system and shall include the installation of the appropriate adapter. Must be on passenger side. Exhaust shall be outboard, under step mounted horizontal after-treatment system with right hand horizontal tailpipe exiting forward of the rear tires at 90 degrees	
14.2	Diesel exhaust Fluid Tank-	6-8 gallon Diesel Exhaust Fluid Tank located As to not impeded with the body installation, and accessible to the operator.	

15.0 TRANSMISSION-

15.1	Model	Emergency Rated EVS 4000 Allison transmission with PTO provision suitable for requested horsepower, torque, GVWR, and application.	
15.2	Shift selector	Dash mounted shift selector	
15.3	Cooling capacity	As per manufacturer’s recommendation for severe duty cycle.	

15.4	Oil level dipstick	Bayonet type with high and low level markings	_____
15.5	Trans. drain plug	Magnetic type	_____
15.6	Fluid	Fully synthetic fluid	_____
16.0	**FRONT AXLE-**		
16.1	Front axle type	20,000 lbs. capacity, **state make and model**-	_____
16.2	Fluid	Fully synthetic fluid	_____
17.0	**REAR AXLE**-		
17.1	Rear axle type	52,000 lbs. capacity, **state make and model-**	_____
17.2	Fluid	Fully synthetic fluid	_____
17.3	Ratio	Rated 100 km/hr maximum top speed, **state ratio-**	_____
17.4	Differential	Differential lock up for both axels	_____
18.0	**HUB SEALS-**		
18.1	Type	Oil lubricated front and rear	_____
19.0	**FRONT SUSPENSION**-		
19.1	Front Suspension Type	Taper leaf front suspension, 20,000 lbs. capacity	_____
20.0	**REAR SUSPENSION**-		
20.1	Rear Suspension Type	52,000 lbs. capacity air suspension with auto levelling	_____
21.0	**WHEELS-**		
21.1	Front	22.5 X 12.25 10 hub pilot polished aluminium disk. Must meet requested GVWR	_____
21.2	Rear	22.5 X 8.25 10 hub pilot polished aluminium disk, Must meet requested GVWR	_____
22.0	**TIRES FRONT-**		
22.1	Front Tires	Must be low profile steer tires, suitable for Manitoba weather conditions, (mud, snow, rain etc.) Preferred Michelin XZY-3	_____
22.2	Size	425/65R 22.5 20 ply, must meet requested GVWR	_____

23.0	**TIRES REAR**-		
23.1	Rear Tires	Must be low profile drive tires, suitable for Manitoba weather conditions, (mud, snow, rain etc.) **Preferred Michelin XDN2**	
23.2	Spare Tire and Rim-	Required Front and rear tire and aluminium rim	
24.0	**FRAME-**		
24.1	Type	Suitable for requested GVWR and height requirements, outside frame clear of components for body installation.	
24.2	Chassis fasteners	Grade-8 threaded hex headed frame fasteners	
24.3	Tow Hooks-	Front and Rear Tow hooks	
24.4	Option-	**State** optional price for galvanized or corrosion resistant frame-	
25.0	**STEERING-**		
25.1	Steering Type	Heavy Duty Power steering required	
26.0	**BRAKES-**		
26.1	Type	Fire and Emergency Rated Non Asbestos Air Brakes, ABS, front & rear brakes with Traction control, with Electronic Stability Program (6-Channel) (Roll Stability Control)	
26.2	Parking brake	**State type and location park brake valve-**	
26.3	Moisture ejector	**Heated**	
26.4	Drain valves	Automatic type, with also cable, required on Each air tank	
26.5	Air dryer	Spin on Heated Air Dryer required	
26.6	Dust Shields	Front and Rear Dust Shields required	
26.7	External Air Inlet	Milton A style air fitting installed on left side of chassis so the WFD can plug their shop air lines into the truck. Shall be plumbed to the outlet side of the air dryer for the option to put alcohol into the air system without going through the dryer.	
27.0	**FUEL TANKS-**		
27.1	Type	Passenger side 50 Gallon (189 L) aluminium fuel tank and aluminium straps	
27.2	Option- Larger Tank	**State** if an additional tank can be installed, But not impede in with the body installation-	

27.3	Tank straps	Steel straps with minimum 1/16 in. rubber or neoprene isolators to prevent galvanic corrosion.	_____
27.4	Fuel separator	Heated, drainable type with water in fuel indicator	_____
28.0	**CAB-**		
28.1	Type/Construction	Conventional style cab (No cab over), Aluminium or galvanized steel construction	_____
28.2	Cab mounts-	Air cab mounts	_____
28.3	Front axle to (BBC)	**106-116 inches f**ront axle to back of cab measurement-	_____
28.4	Front grille	Chrome with dual air horns	_____
28.5	Cab interior / trim	Premium Insulation including cloth or vinyl headliner on roof, door panels and rear interior of cab.	_____
28.6	Cab silencer package	Premium cab silencer package for minimal decibel level	_____
28.7	Hood/Firewall/Engine	Insulated hood liner, engine cover and firewall	_____
28.8	Floor covering	Moulded vinyl floor covering with under-padding	_____
28.9	Floor mats	Two (2), rubber floor mats	_____
28.10	Driver's seat	NFPA 1901-2009 Compliant, Inc 911 Universal series high back air suspension with seat sensor, dash harness and 3 point high visibility orange retractor. Removal and washable seat covers shall be supplied	_____
28.11	Passenger seat	NFPA 1901-2009 Compliant, Inc 911 Universal series high back air suspension with seat sensor, dash harness and 3 point high visibility orange retractor. Removal and washable seat covers shall be supplied	_____
28.12	Sun visors	Dual flip-up type interior and one exterior Roof mounted sun visor	_____
28.13	Steering wheel	Telescopic and Tilt steering	_____
28.14	12-Volt power outlet	Two (2) Required on dash	_____
28.15	Radio	Factory installed AM/WB/ with blue tooth, Microphone , USB port, front and rear inputs J1939	

28.16	Starter switch	Key operated c/w three (3) sets of keys- One key utilized for the ignition shall be securely chained to either the steering column or the cab dash to prevent loss or removal of the ignition key.	_____
28.17	Anti-theft Device	Vehicle Anti-theft switch to cut power to the Transmission.	_____
28.18	Interior light	Dome light with driver and passenger door switches	_____
28.19	Heater / Defroster	High output, capable of keeping all windows clear at an outside temperature of -35°F (-37°C)	_____
28.20	Air conditioning	High output air conditioning required	_____
28.21	Foot Pedals	Floor or hanging type brake and accelerator pedal, **State-**	_____
28.22	Horn	Dual electric horns, and (2) air horns	_____
28.23	Exterior mirrors	Westcoast style, bright finish, heated, 2-way motorized adjustment, exterior mirrors to include 6-8 “convex mirrors, suitable for 102 in. equipment width.	_____
28.24	Down view mirror	Required over passenger door, 5” x 4” approx.	_____
28.25	Frensel Windows	driver and passenger lower door Fresnel Windows	_____
28.26	Windows & windshield	Factory tinted	_____
28.27	Windows and Locks	Power windows and locks	_____
28.28	Windshield wipers	Electric, intermittent	_____
28.29	Wiper blades	OEM Winter Wiper Blades	_____
28.30	Windshield washer	Electric, required with spray nozzles on wiper blades.	_____
28.31	Grab handles	Dual exterior and interior grab handles	_____
28.32	Entrance steps	There shall be .125" aluminum checker-plate trim installed at the chassis steps. The checker-plate shall be easily removable for ease of service and maintenance if required.	_____
28.33	Summer/Winter-front	Summer and Winter Heavy-duty vinyl w/twist lock or snap type fasteners	_____
28.34	Safety equipment-	5 lbs First Fire Extinguisher and First Aid Kit, **State recommended locations**-	_____
28.35	Fender Extensions-	Flexible Fender extensions required	_____

29.0	**INSTRUMENTATION-**		
29.1	Aux. Switches-	Overhead switch mounting, driver, passenger And centre console (18 switch slots)	_____
29.2	Stability Control-	Enhanced Stability Control required	_____
29.3	Tachometer	Required	_____
29.4	Engine oil temp.	Gauge	_____
29.5	Oil pressure	Gauge	_____
29.6	Coolant temperature	Gauge	_____
29.7	Transmission oil temp.	Gauge	_____
29.8	LOP/HWT	Warning light and buzzer	_____
29.9	Voltmeter	Gauge	_____
29.10	Air reservoir pressure	Gauge with LAP warning light and buzzer	_____
29.11	Engine hour meter	Required, non-reset able type gauge or integral to cluster	_____
29.12	Weight Scale-	**OEM installed** Model “Air-Weigh Truck Scales” dash mounted. Shall be able to provide steer and drive axles weights.	_____
29.13	Cruise Control-	required	_____
29.14	Antenna-	AM/FM antenna, **state** location-	_____
29.15	Communications-	Factory Overhead console CB Radio Provision	_____
30.0	**TOW HOOKS-**		
30.1	Location	Readily accessible, front frame mounted, Closed eye hook type.	_____
31.0	**FRONT BUMPER-**		
31.1	Type	Front bumper full width chrome	_____
31.2	Bumper horns-	Front facing forward bumper mounted air horns, Approx..18”.	_____
32.0	**COLOUR-**		
32.1	Paint –	Painted two tone, with bottom half Red (SIIKENS Brand Code 911662 and top half Black (SIKKENS Brand Code 910788) using a polyurethane enamel paint.	_____
32.2	Interior	Blue or grey	_____
32.3	Frame & suspension	Primed and finished with black Imron 5000 paint	_____

33.0 KUSSMAUL AUTO EJECT-

33.1	Auto Eject System	Part #091-193-12 Kussmaul Pump Plus 1200 combination battery charger, 12V air compressor, auto eject 20WP 20 amp automatic power line disconnect and remote bar graph indicator shall be provided. The output side of the battery charger shall be connected to the chassis batteries, and theinput side connected to the auto eject receptacle. The output side of the air pump shall be connected into the chassis air system, and the input side connected to the auto eject receptacle. A 110 volt Kussmaul Auto-Eject, 3-prong, straight blade receptacle shall be provided at the left cab door area. This receptacle shall have a hinged weatherproof cover	_____

BODY VEHICLE SPECIFICATIONS

34.0 TESTING & CERTIFICATION-

34.1	Testing-	The completed vehicle shall be tested and labelled to (NFPA) National Fire Protection Association Standard latest revisions by an independent third party certification organization.	_____
34.2	Third Party Organization-	The third party organization shall be accredited for testing systems on fire vehicle in accordance with ISO/IEC 17020 or ISO/IEC Guide 65.	_____
34.3	Certification-	The certification organization shall not be owned or controlled by manufacturers or vendors of the vehicle being tested. Manufacturer's certification is not acceptable. (**No exceptions**)	_____
34.4	ISO-	The manufacturer shall be certified to ISO 9001	_____

35.0 CARRYING CAPACITY PLATE-

35.1	Labelling-	A warning label shall be provided in the cab within sight of the driver stating the seating capacity of the cab/crew cab.	_____
35.2	Safety Labelling-	Another warning label shall be provided in the cab within sight of the driver that the occupants must be seated and belted.	_____

36.0 VEHICLE DIMENSION PLATE-

36.1 Dimension Plate- A warning label shall be provided in the cab within sight of the driver stating the following vehicle dimensions:

- Height and length in standard and metric measurements. _____
- Gross vehicle weight rating in pounds and kilograms. _____

37.0 DIELECTRIC VOLTAGE TESTING-

37.1 Voltage Testing- The wiring and permanently connected devices and equipment shall be subject to a dielectric voltage withstand test of 900 volts for one minute. The testing shall be performed after all body work has been completed. The electric polarity of all permanently wired equipment, cord reels, and receptacles shall be tested to verify that wiring connections have been properly made. _____

38.0 FLUID CAPACITY AND TYPE LABEL-

38.1 Labelling- A permanent label shall be provided and shall state the type and quantity of the following fluids used in the vehicle:

- Engine Oil
- Engine Coolant
- Chassis Transmission Fluid
- Drive Axle Fluid
- Pump Gear Case
- Primer Lubricant (If Applicable) _____

39.0 VEHICLE DATA RECORDER (VDR)-

39.1 Vehicle Data- Meeting the requirements of NFPA 1901-2009, Vehicle Data Recorder is required. Recorded to Include the following Data:

- Vehicle Speed
- Acceleration
- Deceleration
- Engine Speed
- Engine Throttle Position
- ABS Event
- Seat Occupied Status
- Seat Belt Status
- Master Optical Warning Switch
- Park Brake
- Service Brake
- Time

- Date
- Engine Hours

39.2 Inputs- Two (2) seat position inputs for occupied and belts buckled. Data extraction by a standard, mini USB cable.

40.0 OCCUPANT RESTRAINT INDICATOR-

40.1 Restraints- Occupant Restraints designed to alert driver and officer, this module will indicate where restraints of occupied seats are properly fastened keeping personnel safe. The indicator shall be low profile compact size. Support commercial and custom cab seating layouts up to 12 seats. A dimming feature adjusts indicator intensity to synchronize with dash lights and have a built-in audible alarm.

41.0 VISUAL TIRE PRESSURE MONITORING-

41.1 Monitoring- There shall be a visual ten (10) wheel tire pressure system supplied that monitors all of the tires on the vehicle. An LED valve cap shall be attached to the tires valve-stem that contains a Pressure Sensor to alert the operators of a developing tire problem

42.0 HELMET HOLDERS-

42.1 Holders- There shall be two (2) Zico helmet holders supplied with the vehicle. The helmet holder shall comply with the 2009 edition of NFPA 1901 for use inside of crew cabs. It shall hold both traditional and contemporary style helmets without any adjustment needed.

43.0 TRANSPORTATION ROAD SAFETY KIT-

43.1 Fire Extinguisher- One (1) 2.5 lb. ABC vehicle type fire extinguisher with mounting bracket.

43.2 First Aid Kit- One (1) standard First Aid Kit shall be provided.

43.3 Warning Flares- One (1) set of three (3) dual faced triangular warning flares to meet the Department of Transportation's Motor Vehicle Safety Standards.

44.0 BOOSTER TANK-

44.1 Booster Tank- The booster tank shall be 3500 Imperial gallons

44.2	Tank Warranty-	The tank shall be provided with a lifetime warranty tank manufacturer. Bidder shall provide all maintenance requirements to honour the life time warranty.	_____
44.3	Swash Partitions-	The transverse and longitudinal swash partitions shall be manufactured of Polyprene® material. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow and meet NFPA regulations. All swash partitions interlock with one another and are welded to each other as well as to the walls and floor of the tank.	_____
44.4	Vent and Fill Tower-	The tank shall have a combination vent and fill tower. The fill tower shall be constructed of .5" thick Polyprene® and shall be approximate dimension of 8"x 8" outer perimeter. The tower shall be located in the left front corner of the tank. The tower shall have a .25" thick removable Polyprene® screen and a Polyprene® hinged-type cover. Inside the fill tower, there shall be a combination vent overflow pipe. The vent overflow shall be schedule 40 pipe with an I.D. of 4" that is designed to run through the tank, and shall be piped behind the rear wheels as to maximize traction.	_____
44.5	Cover-	The tank cover shall be constructed of recessed 5" thick Polyprene®, stress relieved, U.V. stabilized material. A minimum of two lifting dowels shall be drilled and tapped .5" x 2" to accommodate the lifting eyes.	_____
44.6	Sump-	There shall be one (1) sump standard per tank. The sump shall be constructed of .5" Polyprene® and be located in the left front corner of the tank.	_____
44.7	Outlets-	There will be two (2) standard tank outlets: One for tank to sump suction line and one for a tank fill line. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank, and be capable of withstanding sustained fill rates of up to 1,000 G.P.M.	_____
44.8	Paint-	Booster tank shall be painted with the PPG paint processfor a Polypropylene plastic surface.	_____
44.9	Paint Process-	Paint process shall include having the entire surface cleaned and prepped before painting.	_____
44.10	Paint Warranty-	Painted surface shall be warrantied for 7 years	_____

45.0 FIREMAN'S FRIEND 4" EXTERNAL TANK FILL REAR PASSENGER-

45.1	External Tank fill-	There shall be a 4" external tank fill with a storz fitting provided at the rear passenger side of the vehicle body.	
45.2	Check-type fill valve-	Internally mounted check-type fill valve. Capable of flowing at a rate in excess of 1,000 gallons per minute. Self-deflecting, requiring no additional diffusion device. Stainless steel, spring actuated piston-type sealing mechanism to minimize seal wear and provide positive sealing of valve after shutting off at feed source. Valve seal designed to be self-cleaning, utilizing EPDM rubber. Mounting plate with TTMA standards, 8-bolt attachment pattern (4 " valve body.)	
45.3	Mounting plate-	Mounting plate and the TTMA 6-bolt attachment pattern (2 1/2" to 3" valve body) positioned on outside of and attached directly to tank wall. All valve components constructed of highly corrosive resistant stainless steel. External attachment fitting corrosion resistant aluminum. Available with connections from 2 1/2" to 5" fittings.	

46.0 10" NEWTON DUMP VALVE STAINLESS STEEL - 180º DEGREE SWIVEL-

46.1	Quick Dump-	One (1) stainless steel 10" Newton "Quick - Dump" with manual valve shall be provided at the rear of the vehicle. This valve shall extend out the center of the rear body with the control lever offset to the left side of the dump valve. The telescopic dump chute shall have a dimension of approx. 8"H x 12.5"W to allow for a maximum dump rate and extend up to 36". The chute shall have the capability of swinging 180º in order to be used on the left, rear and right side of the truck.	
46.2	Extension Chute-	Newton stainless steel manually operated telescoping extension chute shall be provided for the dump valve.	

47.0 TANK DRAIN-

47.1	Tank Drain-	Tank shall have a 1.5" tank drain installed in the bottom of the tank and accessible from the ground.	

48.0 CAB MOUNTED WATER TANK VOLUME INDICATOR-

48.1 Volume Indicator- Fire Research TankVision model WL2500 miniature tank volume indicator shall be installed in the cab. The indicator shall show the volume of water in the tank on five (5) easy to view super bright LEDs. A wide view lens over the LEDs shall provide for a viewing angle of 180 degrees. The indicator case shall be waterproof, manufactured of aluminum, and have a distinctive blue label. _____

48.2 Input- The miniature indicator shall receive input information over a single wire from a Fire Research TankVision model WL2000 tank volume indicator. _____

49.0 TANK VOLUME REMOTE LIGHT DRIVER-

49.1 Remote Light- Fire Research TankVision model WL2900 remote light driver shall be installed. The driver shall be able to control four (4) separate 60 watt remote lights. The lights shall show full, 3/4, 1/2, and 1/4 tank volumes. When power is applied the driver shall run a test and cycle each remote light on and off. When the tank volume is less than 25% the 1/4 tank volume light shall blink. _____

49.2 Input- The remote light driver shall receive input information over a single wire from a Fire Research Tank Vision tank volume indicator. _____

50.0 WHELEN PSTANK WATER LEVEL GAUGE-

50.1 Level Gauge- In addition to the supplied tank water level gauge, there shall be one (1) Whelen PSTANK level gauge(s) installed as per the fire departments instructions. The tank status lights shall consist of 96 steady burn green, blue, amber and red LED lights. The dimensions of the light shall be approximately 1 3/8”W x 11”H. The location(s) shall be: Rear passenger side body _____

51.0 PORTABLE PUMP-

51.1 Trash Pump- Portable Pump - Honda - Trash Pump - WT40 shall be supplied and located in the front driver’s side compartment and mounted to allow for easy quick removal with a flexible supply feed line deployable from full extension of the tray roll-out. _____

52.0 VEHICLE BODY/ DESIGN-

52.1 Fabrication- The body shall be fabricated with the highest quality components available, and acceptable to the fire service industry. Only new components shall be in the manufacturing process. _____

52.2 Center of Gravity- The body shall be engineered and designed to provide a low center of gravity and carry a correct load distribution. _____

52.3 Sub-frame- The entire body sub frame shall be constructed of heavy-duty tubular aluminum and channels to provide a rigid body design. _____

52.4 Strength- The use of tubular aluminum and channels shall provide for extreme strength, maximum durability, and maximum resistance to buckling and failure. _____

52.5 Materials- All compartments shall be fabricated with 3/16" aluminium panels, grade 5052. The 3/16 panels will provide reinforcement to the compartment, for installation of heavy equipment. The 3/16" aluminum panels, grade 5052 panels shall provide extreme strength, rust corrosion resistance, and maximum durability. _____

52.6 Welding- All welding shall conform to the CSA/CWB Standards W47.1-03 and W59-03. Certified welders shall perform all welding. Proof of welder certification shall be provided with the completed vehicle. _____

52.7 Design- The body shall be designed in a way that should the Chassis require to be replaced that the body can be dismounted an placed on to a new chassis for similar dimensions and weight capacities. _____

53.0 BODY SUBFRAME-

53.1 Materials- The body frame rails shall be constructed of 6061T6/6063-T6, 3" x 3" aluminum extrusions with a wall thickness of 1/4". _____

53.2 Cross-Members- The front cross-member shall be a heavy duty 3" x 2" x 1/4" aluminum extrusions providing maximum strength and durability. _____

53.3 Middle Cross-Members- Two middle cross-members shall be heavy duty 3" x 3" x 1/4" aluminum extrusions providing maximum strength and durability at the main section of the body. The two middle cross-members shall extend the full Width of the body. The cross-members shall provide support for the body side compartments section. _____

53.4 Rear Cross-Members- Rear crossmembers shall be heavy duty 3" x 2" x 1/4" aluminum extrusions providing maximum strength and durability at the rear section of the body. _____

53.5	Body Sub-frame-	Body sub frame and the chassis frame shall be insulated and separated by a rubberized belt	_____
53.6	Drop Frame-	There shall be rear drop sub frame bolted to chassis frame made from formed heavy steel rails.	_____
53.7	Mounting-	The body shall be mounted to the chassis frame rails with two double flex mounts at the front, two steel channels in the middle, bolted to the chassis frame at the rear end of chassis frame and four single flex mounts at the drop frame. This shall provide for maximum mounting strength and flexibility.	_____

54.0 CORROSION PROTECTION-

54.1	Corrosion Protection-	All body components or attachments made from dissimilar metals shall be fastened to the body utilizing an UHMW/Polyethylene material to prevent metal-to-metal contact preventing dielectric corrosion.	_____
54.2	Fasteners-	All fasteners used in attaching or fastening or aluminium panels shall be installed with stainless steel hardware. Rivets shall not be acceptable. All fasteners shall be installed in a manner, which shall involve drilling, tapping, and application of non-corrosive grease before the stainless steel bolts are installed. Self-tapping screws or screws without threads shall not be acceptable.	_____

55.0 BODY COMPARTMENTS-

55.1	Compartments-	Body compartments shall be fabricated with 3/16" 5052 marine grade aluminum panels. These panels shall be non-corrosive, durable, and add strength and integrity to the body construction. Front Driver and Passenger compartments shall have PAC (Performance Advantage Company) Tool & fitting storage system	_____
55.2	Seams-	Interior compartment seams shall be sealed and caulked with a permanent, pliable automotive type sealer.	_____
55.3	Lower Edge-	All compartments shall have a 1" drop on the lower edge of the door opening to accommodate the door seal, and to stop moisture from entering the compartment.	_____
55.4	Cleaning-	All compartments shall have sweep out floors.	_____
55.5	Weather Proofing-	All compartments shall be weatherproof.	_____

56.0 ROLL OUT TRAY(S)-

56.1	Roll Out Tray-	One (1) heavy duty ball bearing roll out tray shall be provided in the front driver side compartment.	_____
56.2	Tray Function-	The tray(s) shall have two (2) side mounted, 500 lb. rated ball bearing roll out 18" travel sliding tracks and a 3/16" aluminum tray with up turned edges. The tray shall be supplied with plastic floor matting and corner drain holes.	_____
56.3	Retainer-	The tray(s) shall have a drop bar tray retainer to keep the tray secure in either the open or closed position.	_____
56.4	Matting-	All trays shall come with rubber matting.	_____

57.0 ROLL OUT TRAY(S)-

57.1	Roll-Out Tray-	One (1) heavy duty ball bearing roll out tray shall be provided in the passenger front compartment.	_____
57.2	Tray Function-	The tray(s) shall have two (2) side mounted, 500 lb. rated ball bearing roll out 18" travel sliding tracks and a 3/16" aluminum tray with up turned edges. The tray shall be supplied with plastic floor matting and corner drain holes.	_____
57.3	Retainer-	The tray(s) shall have a drop bar tray retainer to keep the tray secure in either the open or closed position.	_____
57.4	Matting-	All trays shall come with rubber matting.	_____

58.0 REAR BODY SECTION-

58.1	Paint-	The rear section of the vehicle body shall have a painted finish.	_____

59.0 COMPARTMENT MATTING-

59.1	Matting-	There shall be versatile PVC matting supplied on the all body compartment floors. The matting shall be interlocking and 1" high to allow for air movement.	_____

60.0 DRIVER'S SIDE BODY COMPARTMENTS-LOW-

60.1 DS compartment- The following compartments shall be provided on the driver's side of the vehicle body.

- One (1) compartment forward of the rear wheel measuring 74"W x 40"H x 13.5 / 26"D frame opening. _____

61.0 DRIVER'S SIDE BODY COMPARTMENT – BEHIND REAR AXLE-

61.1 DS Compartment- The following compartments shall be provided on the driver's side of the vehicle body behind the rear axle.

- One (1) compartment behind the rear wheel measuring 48.25"W x 40"H x 13.5 / 26"D frame opening. _____

61.2 Door- Door on the driver's side compartment behind the rear axle shall be Amdor roll up style. _____

61.3 Door- The compartment door at the optional compartment behind the rear axle on the driver's side shall be Amdor roll up style. _____

62.0 AMDOR ROLL UP DOORS – DRIVER'S SIDE-

62.1 DS- Roll Up Door- The driver's side of the vehicle shall be Amdor Roll-Up type doors to include: double wall aluminum box section slats with integral hinge joint and recessed slat seal, reusable end shoes with snap-in securement, double wall aluminum reinforced bottom rail with either Stainless Steel Lift Bar door latching system, aluminum track with side frame, sill plate, and top gutter with non-marring top seal, side seals, bottom seal, with all wear component material to be Type 6 Nylon. _____

62.2 Slates- The slats shall have a face depth of 1.0 inches and a wall thickness of 0.045 inches. Each slat shall incorporate a recessed slat seal to weatherproof the compartment and reduce rattle between slats. _____

62.3 Wear components- Wear components shall be constructed of Type 6 Nylon to provide maximum strength and durability. _____

63.0 PASSENGER'S SIDE BODY COMPARTMENTS – LOW-

63.1 Compartments- The following compartments shall be provided on the passenger's side of the vehicle body.

- One (1) compartment forward of the rear wheel measuring 74"W x 40"H x 13.5 / 26"D frame opening. _____

64.0 PASSENGER'S SIDE BODY COMPARTMENT – BEHIND REAR AXLE-

64.1 Compartments- The following compartments shall be provided on the passenger's side of the vehicle body behind the rear axle.

- One (1) compartment behind the rear wheel measuring 48.25"W x 40"H x 13.5 / 26"D frame opening. _____

64.2 Door- The door on the passenger's side compartment behind the rear axle shall be Amdor roll up style. _____

64.3 Door- The compartment door behind the rear axle on the passenger's side shall be Amdor roll up style. _____

65.0 AMDOR ROLL UP DOORS PASSENGER'S SIDE-

65.1 PS Roll-up Doors- Passenger's side of the vehicle shall be Amdor Roll-Up type doors to include: double wall aluminium box section slats with integral hinge joint and recessed slat seal, reusable end shoes with snap-in securement, double wall aluminum reinforced bottom rail with either Stainless Steel Lift Bar door latching system, aluminium track with side frame, sill plate, and top gutter with non-marring top seal, side seals, bottom seal, with all wear component material to be Type 6 Nylon. _____

65.2 Slats- The slats shall have a face depth of 1.0 inches and a wall thickness of 0.045 inches. Each slat shall incorporate a recessed slat seal to weatherproof the compartment and reduce rattle between slats. _____

65.3 Wear components- Wear components shall be constructed of Type 6 Nylon to provide maximum strength and durability. _____

66.0 TAIL LIGHT WIRING COVER PLATE-

66.1 Tail Light Wiring Plate- Shall be an aluminum cover plate mounted in the rear roadside and curbside body compartments for access to the rear tail light wiring. This plate shall be manufactured from 3/16" aluminum sheet and shall come with the same finish as the compartment interiors _____

67.0 REAR FENDERS-

67.1 Rear Fenders- Rear fender outer skin shall be fabricated from 3/16" 5052 aluminum and have a painted finish. The rear fender skin shall be permanently attached to the body. _____

68.0 WHEEL WELL LINER-

68.1 Wheel Liner- All body wheel wells shall have a liner. For corrosion and weather resistance the liner shall be manufactured from .110 inch thick ultraviolet resistant high density polyethelene. The liner shall be black in colour. _____

69.0 VEHICLE BODY RUB RAILS -

69.1 Rub Rails- Shall be three inch "C" channel aluminum rub rails and shall be bolted into place with nylon spacers on the lower framework below the vehicle body compartments. The rub rail will extend to the outside edges of the vehicle body for protection of the body from impact damage. _____

70.0 REAR TOW EYES PAINTED-

70.1 Tow eyes- Two (2) heavy duty steel painted tow eyes shall be bolted directly to the rear frame rails. _____

70.2 Tow Hooks- Tow hooks shall be easily accessible from the rear of the vehicle body. _____

71.0 TAILBOARD-

71.1 Tail Board- A heavy-duty 16" deep tailboard shall be provided _____

71.2 Material- Tailboard shall be covered with slip resistant 3/16" embossed checke-rplate. The aluminum checker-plate shall be bolted to the tailboard sub frame with non-corrosive stainless steel bolts. The bolt on aluminium tread plate shall allow for easy removal for service. _____

71.3 Maintenance- Forward section of the tailboard shall be gapped to allow washing without dirt being trapped and for the drainage of accumulated water. _____

72.0 BODY HAND RAIL-

72.1 Body Hand Rail- The following handrails shall be installed on the vehicle body.

- Two (2) 48" handrails mounted vertically on the curbside rear.
- One (1) 42" handrail mounted horizontally on the upper rear for hosebed access.
- One (1) 12" mounted on the roadside upper rear area _____

72.2 Size/Material- The body hand rail shall be 1 1/4" in diameter and shall be knurled aluminum for maximum grip and safety. The hand rail shall be installed and supported with chrome plated polished cast brackets. The hand rail brackets shall be provided with an isolation gasket and held in place with stainless steel bolts. _____

73.0 COMPARTMENT LIGHTS - LED

73.1 Compartment Lighting- All body compartments shall have Amdor LumaBar™ LED lights activated by a push button switch. The LED compartment lights shall be flush mount and provide a consistent 120 degree wide beam pattern. There shall be two strip lights installed in each compartment. _____

74.0 DOOR AJAR SYSTEM-

74.1 Door Ajar System- Red warning light for the door ajar system shall be provided in the cab. This light shall be activated when a compartment door on the vehicle body is open and the park brake is released. Shall be a magnetic sensor switch located in the compartment that will indicate when a door has been opened. _____

75.0 CHEVRON STRIPPING

75.1 Stripping- Shall be 6" chevron stripping decals applied to the rear face of the vehicle. The chevron decals shall be made of high visibility Reflexite™ material that is red / yellow in color and shaped to form an "A" style pattern. 50% of the rear body shall be covered with Chevron. _____

76.0 MULTIPLEXED ELECTRICAL SYSTEM -

76.1 Multiplexed Wiring- The manufacturer shall design the wiring system for the vehicle in accordance to the SAE, Society of Automobile Engineers. _____

76.2 Circuit Loads- Circuit loads and design to accommodate these loads with appropriate circuit routings and relays. All circuits shall be protected by automatic resetting circuit breakers. All breakers shall be properly sized to the circuit load and are direct plug in sockets. _____

76.3 Wiring Harnesses- All wiring harnesses shall be properly secured and routed. All passages required for routing shall be grommeted and sealed as required. _____

76.4 Servicing- All wiring shall be easily accessible for servicing. _____

76.5 Wiring Standards- All wiring shall meet the following standards:

- All wiring shall be SAE J1128 and SAE J1292 GXL type wire, as per fire industry standards.
- All exposed wiring shall be crimped and heat shrunk for added protection.
- The wiring harnesses shall be pre-engineered for correct circuit loading and shall be custom made.
- The harnesses shall be function, number, and color coded and shall be fitted inside automotive high temperature loom.

- All connections to the main panel box must be made with
- waterproof automotive style guided pin locking connectors _____

76.6 Distribution Panel- Enclosed main electrical distribution panel that provides protection against dirt, dust, oil, and water _____

76.7 Connections- All electrical connections to the panel shall be made through positive locking environmentally sealed connectors. The panel shall have a solid state power distribution board(s) with visual diagnostics. _____

76.8 Wiring Strength- All wiring shall have a strain pull test on wiring connections of 40 pounds. _____

77.0 BATTERY MASTER SWITCH-

77.1 Battery Master Switch- 300 amp solenoid master battery switch shall be installed in the cab within reach of the driver. _____

78.0 LIGHT BAR UPPER EMERGENCY LIGHTING-

78.1 Light Bar- Whelen Freedom 60" light bar (Model: FN60VLED) warning system shall be furnished and rigidly mounted. _____

79.0 FORWARD FACING GRILLE LOWER EMERGENCY LIGHTING-

79.1 Grille Lights- Shall be two (2) Whelen model 600 (4" x 6") LED lights installed. These lights shall have red lenses, red LED's and come with a chrome bezel. _____

80.0 LOWER PORTION OF BODY AND CAB EMERGENCY LIGHTING-

80.1 Body and Cab- There shall be three (3) Whelen model 600 (4" x 6") LED lights installed on each side, both driver and passenger side. These lights shall have red lenses, red LED's and come with a chrome bezel. _____

81.0 UPPER PORTION OF THE TANK REARWARD FACING EMERGENCY LIGHTING-

81.1 Tank Rearward- Two (2) Whelen Part # 449112-04 red beacons lights shall be provided and mounted on the upper rear body, one (1) each side, and controlled by a switch located in the cab. _____

82.0 LOWER PORTION OF THE BODY REARWARD FACING EMERGENCY LIGHTING-

82.1 Lower Body Rearward. There shall be two (2) Whelen model 600 (4" x 6") LED lights installed. These lights shall have red lenses, red LED's and come with a chrome bezel. _____

83.0 DRIVERS SIDE LOWER PORTION OF

83.1 There shall be Three (3) Whelen model 600 (4" x 6") LED lights installed. These lights shall have red lenses, red LED's and come with a chrome bezel.

84.0 HEADLIGHT WIG WAG FLASHER-

84.1 Wig Wag Flaser- The chassis high beam headlights shall be equipped with an alternating flashing , wig wag headlight system. An electronic flasher shall be used to control the lights. A control switch panel shall activate the flashing system. _____

85.0 ELECTRONIC SIREN-

85.1 Siren- Shall be a Whelen model 295SLSA1 electronic siren with microphone provided and mounted in the cab. _____

86.0 ELECTRONIC SIREN SPEAKER-

86.1 Speaker- Shall be a Whelen model # SA 315P, 123db / 100 watt electronic siren speaker provided at the front bumper and connected into the electronic siren. _____

87.0 TAIL LIGHTS – LED-

87.1 Tail Lights- Shall be a set of LED tail lights installed the rear face of the vehicle body. These lights shall include brake, turn and clear back up lights installed in chrome trim bezels. _____

88.0 HAND HELD CAB SPOT LIGHT-

88.1 Spot Light- One (1) SHO-ME 300,000 candle power hand held spot light, with a momentary type control switch, coiled cord, and bracket, shall be provided and mounted on the right side in the cab and wired into the 12 volt electrical system. _____

89.0 HOSEBED FLOOD LIGHT(S)-

89.1 Flood Lights- Shall be one (1) chrome Unity AG-2 halogen 12V light shall provided at the front of the hose bed. The light(s) shall be furnished with halogen flood light bulbs. _____

90.0 STEP LIGHTS-

90.1 Step Lights- All steps on the body shall have adequate light for illumination. _____

91.0 LED GROUND LIGHTS -

91.1 Ground Lights- Shall be eight (8) Luma Bar H2O 12" LED ground lights with outward facing angle brackets installed underneath the vehicle. The ground lights shall be activated by a switch installed in the chassis cab. Ground lights that are directly underneath a door opening will turn on automatically when the door is opened. _____

92.0 ENGINE COMPARTMENT LIGHT

92.1 Engine Light- One (1) 4" clear engine compartment light shall be installed in the engine compartment area and shall be activated by a mercury switch. _____

93.0 DOOR AJAR SYSTEM-

93.1 Door Ajar System- A red warning light for the door ajar system shall be provided in the cab. This light shall be activated when a compartment door on the vehicle body is open and the park brake is released. _____

94.0 LED CLEARANCE AND MARKER LIGHTS-

94.1 Clearance and Marker Lights- All clearance / marker lights, reflectors shall comply with department of transport motor vehicle safety standards. The clearance / marker lights shall be LED (light emitting diode) type. _____

94.2 Turn Signal Lights- A set of LED (light emitting diode) mid body turn signals shall be installed to comply with department of transport motor vehicle safety standards for vehicle over 30 feet in length. _____

95.0 BACK UP ALARM-

95.1 Back Up Alarm- A Federal Signal pt # SA-BBS-97 ,97db back up alarm shall be installed at the rear of the vehicle body. This back up alarm shall be activated when the chassis transmission is placed into reverse. _____

96.0 TWO WAY RADIO POWER SUPPLY-

96.1 Two Way Radio- Shall be a dedicated 12V power supply line coiled underneath the chassis dash for the future install. _____

97.0 ANTENNA MOUNT(S)

97.1	Antenna-	One (1) mounts for future antenna installation shall be installed on the chassis cab roof. The antenna leads shall be wired to the chassis cab dash area for future installation of a radio.	_____

98.0 BODY SCENE LIGHTING -

98.1	Location-	Six (6) Fire Research model LED900-Q65 surface mount light(s) shall be installed. Two (2) driver side, two (2) passenger side and (2) rear of the body. The rear scene light(s) shall be activated when the chassis transmission is place into reverse. The light(s) shall be mounted with four (4) screws to a flat surface. It shall be 6 3/4" high by 9" wide and have a profile of less than 1 3/4" beyond the mounting surface.	_____
98.2	Lighting Class-	Shall be Class 1 light, and shall have twenty-four (24) white LEDs that generate a rated 7000 lumens at 12 or 24 volts DC. The lens shall redirect the light along the vehicle and out onto the working area. The light housing shall be aluminum with a chrome colored bezel.	_____

99.0 REARVIEW CAMERA /MONITOR SYSTEM

99.1	Camera-	One (1) Federal Signal model #CAMSET70-NTSC-4 Camera/Monitor System shall be provided. The system shall consist of (1) 7.0” Color Monitor, (1) Standard Rear view Camera, (1) 4-input Control Box with keyboard, and (1) 65.5-foot Extension Cable.	_____
99.2	Monitor-	The monitor shall be a 7.0” TFT-LCD Color Monitor, and shall be intended for use in vehicle applications utilizing up to four cameras with split screen capability. The monitor shall incorporate a built-in speaker, and a photo sensor for automatic brightness adjustment for low-light / no-light conditions.	_____
99.3	Voltage-	Multi-voltage 12/24 VDC capable	_____
99.4	Camera Resolution-	Resolution: 336960 pixels	_____
99.5	Dimensions-	The monitor dimensions shall measure 7.6” length x 4.9” width x 1.1” depth.	_____

100.0 PAINT COLOR -

100.1	Paint-	Painted two tone, with bottom half red to match Dupont C8053U (Candy Apple Red) and top half white to match Dupont DU 1300 (Super White), using a polyurethane enamel paint. (DuPont Imron or Sikkons paint)	_____

101.0 BODY UNDERCOATING CORASHIELD®

101.1 Standards- The whole frame / crossmembers / and wheelwell area of the vehicle body shall be thoroughly prepared and sprayed with Corashield® that will help prevent rust and corrosion. 8-10 mils of Corashield® shall be sprayed. The bottom, sides and tops of the crossmembers shall be fully covered. _____

102.0 REFLECTIVE BODY PRIMARY STRIPING

102.1 Reflective Stripping- Reflective striping shall be 3M 4000 diamond grade striping where ever possible. The reflective striping shall be red on white and/or aluminum background and white on red background. The side striping shall be stylized Z pattern front to back of vehicle. The striping shall be composed of 5 bands. The band width shall be 10". Example: white stripe on red background. From top down shall be: one 1" white stripe, one 1' red stripe, one 6'"white stripe, one 1" red stripe, one 1" white stripe. The stripes shall not be spaced apart to reveal background. The stripe shall be edge sealed as per 3M guidelines. Incorporated within the cab reflective stripe shall be stylized WFD. Cab drivers and officers door shall be location of Winnipeg Fire Department crest (size 12 ¾ "x 12" wide) crest shall be within reflective stripe. Were 4000 diamond grade reflective striping is difficult to apply; series 680 reflective film shall be allowable Example: on roll up door slats. The reflective striping shall at all times meet
and/or exceed NFPA 1901 as the standard guideline. _____

102.2 Logo- The reflective striping on the cab shall incorporate the Fire Department's stylized "WFD" logo. (A diagram of the logo shall be provided to the Contractor by the City). _____

103.0 PIN STRIPING - CAB & BODY-

103.1 Pin Stripping- Gold pin stripping to separate black from the red paint Body colour _____

104.0 PORTABLE TANK CARRYING BRACKETS-

104.1 Brackets- Two (2) hinged aluminum Quic-Lift portable tank rack, 12 volt hydraulically actuated with mechanical locks shall be provided on the left and right side of the body. The racks shall swing down to a level the same as the running board compartments for ease of removing and installing the portable tank. Controls for each rack shall be from the rear body. _____

105.0 PORTABLE TANK RACK ENCLOSURE – ALUMINUM PAINTED

105.1	Enclosure-	Shall be an enclosure installed on the portable tank rack for storage of the portable tank. The enclosure shall be manufactured from aluminum and painted with the same process as the body.	_____

106.0 FRAMED PORTABLE TANK -

106.1	Portable Tank-	Two (2) Husky 2080 IG / 2500 USG collapsible portable tanks made with 22 oz. EXLON and a full tubular aluminum frame shall be provided. The liner includes a 10" quick-drain tube which will empty the tank in seconds. Two (2) Rhino liner puncture protection tarps. • Open tank dimensions with liner: 12'3" x 12'3" x 29" Closed tank dimensions with liner: 8" x 8'3" x 29", Weight: 135 lbs. color yellow	_____

107.0 HARD SUCTION HOSE MOUNTING-

107.1	Suction Hose-	Suction hose storage for two (2) lengths of hard suction hose shall be installed in the portable tank rack enclosure. Two (2) lengths to be stored in each tank rack for a total of Four (4). One rack shall be installed above the left side body compartments and the other rack shall be installed above the right side body compartments. The hose shall be fastened to the tray with heavy duty type Velcro Straps.	_____

108.0 HARD SUCTION HOSE -

108.1	Hard Suction Hose-	Four (4) ten foot section(s) of 6" PVC lightweight, flexible, hard suction hose shall be provided with lightweight male and female threaded couplings.	_____
108.2	Hard Suctions Hose-	Two (2) ten foot section(s) of 2 ½ " PVC lightweight, flexible, hard suction hose shall be provided with lightweight male and female threaded couplings.	_____

109.0 STRAINER-

109.1	Strainer-	Two (2) 6" low level jet siphon shall be provided and shipped loose with the completed vehicle.	_____
109.2	Strainer-	One (1) 2 ½" barrel strainer and one (1) 2 ½" foot valve strainer shall be provided and shipped loose with the completed vehicle.	_____

110.0 EQUIPMENT-

110.1	Generator-	One (1) Portable Generator - Honda - EU2000i	_____
110.2	Light-	One (1) Cord Reel - Akron - Portable c/w LED light	_____

110.3 Hose- Four (4) fifty ft. lengths of Future Line 44 mm fire hose. Two (2) fifty ft. lengths of rubber jacket 4" supply fire hose with Storz fittings. Six (6) fifty ft. lengths of rubber jacket 2 ½ " fire hose with WCT hose fittings _____

110.4 Fuel Containers- Two (2) two (2) gallon Roto Pax Fuel Containers complete with mounting bracket _____

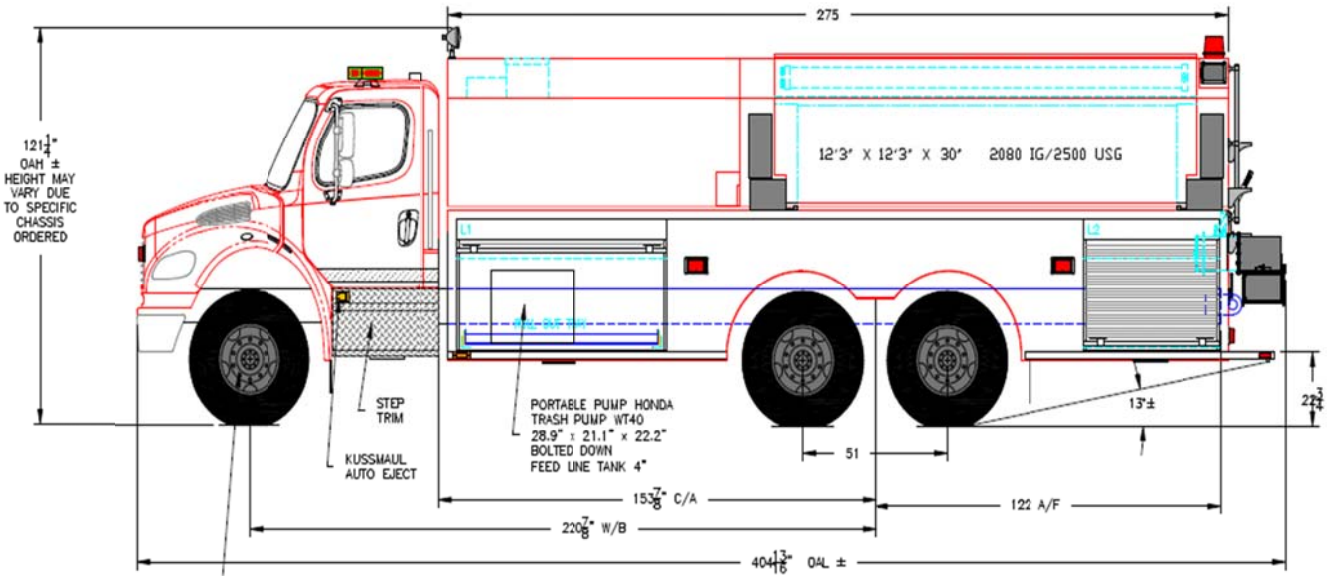
110.5 Gates- One (1) Winnipeg Hydrant Steamer to Four (4") Storz hydrant gate. One (1) (2 ½") Winnipeg Thread fittings. _____

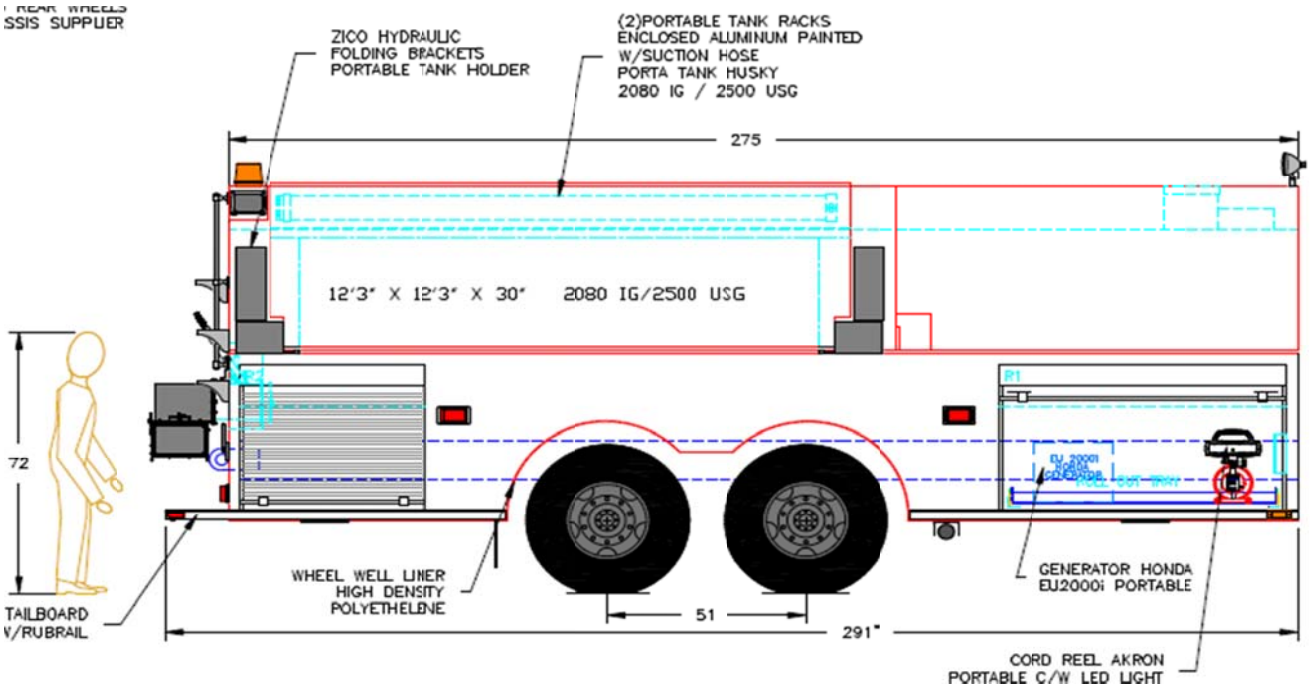
111.0 DETAILED SCHEMATICS

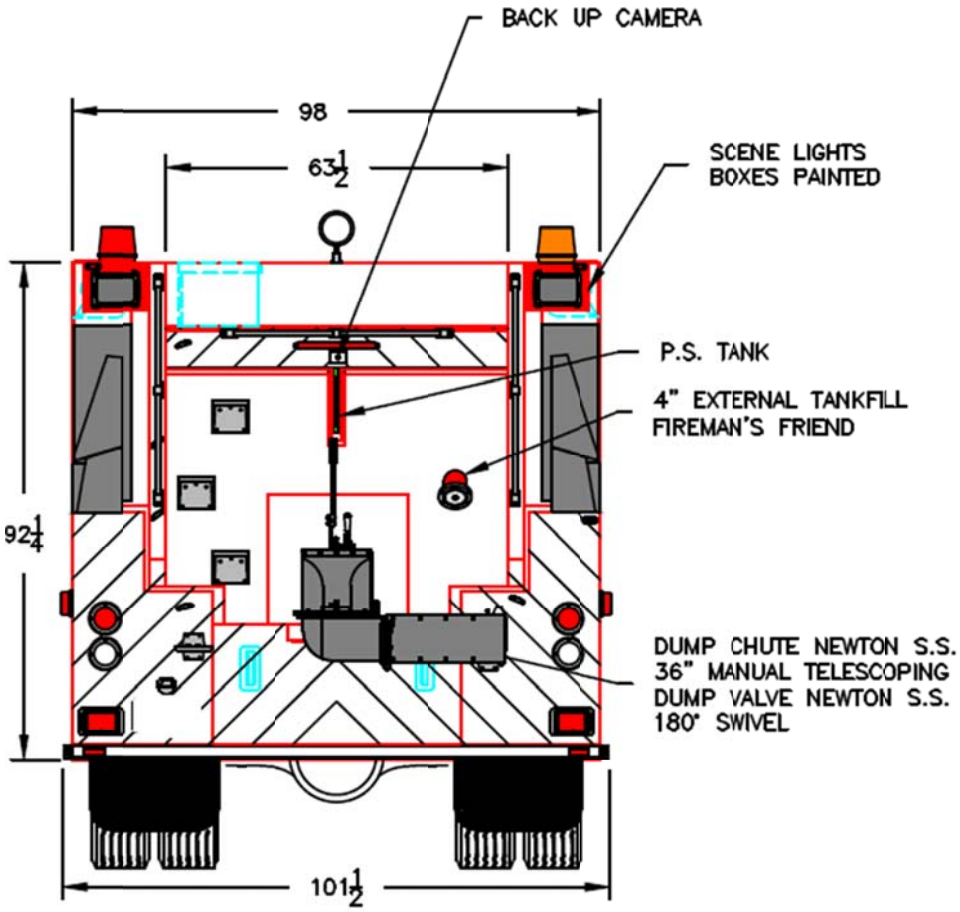
111.1 The bidder should provide detailed schematics.

1. Driver side _____
2. Passenger side _____
3. Frond side _____
4. Rear side _____
5. Down view _____

GENERALIZED DRAWINGS FOR REFERENCE




ZICO HYDRAULIC
FOLDING BRACKETS
PORTABLE TANK HOLDER
(2)PORTABLE TANK RACKS
ENCLOSED ALUMINUM PAINTED
W/SUCTION HOSE
PORTA TANK HUSKY
2080 IG / 2500 USG
275
12'3" X 12'3" X 30" 2080 IG/2500 USG
72
WHEEL WELL LINER
HIGH DENSITY
POLYETHELENE
51
291"
GENERATOR HONDA
EU2000i PORTABLE
CORD REEL AKRON
PORTABLE C/W LED LIGHT


BACK UP CAMERA
98
63 1/2
SCENE LIGHTS
BOXES PAINTED
P.S. TANK
4" EXTERNAL TANKFILL
FIREMAN'S FRIEND
92 1/4
DUMP CHUTE NEWTON S.S.
36" MANUAL TELESCOPING
DUMP VALVE NEWTON S.S.
180° SWIVEL
101 1/2

112.0 DELIVERY-

112.1 Delivery Point- The complete unit shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid, including invoice and N.I.V.S. (if applicable) to the WFMA 185 Tecumseh Street, Winnipeg MB. _____

112.2 Delivery Time- Equipment shall be delivered between 8:00 am and 3:00pm on Business Days. **State delivery time in weeks from the date of award-** _____

112.3 Delivery Contact- The Contractor shall contact the Contract Administrator prior to delivery of the equipment. _____

112.4 P.D.I- A pre-delivery inspection shall be performed by the Contractor on the equipment. Proof upon inspection including completed check list _____

113.0 MANUALS-

113.1 Manuals- Manuals supplied under this contract shall be in English and shall be specifically for the 3500 US Imperial Gallon Fire Rescue Truck Tanker and all of its components and attachments supplied and in electronic form. General purpose manuals are not acceptable. The manuals shall cover the complete equipment including all components thereof. _____

113.2 Manual type- The following manuals shall be supplied at the time of delivery.

a) Operator's manuals – two (2) sets in total. _____

b) Parts and service manuals as per unit built _____

c) Detailed wiring schematics and preventative maintenance schedules – two (2) sets in total. _____

Note: The wiring schematics shall identify the location of all relays, switches, etc.

d) **Chassis Diagnostic tools-** equivalent) diagnostic system and software or equivalent with most recent updates. Modem and data logger to be supplied on all units. Diagnostics shall be on engine, transmission (New World) ABS brakes and multiplex electrical system, etc. _____

114.0 TRAINING-

114.1 Training- The Supplier shall provide at their expense, detailed operational and maintenance training to EVT certified staff and Academy personnel. The training shall be conducted in separate sessions for each group of personnel. Each session shall be sufficient in duration and shall provide adequate familiarization and orientation on the vehicle, to the satisfaction of the Contract Administrator. The training shall be divided into two separate sessions, one for maintenance personnel and one for operating personnel. The training shall be conducted in separate or combined sessions for each group of personnel. _____

114.2 Duration- The duration of the sessions shall be as long as required for adequate familiarization and orientation of the equipment to the satisfaction of the Contract Administrator. _____

114.3 Time- The training shall be conducted within two (2) calendar weeks from the date of delivery and shall be coordinated through the Contract Administrator. _____

114.4 Location- The training shall be conducted in Winnipeg at a time and location designated by the Contract Administrator. _____

114.5 Pricing- Pricing shall be included in the price of the equipment, and should be based on two (2) business days for maintenance personnel and two (2) business days for operating personnel. Payment of the equipment will not be issued until successful completion of training has been conducted to the satisfaction of the Contract Administrator. _____

114.6 Training Aides:

a) On the type of equipment being offered**, state if CD Rom training aides or on-line training are available**- _____

114.7 Question- **What is the recommended minimum training duration for?**

a) Primary unit: _____
b) For major attachments (if applicable): _____

114.9 Training Aids- **State what other training aids are available (videos, CDs)?**

a) For the primary unit: _____
b) For major attachments (if applicable) _____

114.10 Materials-

Training Materials- Training Material and applicable manuals or on-line training material information must be provided to the Winnipeg Fire Paramedic Service Training Academy within (4) weeks (or sooner) prior to delivery, when supplying vehicle ,equipment and related attachments. Materials submitted are preferably in both electronic format and hard copy (training videos are to be supplied on either CD or DVD) to:

Winnipeg Fire Paramedic Service Training Academy
2546 McPhillips Street
Winnipeg, Manitoba
Office- (204).986.8398
Fax- (204).986.4266

115.0 WARRANTY-

115.1 Warranty-

All warranty information should be detailed and include all exclusions. The successful Bidder shall provide all published warranty information upon delivery of the equipment. The Bidder should state all warranty information.

- Chassis basic coverage _____
- Chassis engine _____
- Chassis transmission _____
- Chassis Driveline _____
- Chassis Axles _____
- Chassis Electrical _____
- Chassis Tires _____
- Chassis Frame Rails _____
- Chassis Cab Structural _____
- Chassis Paint _____
- Body Vehicle basic coverage _____
- Body Vehicle hardware (handles, latches, roll-up doors) _____
- Body Vehicle Electrical _____
- Body Vehicle Lighting _____
- Body Vehicle Paint _____

115.2 Literature-

Warranty literature- All warranty literature and documentation or “fine print” documentation should be submitted with their Bid. This warranty documentation will be entered into the City of Winnipeg Fire Department’s Service Data Network to expedite and administrate warranty claims and repairs. _____

115.3 Importance-

Importance to the City- The vehicle is of vital importance to the City in providing essential services and, accordingly, all warranty items brought to the attention of the Contractor by the City shall be rectified expediently. The City reserves the right to affect warranty repairs to the vehicle, at full cost to the Contractor, should the Contractor fail to perform in a timely manner. _____

115.4 Third Party- **Warranty work be performed by a third party**- In the case where the Bidder proposes that warranty work be performed by a third party or by the City of Winnipeg Fire Paramedic Service, the Bidder will include a written detailed estimate with a quotation. Any work performed by the Fire Paramedic Service Mechanical Services Branch shall be charged to the Contractor at the Branch's shop rate in effect at the time the work is performed. The City reserves the right to reject any Bid where the proposal for warranty work is deemed unacceptable by the Supervisor of the Emergency Mechanical Services Branch. _____

115.5 Administration- **Warranty Administration Coordinator**- The successful Bidder shall have a dedicated person allocated and available 24/7 to receive phone calls and determine, co-ordinate, schedule and have the ability to authorize all warranty related issues which arise during the warranty period. _____

Bidder shall state the name of the person responsible and alternate along with the 24hr. emergency phone number- _____

116.0 PERFORMANCE RELIABILITY-

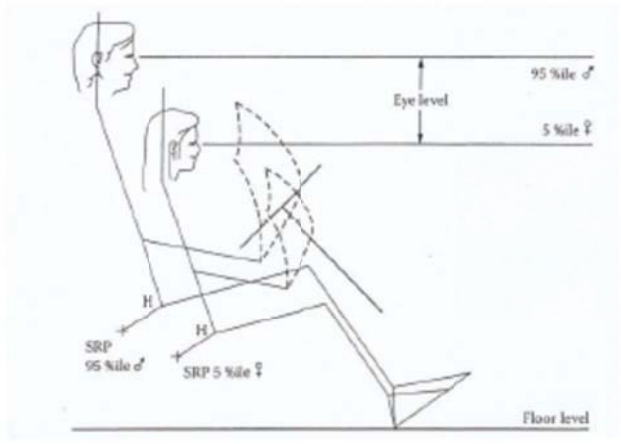
116.1 Responsibility- The responsibility for the design of the **3500 US Imperial Gallon Fire Rescue Truck Tankers**, its performance and reliability shall rest upon the Contractor. _____

116.2 Definition- The term "repeated failures" as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the vehicle inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, subassembly, of assembly. Minor items or ordinary service adjustments are not included, or considered under the scope of "repeated failures", as well as other factors, such as operational damage due to accidents, misuse or lack of proper maintenance, service and lubrication attention by not following the manufacturer's preventative maintenance schedule. _____

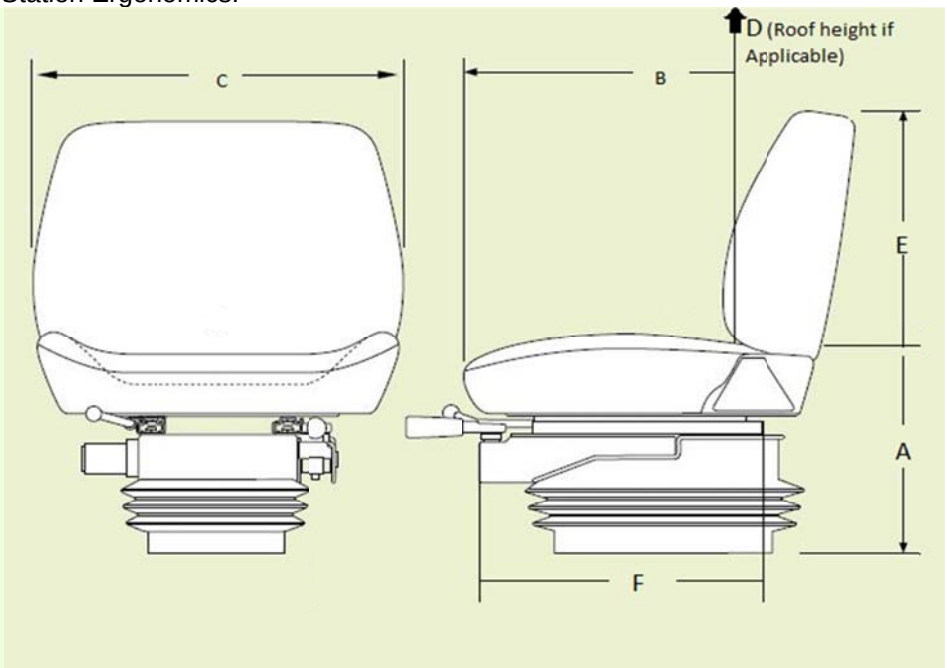
116.3 Failures- Where the **3500 US Imperial Gallon Fire Rescue Truck Tankers** develops "repeated failures" in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance. _____

117.0 OPERATOR STATION ERGONOMICS

117.1 Cab or station layout should provide a comfortable seating position for the 5th to the 95th percentile of personnel. Figure 1 below illustrates the variance between a 5th to a 95th percentile of North American males and females when seated. _____



117.2 Figure 2: Use the below diagram to answer the specifications for Operator Station Ergonomics. _____



117.3	Sitting height range from floor (where feet rest) (A)	**State,** seat height range in inches	_____
117.4	Seat length/depth (B)	**State,** seat length/depth in inches	_____
117.5	Seat width (C)	**State,** seat width in inches	_____
117.6	Cab height from seat to roof (if applicable) (D)	**State,** cab height range in inches	_____
117.7	Back rest height (E)	**State,** back rest height in inches	_____
117.8	Seat travel range (F)	**State,** seat travel in inches	_____
117.9	Include any other relevant ergonomic specifications and applicable range of adjustment		_____