

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS



North Algona Wilberforce Township

1091 Shaw Woods Road
RR #1 Eganville, Ontario K0J 1T0
Tel: 613-628-2080
Fax: 613-628-3341

Invitation for Tender FD 2022-01 (Fire Tanker)

Furnishing and Delivery of a complete apparatus as per enclosed specifications and in accordance with CAN/ULC – S515 Standard for Automobile Fire Fighting Apparatus.

Proposal Closing

Date: 15 April 2022

Time: 1300h

Public Opening

Date: 15 April 2022

Time: 1310h

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

Bids shall be submitted on forms and specifications provided (Mandatory) and signed by the bidder or by a duly authorized representative as proof of commitment. Two paper copies and an electronic PDF copy via flash drive will be provided to the municipality.

DOCUMENTS TO INCLUDE WITH BID

- 1) Proof of public liability and product liability insurance totaling \$4,000,000
- 2) A company resolution authorizing a duly authorized representative to sign the bid
- 3) An Underwriter's Laboratories of Canada (ULC) certificate
- 4) A Canadian Motor Vehicle Safety Standards (CMVSS) certificate
- 5) Canadian Welding Bureau certificate for the materials used in the construction of the body (if applicable)
- 6) A general plan showing five views (Right, Left, Rear, Top and Front) bearing the signature, the number and the seal of an engineer having a minimum of five years' experience in the design and manufacture of fire apparatus
- 7) A sample of typical wiring diagrams

DATE AND TIME

The bid forms and any supporting documents must be received at the North Algona – Wilberforce municipal office by 1300h on 15 April 2022

BID OPENING

Bids received at North Algona-Wilberforce Township, 1091 Shaw Woods Rd, RR#1, Eganville ON, K0J 1T0 prior to 1300h will be subject to a public opening at 1310h. Any bids received after the assigned closing time will be returned unopened.

INFORMATION

Information regarding these specifications may be obtained by contacting Fire Chief Kevin Champ at firechief@nalgonawil.com

BID EVALUATION

Bids not meeting quotation requirements or technical specifications shall be rejected. The signatory of the bidder shall initial any hand made erasures or corrections. The Township may disregard any flaw or minor defect contained in the bid provided such flaws or defects are not deemed to prejudice other bidders.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

ADDENDA

The township may provide explanations for, complete, or make changes to the bidding documents by forwarding, at least two days before the prescribed due date, a duly signed addenda to all bidders who have already obtained their bidding documents. If need be, the prescribed due date shall be postponed in order to observe this two-day period prior to closing.

BIDDING COSTS

The bidder shall not be entitled to any compensation for costs incurred for bid preparation.

BID AMOUNT

The price quoted shall be firm and include all required labour, tools, equipment, and materials, as well as all other costs pertaining to design, manufacturing and delivery, in accordance with the requirements and standards specified for the quotation. The price quoted shall include the cost of all required licenses and patents and all applicable federal and provincial sales taxes. It shall also include all expenses related to the procurement of the vehicle, as well as delivery by driving and any other costs that may arise from the quotation.

The Township shall not be responsible for increases in the price or number of components required for the vehicle.

REVIEW OF BIDDING DOCUMENTS

Before preparing the bid, the bidder should thoroughly examine the bid documents and analyze the requirements and standards stated therein, as well as any problems that may arise from these.

The successful bidder shall not be entitled to request the payment of any claims against the Township should the successful bidder have failed to proceed with a complete review and thorough analysis of the bid documents and applicable workmanship requirements.

ORAL INFORMATION

The Township makes no commitments with respect to oral information obtained regarding the bid documents

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

AMBIGUITIES AND OMISSIONS

The bidder shall inform the Township of any ambiguities or omissions that could be found in the bidding documents. Should the bidder have any doubts concerning the interpretation of some of the clauses of the quotation, the bidder shall immediately notify the Township so as to enable the latter to issue correction notices, if need be.

ACCEPTANCE OF BIDS

The Township shall not be obliged to accept either the lowest bid or any bid received, nor to incur any obligations or expenses of any kind with respect to the bidders. The Township has the right to reject any and all bids for any reason. Notwithstanding all other provisions of the quotation, the Township reserves the right to disregard any irregularity that the bid could contain and the bidders shall have no right to appeal the decision of the Township.

INDEMNIFICATION

Without limiting any other obligation of the bidder under this tender document or otherwise, the bidder hereby agrees to indemnify and save harmless the municipality, its elected officials, officers, employees, servants, agents and others for whom the township is in law responsible, from and against any liability, loss, claims, demands, damages, fines, and penalties, costs and expenses (including consulting fees), investigatory and legal expenses, and any other actions or causes of actions, suits, caused by or attributed to any willful or negligent act, omission, delay, or allegations therefor on the part of the bidder, its officers, employees, subcontractors, agents, licensees, assignees, invites or other persons engaged in the performance, non-performance or attempted performance of the work pursuant to this tender document or anyone else for whom the bidder is in law responsible.

Should the municipality be made a part to litigation commenced by or against the bidder, then the bidder will protect, indemnify and hold the municipality harmless and will promptly pay all costs, expenses, and legal fees (on solicitor and own client basis) incurred or paid by the municipality in connection with such litigation upon demand. The bidder will also promptly pay upon demand all costs, expenses and legal fees (on solicitor and own client basis) that may be incurred or paid by the municipality in enforcing the terms, covenants and conditions in this tender document.

IRREGULARITIES

The Township may, at its discretion, disregard any irregularities deemed not to have a significant impact on the quality of the product.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

INSPECTIONS AND TESTS

Throughout the vehicle manufacturing process, the Township reserves the right to visit the supplier's facilities to make inspections as deemed necessary.

The defects or faults found during those visits shall be corrected at the successful bidder's expense and to the Township's satisfaction.

The Township reserves the right to send an independent inspector of its choice.

FREEDOM OF INFORMATION

The Township is subject to the *Municipal Freedom of Information and Protection of Privacy Act*, as amended ("MFIPPA") with respect to, and protection of, information under its custody and control. Accordingly, all documents provided to the Township by the bidder pursuant to this document may be available to the public unless the party submitting the information requests that it be treated as confidential.

FIRE TANKER TENDER FD 2022-01

Delivered to: Township of North Algona – Wilberforce

Price Sheet	
Submission Amount:	\$
HST#: _____	\$
Total Price*	\$

*THIS PRICE IS VALID FOR 60 DAYS

F.O.B. MUNICIPAL GARAGE 1091 Shaw Woods Rd. Eganville ON

Name of Manufacturer: _____

Name of Dealer: _____

Authorized Signature: _____

Date: _____

Proposed Delivery Date: _____

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

Specification Contents

- | | |
|-----------------------------------------|-----------------------------------|
| 1 – General Requirements | 2 – Chassis and Cab Configuration |
| 3 – Fire Pump, Plumbing and Accessories | 4 – Booster Tank |
| 5 – Apparatus Body | 6 – 12v Electrical |
| 7 – Line Voltage System | 8 – Equipment |
| 9 – Paint and Finish | 10 – Warrantee |

1.0 GENERAL REQUIREMENTS

1.01 INTENT OF SPECIFICATIONS

It is the intent of these specifications to cover the furnishing and delivery to the purchaser of a complete apparatus equipped as hereinafter specified. With a view to obtaining the best results and the most acceptable apparatus for service in the Fire Department, these specifications cover only the general requirements as to the type of construction and tests to which the apparatus must conform, together with certain details as to finish, equipment, and appliances with which the successful bidder must conform. Minor details of construction and materials where not otherwise specified are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features.

The applicable sections of the latest edition of the **CAN/ULC- S515, Standard for Automobile Fire Fighting Apparatus** shall be used as a reference and, unless otherwise specified in these specifications, its requirements shall be met by the bidder. Mandatory minor apparatus equipment as stated in the applicable paragraphs of the standards shall not be provided unless specifically stated and listed in purchaser's written specifications.

Bids shall only be considered from companies whose products have established a reputation of expertise in the field of fire apparatus construction for a minimum of **5 years**.

The chassis shall be a commercial model designed specifically for fire service and/or severe service. The body shall be custom built and shall be designed for strength, durability, and safety.

Each bidder shall furnish satisfactory evidence of their ability to construct the apparatus specified and shall state the location of the factory where the apparatus is to be built. They shall also show that they are in a position to render prompt service and to furnish replacement parts for the apparatus. Minimum is a full-service center with full time EVT mechanics.

Each bid shall be accompanied by a set of "Contractor's Specifications" consisting of a detailed description of the apparatus and equipment proposed to which the apparatus furnished under the contract must conform. A set of drawings will also accompany the bid.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

Total price on the bidder's proposal sheet must include all items listed in the specifications. Listing any items beyond those listed in the specifications as an extra cost item shall be required to be shown on a separate schedule.

1.02 NUMBER OF RIDING POSITIONS

The maximum number of firefighters to ride within the apparatus shall be two.

1.03 PRE-DELIVERY INSPECTIONS

One inspection prior to paint and one final inspection may be conducted at the manufacturer's facility, prior to delivery of the completed apparatus. The purchaser shall be responsible for all travel cost for their representatives.

1.04 PRE-CONSTRUCTION MEETING

One (1) meeting shall be conducted at the purchaser's facility prior to the start of construction. Representatives of the manufacturer, the dealer and the purchaser shall be in attendance to review the specifications and construction details.

1.05 DELIVERY AND TRAINING

Whenever applicable, the apparatus, to ensure proper break-in of all components while still under warranty, shall be delivered under its own power.

A qualified and responsible employee of the bidder, with direct knowledge of the construction and operation of the apparatus shall instruct personnel specified by the purchaser, in the proper operation, care, and maintenance of the firefighting apparatus and equipment delivered. This instruction shall take place at the purchaser's facility at an agreed upon date.

1.06 PAYMENT TERMS

Standard Terms of Payment are full due upon completion of delivery to our fire hall with all defects found at the prebuild corrected.

1.07 GENERAL CONSTRUCTION, QUALITY AND WORKMANSHIP NFPA and ULC

The apparatus shall be designed and constructed with consideration for ease of operation and safety. The apparatus shall comply with all applicable Canadian Federal, and provincial motor vehicle laws and regulations.

The apparatus shall be designed, and the equipment mounted with due consideration to distribution of load between the front and rear axles so that all specified equipment, including a

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

filled water tank, full complement of personnel and fire hose shall be carried without damage to the apparatus.

Guards, shields or other protection shall be provided where necessary to prevent injury to personnel by hot, moving, or rotating parts during normal non-maintenance operations.

Electrical insulation or isolation shall be provided where necessary to prevent electrical shock from onboard electrical equipment.

The workmanship shall ensure a safe operating environment free of accessible sharp projections and edges.

Hydraulic lines, air system tubing, control cables and electrical lines shall be clipped to the frame or body structure of the apparatus and suitably protected where they pass through body panels or structural members.

Apparatus components that interfere with the repair or removal of other components shall be attached with fasteners that will allow the component to be removed and replaced with ordinary hand tools. These components shall not be welded or otherwise permanently secured in place.

Dissimilar metals in intimate contact with each other shall be protected against electrolytic corrosion.

1.08 GENERAL DESIGN AND CONSTRUCTION – SINGLE SOURCE MANUFACTURE

All aspects of the fire apparatus body are to be entirely designed, assembled, and painted by the apparatus manufacturer, which minimizes third party involvement on engineering, design, service and warranty issues.

1.09 DIMENSIONS:

OVERALL HEIGHT

An overall height of the apparatus shall not exceed 11 Feet 6 Inches.

Y___N___

MAX LENGTH

The maximum length of the apparatus shall not exceed **28 feet**:

Y___N___

OVERALL WIDTH

An overall width of the apparatus shall not exceed 102” (not to include mirrors and trim)

Y___N___

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

WHEELBASE

A wheelbase restriction has not been specified for this apparatus.

Y__N__

ANGLE OF APPROACH

The angle of approach for the apparatus shall not be less than eight (8) degrees as specified by the current edition of NFPA 1901.

Y__N__

ANGLE OF DEPARTURE

The angle of departure for the apparatus shall not be less than eight (8) degrees as specified by the current edition of NFPA 1901.

Y__N__

1.1 NFPA TANKER EQUIPMENT ALLOWANCE

In compliance with NFPA #1901 standards, the apparatus shall be engineered to allow for the storage of loose equipment, as indicated in the standard for mobile water supply apparatus

Y__N__

1.2 BODY MANUAL - PRINTED WITH DIGITAL COPY

The manufacturer shall provide with the vehicle upon delivery, one (1) complete delivery manual. This manual shall be in a notebook type binder, with reference tabs for each section of the vehicle. In addition to the printed material, a digital copy shall be provided.

Within each section shall be:

- Individual component manufacturer instruction and parts manuals
- Warranty forms for the body
- Warranty forms for all major components
- Warranty instructions and format to be used in compliance with warranty obligations
- Wiring diagrams
- Installation instruction and drawings for major parts
- Visual graphics and electronic photos for the installation of major parts
- Necessary normal routine service forms, publications, and components of the body portion of the apparatus
- Technical publications for training and instruction on major body components
- Warning and safety related notices for personnel protection
- One (1) manual covering the fire pump transmission and fire pump shall be

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

provided with the apparatus.

- Cab and chassis manuals on parts, service and maintenance shall be provided.

Y__N__

2.0 CHASSIS AND CAB CONFIGURATION

See Annex "A" for chassis (International) specifications. In the event of substitution of the chassis, the bidder must prove that the proposed chassis meets the intent of the attached specification.

2.1 FLUID DATA PLAQUE

One (1) fluid data plaque containing required information shall be provided based on the applicable components for this apparatus, compliant with NFPA Standards:

- Engine oil
- Engine coolant
- Chassis transmission fluid
- Drive axle lubricant
- Power steering fluid
- Pump transmission lubrication fluid
- Other NFPA applicable fluid levels or data as required

Location shall be in the driver's compartment or on driver's door.

Y__N__

2.2 DATA & WARNING LABELS

HEIGHT LENGTH & WEIGHT

A highly visible label indicating the overall height, length, and weight of the vehicle shall be installed in the cab dash area.

Y__N__

NO RIDE LABEL

One (1) "NO RIDERS" label shall be applied on the vehicle at the rear step area or other applicable areas. The label shall warn personnel that riding in or on these areas, while the vehicle is in motion is prohibited.

Y__N__

TIRE PRESSURE LABEL

A label shall be placed in a visible area that indicates the front and rear tire pressure.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

CAB SEATING POSITION LIMITS

One (1) label shall be installed in the cab to indicate seating positions for firefighters. A weight allowance of 250 pounds for each shall be factored into the gross vehicle weight rating of the chassis.

Y__N__

HELMET WARNING TAG

One (1) label shall be installed in the cab, visible from each seating position. The label shall read "CAUTION: DO NOT WEAR HELMET WHILE SEATED." Helmets must be properly stowed while the vehicle is in motion according to the current edition of NFPA 1901.

Y__N__

2.3 REAR TOWING PROVISIONS

There shall be two (2) tow eyes furnished at the rear of the body and attached directly to each chassis frame rail. The tow eyes shall be accessible above the rear tailboard. The tow eyes shall be constructed of 5/8" plate steel with a 4" I.D. hole, large enough for passing through a tow chain end hook.

Y__N__

The tow plates shall be painted black.

Y__N__

2.4 WHEELS AND TIRES

2.41 HUB AND LUG NUT COVERS

The apparatus shall have stainless steel hub and lug nut covers on the front and tandem rear axles.

Y__N__

2.42 TIRE PRESSURE INDICATOR

There shall be a tire pressure indicator, at each tire's valve stem on the vehicle that shall indicate if there is insufficient pressure in the specific tire.

Y__N__

2.43 REAR MUD FLAPS

One (1) pair of black mud flaps shall be installed behind the rear wheels.

Y__N__

2.5 AIR HORNS

Two (2) Stuttertone chrome plated air horns shall be mounted under the front bumper of the commercial chassis. An air protection valve shall be provided in the

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

air horn piping that will not allow the chassis air brake system to drop below 90 PSI.

Y__N__

2.51 ELECTRIC TRAFFIC HORN AND AIR HORN SELECTOR SWITCH

One (1) selector switch shall be provided within reach of the driver that will allow the chassis steering wheel horn button to activate either the electric traffic horn or air horn system.

Y__N__

2.6 EXHAUST HEAT SHIELD

A heat shield shall be installed under the body in the areas where the exhaust system is routed.

Y__N__

2.7 CAB STEPS

The driver's side and passenger's side cab step areas on the 2-door chassis shall be constructed with slip resistant, self cleaning, aluminum material in compliance with applicable NFPA standards.

Y__N__

2.71 BATTERY JUMP START LUGS

A method for quickly connecting jumper cables shall be installed on the apparatus. The system shall be internally wired to the 12-volt chassis batteries and terminate with positive and negative lugs located near the driver's door. The lugs shall be covered with color-coded rubber plugs, red for positive and black for negative. An identification label shall be applied.

Y__N__

2.72 AIR TANK DRAIN CABLE EXTENSION

Five (5) cable from the spring-loaded air tank drain shall be routed and attached to the outer edge of the apparatus for ease of access. The 1/8" braided steel cable shall allow accumulated moisture in the air brake system to be easily drained. The cable shall be installed so that maximum ground clearance is maintained.

Y__N__

2.8 MOBILE RADIO ANTENNA

An antenna shall be provided by the purchaser and installed by the bidder in a location agreed upon by the bidder and purchaser.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

3.0 FIRE PUMP

3.01 SINGLE STAGE PUMP

A single stage fire pump shall be provided and installed.

Power to drive the pump shall be provided by the same engine used to propel the apparatus. The pump shall be mounted and designed to operate through a transmission PTO. The pump is to be placed in gear from the chassis cab with a pump shift mechanism that is clearly labeled.

Y___N___

3.02 SIDE MOUNT PUMP ENCLOSURE

The department prefers a design that allow for maximum space for tank and equipment by moving the pump module below the chassis top of frame. This allows for the space above the module to utilize the full width of the apparatus effectively assisting to lower the center of gravity.

All pump suction and discharge controls are to be mounted on the driver side pump operator's panel so as to permit operation of the pump from a central location. The control panel shall be located in front of the left side lower compartment of the apparatus. Panel shall house pressure gauge and controls for the pump, including throttle. Panel shall have an anodized aluminum shield with adequate illumination for nighttime operation. The lights shall be controlled by the operator's panel light switch. The valve controls shall be neatly arranged for access and visibility. All controls shall be clearly marked with permanent type labels and color-coded. The electrical wiring and all gauge lines shall be properly tie wrapped to prevent kinking or cutting of the lines.

The following controls and equipment as specified in the specifications, shall be provided on the pump panel or within the pump enclosure:

- Primer.
- Pump and plumbing area service lights.
- Pressure control device and throttle control.
- Fire pump and engine instruments.
- Pump intakes and discharge controls.
- Master intake and discharge gauges.
- Tank fill control.
- Tank suction control.
- Water tank level gauge.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

3.03 FACTORY FIRE PUMP TEST

The fire pump shall undergo factory pump certification tests per applicable sections of NFPA standards, prior to delivery of the completed apparatus.

The factory pump testing certificate shall be furnished with the apparatus on delivery.

Y__N__

3.1 DRIVELINE INSTALLATION

The pump drivelines shall be sized for intended application and torque requirements. The installation shall comply with driveline manufacturer's guidelines.

Y__N__

3.11 PTO PUMP SHIFT SPECIFICATIONS

An electric powered PTO pump shift shall be installed in the cab driver's area where not subject to accidental engagement. The pump shift system shall permit pump and roll operations.

The following indicator lights shall be included with pump shift.

1. A green indicator light, labeled "PUMP ENGAGED" shall indicate pump shift has successfully been Completed.
2. Pump shift and interlocks shall comply with applicable sections of NFPA standards.
3. The pump shift shall have an instruction label and nameplate to indicate proper pump shift instructions.

3.2 500 GPM FIRE PUMP SPECIFICATIONS

The centrifugal type fire pump shall have a rated minimum capacity of 500 GPM.

The pump shall be certified to meet the following deliveries:

500 GPM @ 150 PSI
500 GPM @ 165 PSI
350 GPM @ 200 PSI
250 GPM @ 250 PSI

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

3.3 PUMP ACCESSORIES

3.31 PRESSURE GOVERNOR AND ENGINE-PUMP MONITORING

One (1) Fire Research InControl series TGA300 (or equivalent) pressure governor and monitoring display kit shall be installed. Any alternate pressure governor system proposed must be approved by the purchaser.

Y__N__

3.32 PRIMER SYSTEM

A Trident air primer system shall be provided.

Y__N__

3.321 PRIMER CONTROL

A manual push button shall be provided on the pump operator's panel, for the manually priming the main pump.

Y__N__

3.33 PUMP ANODES

There shall be sacrificial, zinc anodes in the pump steamer ports which shall protect the pump and piping from electrolysis. These anodes shall also act as screens.

Y__N__

3.4 PUMP PLUMBING SYSTEM

The fire pump plumbing system shall be of rigid stainless-steel pipe or flexible piping with stainless steel fittings. Mechanical grooved couplings shall be installed to permit flexing of the plumbing system and allow for quick removal of piping or valves for service. Flexible hose couplings shall be threaded stainless steel or mechanical grooved coupling connections.

The fire pump and plumbing shall be hydrostatically tested in compliance to applicable sections of NFPA standards. The test results shall be included in the delivery documentation.

Y__N__

3.41 STAINLESS STEEL DISCHARGE MANIFOLD

Any additional discharge plumbing shall meet the following requirements:

The discharge manifold assembly shall be fabricated with minimum of Schedule #10 Type 304 stainless steel. All threaded fittings shall be a minimum of Schedule #40 stainless steel. The discharge manifold assembly shall have radiused sweep elbows to minimize water turbulence. The manifold shall be welded, and pressure

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

tested prior to installation. The stainless-steel manifold inlet shall be attached to the pump discharge and have additional brackets as required to support the discharge manifold, valves, and related components.

The stainless-steel manifold assembly shall have a ten (10) year warranty.

Y__N__

3.42 FIRE PUMP & PLUMBING SYSTEM PAINTING

The fire pump and plumbing system shall be painted by the fire apparatus manufacturer. The fire pump and the plumbing shall be painted metallic silver.

Y__N__

3.43 WATER TANK TO PUMP LINE

One (1) 3" water tank to fire pump line shall be provided with a full flow quarter turn ball valve, 3" piping, and with flex hose and stainless-steel hose clamps. The tank to pump line shall be equipped with a check valve to prevent pressurization of the water tank.

The line shall be flow tested during the fire pump testing and shall meet applicable requirements of NFPA standards.

The tank to pump valve shall be controlled at the pump operator's panel.

The valve shall be sized proportional to the intake of the pump.

The valve control shall be a manually operated pull-rod with aircraft cable control.

The lever shall be locking with a polished finish. The lever shall have a 6" stroke for ease of operation.

The aircraft cable used to control the valve from the lever shall be furnished with 7/8" bulkhead and 5/16" thread on both ends. The cable end nearest the valve will have a 5/16" swivel u-joint. This cable allows for ease of maintenance and operation.

The control shall be properly identified with a color-coded name plate.

Y__N__

3.44 FIRE PUMP TO WATER TANK FILL LINE

One (1) 2" fire pump to water tank refill and pump bypass cooler line shall be provided. The valve shall be a full flow quarter turn ball valve with 2" piping and flex hose to tank. The valve control handle shall have a nameplate located near the valve control.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

The valve shall be an Akron 8000 Series two-inch (2") valve with a stainless ball.

One (1) Akron valve equipped with a manually operated pull rod, with quarter-turn locking feature shall be provided on the intake. The handle shall be equipped with a color-coded name plate.

Y__N__

3.45 INTAKE RELIEF/DUMP VALVE

One (1) TFT A18 series, 2-1/2" intake relief/dump valve preset at 125 psi shall be permanently installed on the suction side of the fire pump. The valve shall have an adjustment range of 75 psi to 250 psi and shall be designed to automatically self-restore to a non-relieving position when excessive pressure is no longer present.

Discharge side of the intake relief valve shall be plumbed away from the pump operator.

Y__N__

3.46 FIRE PUMP COOLING

The fire pump shall be equipped with 3/8" cooling line from the pump to the water tank. This re-circulation line shall be controlled by a pump panel control valve with nameplate label noting it as the "fire pump bypass cooler". There shall be a check valve installed in the pump cooler line to prevent tank water from back flowing into the pump when it is not in use.

Y__N__

3.47 CHASSIS ENGINE HEAT EXCHANGER COOLING SYSTEM

The apparatus shall be equipped with a heat exchanger for supplementary chassis engine cooling during fire pump operations. A manually opened valve, mounted at the operator's panel, shall direct water from the fire pump to the heat exchanger that is mounted in the engine radiator cooling hose. The system shall provide cooling water from the fire pump to circulate around the engine radiator coolant without mixing or coming in direct contact with the engine coolant. The complete installation shall be done by the fire apparatus manufacturer.

A nameplate label shall be installed on the pump panel noting "engine cooling system" with "on-off" opening directions noted.

Y__N__

3.48 FIRE PUMP MASTER DRAIN

The fire pump plumbing system and fire pump shall be piped to a single push-pull type master pump drain assembly.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

3.49 ADDITIONAL LOW POINT DRAINS

The plumbing system shall be equipped with additional low point manually operated drain valves to allow total draining of the fire pump plumbing system. These valves shall be accessible from the side of the vehicle and labeled.

Y___N___

3.5 INTAKES AND DISCHARGES

3.51 LEFT SIDE -- 4" UNGATED INTAKE

One (1) 4" un gated suction intake shall be installed on the left side pump panel to supply the fire pump from an external water supply. The threads shall be 4" NST male threads.

The intake shall be provided with a removable screen.

One (1) 4" chrome plated cap shall be provided. The threads shall be NST, and the cap shall be equipped long handles.

Y___N___

3.52 LEFT SIDE -- 2-1/2" GATED INTAKE

One (1) 2-1/2" gated suction intake shall be installed on left side pump panel to supply the fire pump from an external water supply. The control valve shall be a quarter turn ball valve and shall have 2-1/2" CSA female thread of chrome plated brass.

The intake shall be equipped with a 3/4" drain and bleeder valve. A nameplate label and removable screen shall be installed.

A 3/4", quarter turn drain/bleeder valve shall be installed for each intake and discharge. The valve shall be identified with a permanent label.

One (1) 2-1/2" chrome plated plug shall be provided. The threads shall be CSA and the plug shall be equipped rocker lugs and chain or cable securement.

The valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.

The valve shall be equipped with one (1) manually operated, swing-type manual control located adjacent the intake. The valve shall be equipped with a color-coded name plate.

Y___N___

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

3.53 LEFT SIDE PUMP PANEL -- 2-1/2" DISCHARGE

One (1) 2-1/2" discharge shall be installed on the left side pump panel area and shall be controlled by a quarter turn ball valve. The discharge shall have 2-1/2" NST male hose threads. A colour-coded nameplate label shall be provided adjacent the control handle.

A 3/4", quarter turn drain/bleeder valve shall be installed for each intake and discharge. The valve shall be identified with a permanent label

One (1) 30-degree, chrome plated elbow with rocker lugs shall be provided with 2-1/2" NST swivel female x 2-1/2" CSA male hose threads.

One (1) 2-1/2" CSA rocker lug chrome plated vented cap and cable, or chain securement shall be provided.

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.

The control assembly shall include a decorative chrome-plated zinc panel mounted gauge bezel with recessed color-coded label.

One (1) 2-1/2" (65mm) diameter IC pressure gauge with (Dual Scale PSI/kPa) (0-400) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.

Y___N___

3.54 RIGHT SIDE PUMP PANEL -- 2-1/2" DISCHARGE

One (1) 2-1/2" discharge shall be installed on the right-side pump panel area and shall be controlled by a quarter turn ball valve. The discharge shall have 2-1/2" NST male hose threads. A colour-coded nameplate label shall be provided adjacent the control handle.

A 3/4", quarter turn drain/bleeder valve shall be installed for each intake and discharge. The valve shall be identified with a permanent label

One (1) chrome plated elbow with rocker lugs shall be provided with 2-1/2" NST swivel female x 2-1/2" CSA male hose threads.

One (1) 2-1/2" CSA rocker lug chrome plated vented cap and cable, or chain securement shall be provided.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.

The control assembly shall include a decorative chrome-plated zinc panel mounted bezel with recessed color-coded label.

One (1) 2-1/2" (65mm) diameter IC pressure gauge with (Dual Scale PSI/kPa) (0-400) shall be provided. The face of the gauge shall be a WHITE dial with black letters. The gauges will be located on the pump instrument panel.

Y___N___

3.6 PUMP – OTHER

3.61 PUMP COMPARTMENT HEATER SYSTEM

The interior of the pump enclosure shall be equipped with a minimum of 30,000 BTU hot water heater system. The unit shall be piped to the chassis radiator system with standard heater hose. The hose shall be properly clamped and secured in place and be properly protected from engine exhaust or mechanical damage.

The heater unit shall be equipped with a 12-volt blower fan with control located on the pump operator's panel.

Y___N___

3.62 PUMP ENCLOSURE HEAT PAN

A removable casing constructed of galvanized steel, completely enclosing the underside of the pump compartment, and heated by the engine exhaust shall be provided. The heat pan assembly shall include individual panels that can be easily removed from their mounting locations. The two outer slide-out panels shall be bolted in place.

Y___N___

3.63 LABELS

Safety, information, data, and instruction labels for apparatus shall be provided and installed at the operator's instrument panel.

The labels shall include rated capacities, pressure ratings, and engine speeds as determined by the certification tests. The no-load governed speed of the engine, as stated by the engine manufacturer, shall also be included.

The labels shall be provided with all information and be attached to the apparatus prior to delivery.

Y___N___

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

3.64 COLOR CODED PUMP PANEL LABELING AND NAMEPLATES

Discharge and intake valve controls shall be color coded in compliance to guidelines of applicable sections of NFPA standards.

Y__N__

3.65 PUMP PANEL LIGHTS -- LEFT SIDE

Three (3) Techiq E10-W0001-1 or equal LED lights with clear lenses shall be installed under an instrument panel light hood on the left side pump panel. The lights shall be controlled by a switch located on the operator's instrument panel.

Y__N__

3.66 PUMP ENGAGED LIGHT

One (1) pump panel light shall be illuminated at the time the fire pump is engaged into operation. The remaining lights shall be controlled by a switch located on the operator's instrument panel.

Y__N__

3.67 TEST TAPS

Test taps for pump intake and pump pressure shall be provided on the pump instrument panel and be properly labeled.

Y__N__

3.68 WATER TANK GAUGE

One (1) Fire Research TankVision Pro model WLA300-A00 tank indicator kit shall be installed on the pump panel. The kit shall include an electronic indicator module, a pressure sensor, and a 10' sensor cable. The indicator shall show the volume of water in the tank on nine (9) easy to see super bright RGB 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 Polycarbonate/Nylon material, and have a distinctive blue label.

3 Additional Large water tank level indicators shall be mounter on fire body to allow for viewing from around vehicle. One located on each right and left side of apparatus and one on rear.

The program features shall be accessed from the front of the indicator module. The program shall support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display tank volume, adjustable brightness control levels and a datalink to connect remote indicators. Low water warnings shall include flashing LEDs at 1/4 tank, down chasing LEDs when the tank is almost empty, and an output for an audio alarm.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

The indicator shall receive an input signal from an electronic pressure sensor. The sensor shall be mounted from the outside of the water tank near the bottom. No probe shall place on the interior of the tank. Wiring shall be weather resistant and have automotive type plug-in connectors.

Y__N__

4.0 BOOSTER TANK

4.1 WATER TANK - 3000 GALLON

The apparatus shall be equipped with a three thousand (3000) U.S. gallon polypropylene water tank. The tank shall be equipped with a six-inch (6") overflow pipe.

Y__N__

4.2 WATER TANK

The apparatus shall be equipped with a "T" shaped tank.

Y__N__

4.21 HARD SUCTION MOUNTING

One (1) hard suction hose compartment shall be provided below the upper "T" of the booster tank, on the right side. The design shall allow one hose (5" diam, 10' long, 13" across lugs) to contain an attached low level jet siphon (16" wide x 14" high x 16" deep). The hard suction hose compartment shall have a hinged door with push to latch door catches.

The hinged door shall be constructed of smooth material, with chevron striping applied to match the rear of the apparatus body.

Y__N__

4.3 WATER TANK FILL TOWER

A fill tower measuring approximately 10" x 10" square shall be provided on the water tank up to and including 3500 gallons total capacity.

The apparatus shall be equipped with a polypropylene water tank. The tank body and end bulkheads shall be constructed of .75" thick, polypropylene, nitrogen-welded and tested inside and out. Tank construction shall conform to applicable NFPA standards. The tank shall carry a lifetime warranty.

The transverse and longitudinal .375" thick swash partitions shall be interlocked and welded to each other as well as to the walls of the tank. The partitions shall be designed and equipped with vent holes to permit air and liquid movement between compartments.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

The .5" thick cover shall be recessed .375" from the top of the side walls. Hold down dowels shall extend through and be welded to both the covers and the transverse partitions, providing rigidity during fast fill operations. Drilled and tapped holes for lifting eyes shall be provided in the top area of the booster tank.

A combination vent/water fill tower shall be provided at front of the tank. The 0.5" thick polypropylene fill and overflow tower shall be equipped with a hinged lid and a removable polypropylene screen. The overflow tube shall be installed in fill tower and piped with a minimum schedule 40 PVC pipe through the tank.

The water tank sump shall be located in the forward area of the tank. There will be a schedule 40 polypropylene tank suction pipe from the front of the tank to the tank sump. The tank drain and clean out shall be located in the bottom of the tank sump. The sump shall have a minimum 3" threaded outlet on the bottom to be used for a combination clean out and drain.

The pump to tank refill connection shall be sized to mate with tank fill discharge line. A deflector shield inside the tank will also be provided.

The tank shall rest on the body cross members in conjunction with such additional cross members, spaced at a distance that would not allow for more than 530 square inches of unsupported area under the tank floor. In cases where overall height of the tank exceeds 40 inches, cross member spacing must be decreased to allow for not more than 400 square inches of unsupported area.

The tank must be isolated from the cross members through the use of hard rubber strips with a minimum thickness and width dimension of 1/4" x 1" and a hardness of approximately 60 durometers. The rubber must be installed so it will not become dislodged during normal operation of the vehicle. Additionally, the tank must be supported around the entire bottom outside perimeter and captured both in the front and rear as well as side to side to prevent tank from shifting during vehicle operation.

A picture frame type cradle mount with a minimum of 2" x 2" x 1/4" mild steel, stainless steel, or aluminum angle shall be provided or the use of corner angles having a minimum dimension of 4" x 4" x 1/4" by 6" high are permitted for the purpose of capturing the tank.

Although the tank is designed on a free-floating suspension principle, it is required that the tank have adequate vertical hold down restraints to minimize movement during vehicle operation. If proper retention has not been incorporated into the apparatus hose floor structure, an optional mounting restraint system shall be located on top of the tank, halfway between the front and the rear on each side of

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

the tank. These stops can be constructed of steel, stainless steel or aluminum angle having minimum dimensions of 3" x 3" x 1/4" and shall be approximately 6" to 12" long. These brackets must incorporate rubber isolating pads with a minimum thickness of 1/4" inch and a hardness of 60 durometer affixed on the underside of the angle. The angle should then be bolted to the body side walls of the vehicle while extending down to rest on the top outside edge of the upper side wall of the tank.

Hose beds floors must be so designed that the floor slat supports extend full width from side wall to side wall and are not permitted to drop off the edge of the tank or in any way come in contact with the individual covers where a puncture could occur. Tank top must be capable of supporting loads up to 200 lbs. per sq. foot when evenly distributed. Other equipment such as generators, portable pumps, etc. must not be mounted directly to the tank top unless provisions have been designed into the tank for that purpose. The tank shall be completely removable without disturbing or dismantling the apparatus structure.

The water tank shall be certified for the capacity of the water tank prior to delivery of the apparatus. This capacity shall be recorded on the manufacturer's record of construction and the certification shall be provided to the purchaser when the apparatus is delivered.

Y__N__

4.4 DIRECT TANK FILL

One (1) 2-1/2" diameter direct tank fill inlet shall be provided, including a 2-1/2" female NH swivel, plug and screen.

The valve shall be located and controlled on the left side rear of body.

The valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.

The valve shall be equipped with one (1) manually operated, swing-type manual control located adjacent the intake. The valve shall be equipped with a color-coded name plate.

The direct tank fill inlet shall include a 2-1/2" female NH swivel, plug and screen.

Y__N__

4.5 DIRECT TANK FILL

One (1) 4" Fireman's Friend, model FFE4030CF8M-F-4", stainless steel, semi-automatic fill shall be provided, including a 4" valve body with 8-bolt flange. The

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

Fireman's Friend shall terminate in a 3" NPTF. A 3" NPTM x 4" NSTM adaptor with screen shall also be provided.

The valve shall be located and controlled on the rear of body.

A colour coded adapter shall be provided. Threads shall be a 4" Storz with lugs with manual locks x 4" swivel female NST.

One (1) colour coded locking 4" Storz cap shall be provided. A chain or cable attachment shall be also supplied.

Y__N__

4.6 QUICK DUMP - REAR

One (1) Newton 10" quick dump valve shall be provided and externally mounted. The location shall be at the center rear of the apparatus.

Dump valve will be manual operated with operating handle located on the passenger side of the valve.

The Newton dump valve installed on the water tank shall be constructed of stainless steel.

One (1) swivel dump shall be fabricated with .125" aluminum and attached to the Newton Quick Dump.

The swivel dump shall have the ability to dump water from the driver's side or the officer's side and any point in between. The swivel dump is 70 inches long when fully extended. The swivel dump shall have an extension that is hinged and can be folded up when the dump is not in use. The dump shall have the ability to be stowed on either the driver's side or the officer's side of the truck. The latch that holds the extension in the stowed position shall also help support the swivel dump extension.

When the extension is in the down and extended position, there shall be no less than a 34-inch clearance from level ground to the bottom of the dump to ensure that there is enough clearance for the swivel dump to offload into all portable drop tanks.

The dump shall meet NFPA requirements for water delivery on three sides of the vehicle.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

5.0 APPARATUS BODY CONSTRUCTION

5.01 GENERAL

5.02 FASTENERS

All aluminum and stainless-steel components shall be attached using stainless steel fasteners.

Compartment door hinges, handrails and running boards shall be attached using minimum 1/4" diameter machine bolt fasteners.

3/16" diameter fasteners shall only be used in nonstructural areas such as door handles, trim moldings, gauge mounting, etc.

Y___N___

5.03 ELECTROLYSIS CORROSION CONTROL

The apparatus shall be assembled using ECK or electrolysis corrosion control, on all high corrosion potential areas, such as door latches, door hinges, trim plates, fenderettes, etc. This coating is a high zinc compound that shall act as a sacrificial barrier to prevent electrolysis and corrosion between dissimilar metals. This shall be in addition to any other barrier material that may be used.

All 1/4" diameter and smaller screws and bolts shall be stainless steel.

Due to the expected life of the vehicle, proposals will only be acceptable from manufacturers that include these corrosion features.

Y___N___

5.1 ALUMINUM BODY

The body shall be fabricated of aluminum extrusions, smooth aluminum sheet and aluminum treadplate.

The aluminum extrusion alloy shall be 6061 with a temper rating of T6 and have a tensile strength of 45,000 PSI and yield strength of 40,000 pounds. The aluminum extrusions shall 3" x 3" aluminum tubing, 1-3/4" x 3" aluminum tubing and 3" x 3" aluminum angle and specially designed extrusions, up to .250" wall thickness where applicable.

The smooth aluminum sheet material alloy shall be 5052 with a temper rating of H32 and have a tensile strength of 33,000 PSI and yield strength of 28,000 pounds.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

The aluminum treadplate alloy shall be 3003 with a temper rating of H22 and have a tensile strength of 30,000 PSI and yield strength of 28,000 pounds.

The extrusions shall be designed as structural-framing members with the smooth aluminum and treadplate fabricated to form compartments, hose beds, and floors. All aluminum material shall be welded together using the latest mig spray pulse arc welding system.

Compartment floors shall be of the sweep out design with the floor higher than the compartment door lip and to be water and dust proof. All compartments shall be made to the maximum practical dimensions to provide maximum storage capacity. To ensure maximum storage space, the apparatus shall be constructed without any void spaces between the body and the compartment walls. Double wall construction does not meet this requirement.

All exterior compartments shall have polished aluminum drip moldings installed above the doors where necessary to prevent water from entering the compartments.

Wheel well panels shall be formed aluminum that is welded in place. There shall be no visible bolt heads, retention nuts or fasteners on the exterior surface of the panel. To fully protect the wheel well area from road debris and to aid in cleaning, a full depth radius wheel well liner shall be provided. The frame side of the wheel well area on each side of the opening shall be attached to the frame side of the front and rear compartments. All seams on the frame side of the body shall be welded and caulked to prevent moisture from entering the compartments.

Y___N___

5.2 GALVANIZED SUB-FRAME

The apparatus body subframe shall be constructed entirely of heavy steel structural channel material.

Two full frame lengths, three-inch (3") 3.4 pound per foot longitudinal steel channels shall form the sides of the body subframe and sides of the water tank cradle. Subframe crossmembers shall be fabricated with three inch (3") 3.4 pound per foot heavy steel channel cross members welded to the longitudinal body subframe sides and the full-length frame pads.

Two full frame length 1/2" x 3" flat steel frame pads shall be attached to the body subframe and rest on top of the chassis frame rails for proper frame weight distribution.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

The steel frame pads, longitudinal steel channels and subframe crossmembers shall be attached to the chassis frame rails using heavy "U" bolt fasteners to allow removal of the subframe and body assembly from the chassis. There shall be a barrier provided between the subframe and body to prevent electrolysis.

The rear subframe and lower body platform support members shall be of the "two piece" design, fabricated of 3.4 lb. Per foot heavy channel and welded to the full length subframe channel liners at the rear.

A minimum of two rear platform support channels shall be provided and constructed of 3.4 lb. Per foot heavy steel material. Each support channel shall have welded in gusset where the support meets the rear subframe rails.

After fabrication the entire subframe assembly shall be hot dip galvanized to prevent corrosion. The hot dip galvanized subframe shall have a lifetime warranty against failure due to corrosion.

This steel subframe shall carry the weight of the apparatus body, tank, water, and equipment. This method of apparatus construction gives an excellent strength/weight ratio.

Y__N__

5.3 BODY CONFIGURATION

The aluminum apparatus body shall be up to 220" long, reference the drawing for actual body length.

Y__N__

5.31 TANDEM AXLE WHEEL AREA

For ease of accessibility and maintenance, wheel well panels shall be double break formed painted smooth plate that is welded in place.

To fully protect the wheel well area from road debris and to aid in cleaning, a full depth (minimum of 25") radius wheel well liner shall be provided. Wheel well liner shall be smooth aluminum to prevent corrosion.

Y__N__

5.32 FENDERETTES

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with concealed stainless-steel fasteners.

Y__N__

5.33 BODY WIDTH

The overall width of the apparatus body shall not exceed 102".

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

5.34 COMPARTMENT DEPTH

The left side compartments on the apparatus body shall have the following dimensions:

Lower portion depth of 26"

Upper portion depth of 13"

The lower right-side compartments on the apparatus body shall be 26" deep.

Y__N__

5.35 COMPARTMENT HEIGHT

The left side body compartments shall be 72".

Y__N__

5.36 COMPARTMENT HEIGHT

The right-side body compartments shall be 45" high.

Y__N__

5.37 HOSEBED WIDTH

The width of the pumper body hose bed shall be 74"

Y__N__

5.4 DOOR CONSTRUCTION

5.41 HINGED COMPARTMENT FLUSH DOOR CONSTRUCTION

All hinged compartment doors shall be of the flush style so that the entire door fits flush against the apparatus body sides. Doors shall be designed, in the closed position, to have the painted edges protected from damage on the tops by forming the tread plate compartment tops into an extended drip edge and on the bottom by the rub rail.

Doors shall be minimum 2" thick, fabricated of a minimum of 1/8" smooth aluminum. Full panel inner compartment door liners shall be provided and constructed from smooth aluminum. The compartment doors shall have a foam panel glued in place between the exterior and interior door skin. Exterior door panels shall be smooth with no welds visible on the exterior skin. Double door compartments shall be equipped with a secondary latch to hold the secondary door in position.

All compartment door hinges shall be full-length piano type constructed of a minimum 16-gauge type 304, stainless-steel with 3/16" stainless-steel hinge pin with dual directional bolt holes for ease of adjustment.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

When horizontally hinged lift-up doors are specified, they shall be equipped with heavy-duty gas filled dampeners to hold the doors in the open position. All other hinged doors shall be equipped with spring loaded hold open devices specifically designed for use on vertically hinged doors. Door holders shall be bolted in position. The door ajar switches shall be fully enclosed with structural members and shall not extend into the clear door opening.

All compartment doors shall be provided with hollow core weather stripping to provide a weather tight seal at the door opening and to prevent road spray and debris from entering the compartment.

A non-moisture absorbing gasket shall be installed between the door latch and the door skin panel.

Y__N__

5.42 EXTERIOR DOOR HANDLES

All compartment doors shall be furnished with a large solid STAINLESS-STEEL spring-loaded D-handle with slam type latches. D-handles shall have the large style "bent" D-ring for ease of grabbing the handle even when wearing mitts or gloves. Chrome plated standard steel D-handles are not acceptable.

Door handles shall be held in place with four stainless steel stud fasteners secured on the interior of the door skin to eliminate bolt heads on the exterior latch ring. To prevent possible interaction between dissimilar metals, the studs shall not break any painted surface. A non-moisture absorbing gasket shall be installed between the door latch and the door skin panel.

Handles which are held in place with visible fasteners, two-sided tape or glue do not meet the intent of this requirement.

Y__N__

5.43 ROLL UP DOOR CONSTRUCTION

The roll up door(s) shall be fabricated from aluminum extrusions.

The track shall be a one (1) piece aluminum assembly that has an attaching flange and finishing flange incorporated into the design that facilitates installation and provides a finished look to the door without additional trim or caulking. A low-profile side seal shall be utilized to maximize usable compartment space.

A drip rail designed to prevent water from dripping into the compartment shall be provided. The drip rail shall have a built in replaceable non-contacting seal to eliminate scratching of the surface of the door.

Bottom rail extrusion must have smooth back to prevent loose equipment from

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

jamming the door and have "V" shaped double seal to prevent water and debris from entering the compartment. The door latch system shall be a full width one (1) piece lift bar that enables the user to operate with one hand.

The roll mechanism shall have a clip system that connects the curtain slats to the operator drum to allow for easy tension adjustment without tools. A counterbalanced operator drum to shall be incorporated to assist in lifting the door.

Y__N__

5.5 COMPARTMENTS

5.51 ADJUSTABLE SHELVING TRACKS

All upper (shallow depth) compartments shall be equipped with a minimum of two (2) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

All lower compartments shall be equipped with a minimum of four (4) aluminum adjustable tracks, vertically mounted, that are bolted in place for adjustable shelving and equipment mounting.

Y__N__

5.52 COMPARTMENT VENTING

All compartments shall be equipped with a louver (filtered) to allow for venting.

Y__N__

5.53 COMPARTMENT FLOORING

The floor area of all compartments shall be fitted with removable vinyl Turtle Tile (or equivalent) matting. The matting shall be interlocking modules approximately 12" square by 9/16" thick. This material shall be resistant to heat, cold, ultra-violet radiation, mechanical impacts, chemical actions and is corrosion resistant.

Y__N__

5.54 LEFT FRONT COMPARTMENT

There shall be one (1) full height compartment located ahead of the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

The compartment shall be equipped with the following:

Two (2) adjustable shelves, sized for use in the upper section of the compartment

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

5.55 LEFT HIGH SIDE COMPARTMENTS

There shall be two (2) compartments located above the wheels. Each of the two (2) compartments shall be equipped with a natural finish roll up door.

The rearmost compartment is extended to the rear of the body to maximize compartmentation.

The compartments shall be equipped with the following: Over wheel well compartment to contain two SCBA brackets to hold SCBA with 2216 psi 30-minute cylinders and rear most compartment to contain one adjustable shelf.

Y___N___

5.56 LOWER LEFT REAR COMPARTMENT

There shall be one (1) low compartment located behind the rear wheels. The compartment shall be equipped with a low single hinged door.

Y___N___

5.57 RIGHT FRONT COMPARTMENT

There shall be one (1) low compartment located ahead of the rear wheels. The compartment shall be equipped with a low single natural finish roll up door.

The compartment shall be equipped with the following:

One (1) adjustable shelf

Y___N___

5.58 RIGHT REAR COMPARTMENT

There shall be one (1) low compartment located behind the rear wheels. The compartment shall be equipped with a low single hinged door.

The compartment shall be equipped with the following:

Four (4) vertical, adjustable dividers arranged in a manner agreed upon during the pre-build meeting. Adjustable shelving tracks will be mounted in a horizontal fashion on the upper and lower surfaces of this compartment.

Y___N___

5.6 BODY EXTERIOR

5.61 REAR STEP - BOLT-ON (Tailboard)

The rear step shall be specially designed and engineered for the rear of the apparatus body. The step shall be bolted in place and be easily removable for

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

replacement or repair. The step should extend rearward as far as the dump chute when the chute is in the stowed position. The tailboard shall be constructed of self-cleaning aluminum surface in compliance with NFPA #1901 standards.

A label shall be provided warning personnel that riding on the rear step while the apparatus is in motion is prohibited.

Y__N__

5.62 LADDER MOUNTINGS IN LEFT SIDE HOSEBED

The left side hose bed shall have ladder slide in tracks to store specified ladders in a horizontal position. The mounting system shall be equipped with fiberglass angles, positive holding device at the rear, and stop at front of ladders.

Y__N__

5.63 PORTABLE WATER TANK MOUNTING SYSTEM

There shall be a ZICO Quic-Lift Hydraulic Portable Tank System, Model PTS-HA storage carrier provided on the right side of the booster tank and above the lower compartments to carry a portable folding tank. The tank carrier shall hold the folding tank in the vertical position for travel, and fold down over the lower body side for loading and unloading. The folding tank carrier shall have two high strength aluminum casting sets, dual self-contained hydraulic actuators, and a PTS-HA-CH center hinge. The hydraulic actuators shall be controlled with a momentary switch located on rear of the body, inside a compartment designed for the controls. There shall be a reinforcement plate installed on the compartment top where the folding tank carrier is attached. The Quic-Lift Hydraulic Portable Tank System shall be capable of being lowered manually if a failure occurs.

The folding tank storage carrier shall be provided with a smooth aluminum cover enclosing the folding tank, painted to match the body.

Y__N__

5.64 FRONT BODY PROTECTION PANELS

Aluminum tread plate overlays and panels shall be installed on the front of the body compartment from the lower edge to the top of the compartment doors.

Y__N__

5.65 REAR BODY PROTECTION PANELS

The rear body panels of the body shall be a smooth material, to allow for the proper application and installation of a "Chevron" stripe on the rear.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

5.66 FOLDING STEPS LEFT SIDE REAR

Four (4) folding steps of die cast high-strength zinc/aluminum alloy, plated with a superior automotive grade chrome finish shall be provided. The greater than 42 sq. in. serrated non-skid step traction area shall offer an oversized non-slip grasp handhold.

The step must be third party tested to assure conformation of NFPA 1901 and FHA, 49CFR specifications for stepping surfaces and handhold.

The steps shall be installed on the rear left side of the body.

Y__N__

5.67 REAR INTERMEDIATE STEP

An intermediate fixed step shall be provided at the rear of the apparatus body, bolted in place and easily removable for replacement or repair. The intermediate step shall be constructed of a self-cleaning, non-slip surface in compliance with NFPA #1901 standards and be approximately 8" deep x 48" wide.

Y__N__

5.68 HANDRAIL REAR STEP

Two (2) extruded aluminum non-slip handrails, approximately 60" in length, shall be provided and vertically mounted on the rear of the apparatus, one (1) on each side of the body.

Y__N__

5.69 EXTRUDED ALUMINUM RUB RAILS

Full body length polished aluminum rub rails shall be bolted in place on the lower right and left body sides. The side rub rails shall be a heavy extruded aluminum "C" channel. There shall be nylon spacers provided between the rub rail and the body. This shall allow wash out and replacement in the event of damage.

Y__N__

5.7 BODY EXTERIOR

5.71 LICENSE PLATE BRACKET

One (1) stainless steel license plate bracket shall be provided at the rear of the apparatus. The bracket shall have a LED light.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

5.72 FOUR LIGHT HOUSING

One (1) pair of chrome plated taillight housings shall be supplied. Each housing shall be designed to hold four (4) Whelen C6 Series rear lights located at the lower rear corners of the body.

Y___N___

5.8 HOSEBED

5.81 ALUMINUM HOSEBED GRATING

The hose bed compartment deck shall be constructed entirely from maintenance-free, extruded aluminum slats. The slats shall have an anodized, radiused ribbed top surface. The slats shall be of widths approximately 3/4" high x 6" wide and shall be assembled into a one-piece grid system to prevent the accumulation of water and allow ventilation to assist in drying hose.

The apparatus hose body shall be properly reinforced without the use of angles or structural shapes and free from all projections that might injure the fire hose.

The main apparatus hose body shall run the full length of the apparatus body from behind the pump panel area to the rear face of the body.

The upper rear interior of the hose body on the right and left sides shall be overlaid with brushed stainless steel to protect the painted surface from damage by hose couplings.

Y___N___

5.82 HOSE BED STORAGE CAPACITY

The hose bed shall be designed to have a storage capacity for a minimum of 55 cubic feet of fire department supplied fire hose.

Y___N___

5.83 ALUMINUM HOSEBED DIVIDER

One (1) adjustable hose bed divider constructed of .250" aluminum shall be installed on the apparatus.

Y___N___

5.84 ALUMINUM HOSEBED COVER

The hose bed shall be equipped with a reinforced hinged .125" aluminum diamond plate cover. The covers shall be of the sloped design for proper water runoff. Positive hold-open devices shall be provided to hold the door in the open position.

The cover, with a center opening, shall be installed the full length of the hose bed.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

The hose bed cover shall be labeled, "Not a Standing or Walking Surface", per NFPA.

The hose bed covers shall be equipped with power operated actuators to open the covers. Controls shall be located at the rear of the apparatus in an enclosed compartment.

Y__N__

5.85 MAIN HOSEBED DIVIDER

One (1) stationary hose bed divider shall be provided in the main hose bed to act as a support for the hose bed covers.

The hose bed divider shall be fabricated of 1/4" smooth aluminum sheet stock, pressed into a "T" shaped aluminum extrusion for added strength along the bottom and front edges of the divider.

Divider shall be bolted in place, front, and rear, to allow for ease of removal when maintenance is required.

The rear edge of the divider shall be equipped with a hand hold cutout to aid access.

Y__N__

5.86 HOSEBED LED LIGHTS

Four (4) 48" long OnScene Solutions Access (or equivalent) LED light shall be installed and produce approximately 10050 lumens per light. The light stick shall be rated at 100,000 hours of service and shall be provided with a 5-year free replacement warranty. The light shall have a 5/8" LEXANTM polycarbonate tube enclosure for severe duty applications. The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

The LED lights shall be recessed into the underside of the hinged aluminum hose bed covers to provide illumination for repacking of fire hose. The 12-volt LED lights shall be automatically controlled by a switch which activates upon opening of the cover. The lights shall also be connected to the hazard light in the chassis cab to indicate when the hose bed covers are in the open position.

Y__N__

5.87 REAR VINYL FLAPS FOR ALUMINUM COVER

There shall be a vinyl flaps attached to each aluminum hose bed cover. The vinyl flaps shall cover the area on the rear of the hose bed from top to bottom. The flaps shall be independent of each other but attachable with Velcro in the center. The

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

bottom edge of the flap shall be secured utilizing a hook and loop fastening system.

The vinyl cover shall be black in color.

Y__N__

5.9 WHEEL WELL CYLINDER STORAGE PROVISION LOCATION

Storage for two (2) breathing air cylinders, meeting NFPA 1901 standards shall be provided. The storage provisions shall be located on left side of the apparatus body, between the rear axles.

Y__N__

6.0 LOW VOLTAGE (12v) ELECTRICAL

6.01 LOW VOLTAGE ELECTRICAL SYSTEM SPECIFICATIONS

The electrical system shall include all panels, electrical components, switches and relays, wiring harnesses and other electrical components. The electrical equipment installed by the apparatus manufacturer shall conform to current automotive electrical system standards, the latest CSA and Canadian Motor Vehicle Safety Standards, and the requirements of the applicable NFPA standards.

All wiring shall be stranded copper or copper alloy conductors of a gauge rated to carry 125 percent of the maximum current for the protected circuit. Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. The wiring and wiring harness and insulation shall be in conformance to applicable SAE and NFPA standards. The wiring harness shall conform to SAE J-1128 with GXL temperature properties. All exposed wiring shall be protected in a loom with a minimum 289-degree Fahrenheit rating. All wiring looms shall be properly supported and attached to body members. The electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

The wiring connections and terminations shall use a method that provides a positive mechanical and electrical connection and shall be installed in accordance with the device manufacturer's instructions. Electrical connections shall be with mechanical type fasteners and large rubber grommets where wiring passes through metal panels.

The wiring between the cab and body shall be joined using Deutsche type connectors or an enclosed in a terminal junction panel area. This system will permit body removal with minimal impact on the apparatus electrical system. All connections shall be crimp-type with insulated shanks to resist moisture and foreign debris such as grease and road grime. Weather-resistant connectors shall

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

be provided throughout to ensure the integrity of the electrical system.

Any electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions. In addition, the main body junction panel shall house the automatic reset breakers and relays where required.

There shall be no exposed electrical cabling, harnesses, or terminal connections located in compartments, unless they are enclosed in a junction box or covered with a removable electrical panel. The wiring shall be secured in place and protected against heat, liquid contaminants, and damage. Wiring shall be uniquely identified every three inches (3") by color coding or permanent marking with a circuit function code and identified on a reference chart or electrical wiring schematic per requirements of applicable NFPA #1901 standards.

The electrical circuits shall be provided with low voltage overcurrent protective devices. Such devices shall be accessible and located in required terminal connection locations or weather resistant enclosures. The overcurrent protection shall be suitable for electrical equipment and shall be automatic reset type and meet SAE standards. All electrical equipment, switches, relays, terminals, and connectors shall have a direct current rating of 125 percent of maximum current for which the circuit is protected. The system shall have electro-magnetic interference suppression provided as required in applicable SAE standards.

The electrical system shall include the following:

- Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied. A corrosion preventative compound shall be applicable to all terminal plugs located outside of the cab or body.
- The electrical wiring shall be harnessed or be placed in a protective loom.
- Holes made in the roof shall be caulked with silicone. Large fender washers shall be used when fastening equipment to the underside of the cab roof.
- Any electrical component that is installed in an exposed area shall be mounted in a manner that will not allow moisture to accumulate in it.
- 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.
- All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.

The warning lights shall be switched in the chassis cab with labeled switches in an accessible location. Individual rocker switches shall be provided only for warning

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

lights provided over the minimum level of warning lights in either the stationary or moving modes. All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the operator. The warning light switches shall be of the rocker type. For easy nighttime operation, an integral indicator light shall be provided to indicate when the circuit is energized. All switches shall be appropriately identified as to their function.

A single warning light switch shall activate all required warning lights. This switch will allow the vehicle to respond to an emergency and "call for the right of way". When the parking brake is applied, a "blocking right of way" system shall automatically activate per requirements of the applicable NFPA standards. All "clear" warning lights shall be automatically turned off upon application of the parking brake.

Y__N__

6.02 NFPA REQUIRED TESTING OF ELECTRICAL SYSTEM

The apparatus shall be electrically tested upon completion of the vehicle and prior to delivery. The electrical testing, certifications, and test results shall be submitted with delivery documentation per requirements of the applicable NFPA standards. The following minimum testing shall be completed by the apparatus manufacturer:

1. Reserve capacity test:
2. Alternator performance test at idle:
3. Alternator performance test at full load:
4. Low voltage alarm test:

NFPA REQUIRED DOCUMENTATION

The following documentation shall be provided on delivery of the apparatus:

- a. Documentation of the electrical system performance tests required above.
- b. A written load analysis, including:
 1. The nameplate rating of the alternator.
 2. The alternator rating under the conditions.
 3. Each specified component load.
 4. Individual intermittent loads.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

6.1 WEATHER RESISTANT ELECTRICAL JUNCTION BOX

The electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions. In addition, the main body junction panel shall house the automatic reset breakers and relays where required. The main body junction panel shall be located in an accessible location within a compartment.

Y___N___

6.2 COMPARTMENT LIGHTS

In each compartment on the apparatus body two (2) OnScene Solutions Access LED lights (or equivalent) shall be installed, one on each side of the door opening. The lights shall contain 36 LEDs per light producing approximately 180 lumens (six LEDs and 30 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5-year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

The compartment light will be controlled by an automatic "On-Off" switch located on each compartment door.

Y___N___

6.3 UTILITY LIGHTING

6.31 ENGINE COMPARTMENT LIGHT

One (1) 12-volt LED light shall be mounted in the engine enclosure.

The light shall illuminate with the ground lighting actuated when the parking brake is engaged.

Y___N___

6.32 CAB GROUND LIGHTS

Two (2) LED ground lights shall be installed on the chassis cab, one under each cab door.

Y___N___

6.33 CAB STEP LIGHTS

There shall be LED cab step lights supplied below the chassis cab doors. The lights shall be mounted below the cab doors and illuminate the chassis cab steps. There shall be two (2) LED lights located on each side of the chassis cab.

Y___N___

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

6.34 GROUND LIGHTS

LED ground lights shall be installed under each compartment door to allow for complete vehicle ground lighting.

Y__N__

6.35 REAR STEP GROUND LIGHTS

Two (2) LED ground lights shall be installed under rear step of the apparatus.

The ground lights shall automatically activate when the parking brake is applied.

Y__N__

6.36 STEP LIGHT

Two (2) LED step light(s) with clear lens shall be installed.

Y__N__

6.37 REAR TAILBOARD LIGHTS

Two (2) LED step lights with clear lens shall be installed to illuminate the step surfaces at the rear of the apparatus body.

The step/walkway light switch shall be installed and wired to the parking brake.

Y__N__

6.4 SAFETY EQUIPMENT

6.41 BACK-UP ALARM

One (1) automatic electric back-up alarm shall be wired to the back-up light circuit and mounted under the rear of the apparatus body. The alarm should have a variable output designed to adjust to ambient noise levels.

Y__N__

6.42 BACKUP CAMERA SYSTEM

One (1) Safety Vision camera system SV-CLCD-70A-KIT with cables and mounting hardware shall be furnished utilizing one SV-620A-KIT color camera with audio which provides a wide field of view and picture quality. The 7" color monitor shall be a SV-CLCD-70A supporting up to two cameras and has a compact flat screen that takes minimal space with integrated speaker for camera audio. The monitor does not require a separate control box.

Y__N__

6.43 DOOR OPEN/HAZARD WARNING LIGHT

One (1) red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

warning light shall also be attached to folding equipment racks and light towers as specified. The light shall be a flashing marker light with a red lens and shall be properly marked and identified.

Y__N__

6.5 VEHICLE LIGHTING – NON-EMERGENCY

6.51 MARKER LIGHTS

LED marker lights shall be installed on the vehicle in conformance to the Canadian Motor Vehicle Safety Standard requirements.

Y__N__

6.52 TAILLIGHTS

One (1) pair of Whelen C6BTT LED tail/brake lights shall be provided on the rear of the apparatus.

Y__N__

6.53 TURN SIGNALS

One (1) pair of Whelen, C6T turn signals shall be provided.

Y__N__

6.54 BACKUP LIGHTS

One (1) pair of Whelen Series C6BU LED backup lights shall be installed on the rear of the apparatus body.

Y__N__

6.55 MID BODY LED TURN SIGNALS

One (1) pair of TechNiq S17 amber mid body LED marker / turn signals shall be provided. The location of the turn lights shall be at mid-body near the rear wheel axle.

Y__N__

6.6 SCENE LIGHT

Six (6) Whelen M9 Series Model # M9LZC scene light(s) shall be provided.

Y__N__

6.61 SCENE LIGHT LOCATION

All scene lights will be installed near the upper corners of the body.

Two (2) scene light shall be located on the left side of the apparatus body

Two (2) scene light shall be located on the right side of the apparatus body.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

Two (2) scene light shall be located on the rear of the apparatus body.

Y__N__

6.62 SCENE LIGHT SWITCHING

One (1) scene light switch with indicator shall be installed on the cab main switch panel to control the left side scene light(s). The switch shall be labeled "LEFT SCENE".

One (1) scene light switch with indicator shall be installed on the cab main switch panel to control the right-side scene light(s). The switch shall be labeled "RIGHT SCENE".

One (1) scene light switch with indicator shall be installed on the cab main switch panel to control the rear scene light(s). The switch shall be labeled "REAR SCENE".

The rear scene lights shall activate automatically upon placing the transmission into reverse.

Y__N__

6.7 MOBILE RADIO/ELECTRIC SIREN AND CONTROL

One (1) Whelen model #295SLSA1 electronic siren shall be mounted in the cab. This unit shall feature an electronic air horn, wail, yelp, hi-lo and shall have a hard-wired PA microphone.

Y__N__

6.71 SPEAKER

One (1) Federal Signal DynaMax 100-watt speaker, Model #ES100C, shall be installed. The speaker shall feature a Neodymium driver and a high strength composite housing that is chemical resistant and maintains rigidity at high temperatures.

Y__N__

6.72 SPEAKER

One (1) stainless steel grille shall be installed on the speaker.

Y__N__

6.73 SPEAKER LOCATION

The siren speaker shall be installed under the front bumper of apparatus.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

6.74 12 VOLT POWER SOURCE

One (1) 12-volt power and ground connection rated at 30 amps shall be provided on the apparatus for the installation of a mobile two-way radio.

Y__N__

The power source shall be run through the chassis master battery switch and shall be deactivated when the master switch is in the "OFF" position.

Y__N__

6.8 EMERGENCY LIGHTING

6.81 LIGHTBAR

One (1) Whelen NFPA Justice light bar shall be included with the apparatus cab. The light bar shall be model JE2RRBB and shall be mounted on the roof of the cab towards the front, above the windshield.

The light bar shall feature:

- A 56" light bar designed for high performance
- Two (2) corner red linear LED light heads and two (2) corner blue linear LED light heads
- Six (6) front CON3 style light heads, two (2) red, two (2) blue and two (2) white for optimum wide range lighting and high performance
- Designed in accordance with NFPA Zone A lighting requirements

Y__N__

6.811 LIGHTBAR ACTIVATION

The front upper light bar shall be activated through the master warning switch.

Y__N__

6.82 UPPER REAR WARNING LIGHTS

One (1) pair of Whelen Super LED, rotating beacons, P/N L31H*F, shall be installed, one each side on the upper rear of the apparatus body. The unit shall have dimensions of 4" high x 7-9/16" deep.

The driver side warning light shall be a Whelen LED rotator, model L31HRF with a red lens.

The officer side warning light shall be a Whelen LED rotator, model L31HBF with a blue lens.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

6.83 REAR WARNING LIGHT MOUNTING

The upper rear lights shall be mounted on cast aluminum stanchions attached to the apparatus body, one on each side.

Y__N__

6.84 LOWER FRONT WARNING LIGHTS

One (1) pair of Whelen model #C6L LED warning lights shall be installed, one each side one the front of the chassis cab.

The driver side warning light shall be a Whelen Model C6LR red-LED with a red lens.

The officer side warning light shall be a Whelen Model C6LR red-LED with a red lens.

Y__N__

6.85 INTERSECTION WARNING LIGHTS

One (1) pair of Whelen model LINZ6 LED warning lights shall be installed, one each side of the chassis cab.

The driver side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

The officer side warning light shall be a Whelen Model LINZ6R red LED with clear lens.

Each light shall be surface mounted with a Whelen Model LIN6FC chrome flange.

Y__N__

6.86 LOWER MID-BODY WARNING LIGHTS

One (1) pair of Whelen model M2 LED warning lights, model M2WR, shall be installed, one each side of the apparatus, mid-body in the rub rail. The dimensions of the lights shall be 4-1/4" x 2-11/16".

The driver side warning light shall be a Whelen Model M2WR wide-angle red Super-LED™ with color lens.

The officer side warning light shall be a Whelen Model M2WR wide-angle red Super-LED™ with color lens.

Each light shall be mounted with a Whelen Model M2FC chrome flange.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

6.88 LOWER REAR SIDE WARNING LIGHTS

One (1) pair of Whelen model M2 LED warning lights shall be installed, one each side of the apparatus, towards the rear of the body, in the rub rail. The dimensions of the lights shall be 4-1/4" x 2-11/16".

The driver side warning light shall be a Whelen Model M2WR wide-angle red Super-LED™ with color lens.

The officer side warning light shall be a Whelen Model M2WR wide-angle red Super-LED™ with color lens.

Each light shall be mounted with a Whelen Model M2FC chrome flange.

Y___N___

6.89 LOWER REAR WARNING LIGHTS

One (1) pair of Whelen model #C6L LED warning lights shall be installed, one each side on the lower rear of the apparatus body.

The driver side warning light shall be a Whelen Model C6LR red-LED with a red lens.

The officer side warning light shall be a Whelen Model C6LR red-LED with a red lens.

Y___N___

6.90 TRAFFIC ARROW LIGHT

One (1) Whelen Model #TAL65 Traffic Advisor shall be installed. The light shall be equipped with six (6) LED lights measuring 36" in length. The unit shall be mounted at the rear of the apparatus body. The Traffic Advisor control head shall be mounted inside the cab and be accessible by the driver and officer.

The traffic arrow light shall be surface mounted below the rear intermediate step of the apparatus body.

Y___N___

6.91 WATER TANK LEVEL – REMOTE INDICATORS

Three (3) Whelen PS-TANK2 vertically mounted LED lights shall be installed one each side of the apparatus and one (1) on the rear to allow for monitoring the water tank level from a distance.

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

They shall be configured as follows:

- GREEN - Position 1 indicates FULL
- BLUE - Position 2 indicates 3/4
- AMBER - Position 3 indicates 1/2
- RED - Position 4 indicates 1/4

Each light shall remain illuminated until the water level drops below full 3/4, 1/2, or 1/4 levels. When the level drops below 1/4 the RED light will flash to indicate an empty tank. The Whelen PS-TANK water tank level lights shall be controlled with a Fire Research Corporation TankVision remote driver.

Y__N__

7.0 LINE VOLTAGE SYSTEMS

7.1 DUPLEX OUTLETS

Two (2) duplex outlets shall be provided and wired to the shore power for the purpose of charging equipment when the apparatus is parked within the station.

Y__N__

7.11 LOCATION

One (1) outlet shall be installed within the cab of the apparatus.

One (1) outlet shall be installed within the forward upper compartment on the left side of the body. The outlet shall be installed on the forward wall at a distance of four (4) inches from the floor of the compartment.

Y__N__

8.0 EQUIPMENT

8.1 FOLDING WHEEL CHOCKS

Two (2) Zico model SAC-44, aluminum folding wheel chocks shall be provided.

Y__N__

8.2 ROOF LADDER

One (1) Duo Safety Model 775-A, 14-foot aluminum roof ladder with folding steel roof hooks on one end and steel spikes on the other end shall be provided on the apparatus. The ladder shall meet or exceed all latest NFPA Standards.

Y__N__

8.3 EXTENSION LADDER

One (1) Duo-Safety Model 1225-A, 35-foot three (3) section aluminum extension ladder shall be installed on the apparatus. (Supplied by purchaser)

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

8.4 SUCTION HOSE

Two (2) 4" x 10-foot length of PVC flexible suction hose shall be supplied.

Y___N___

8.41 HOSE COUPLINGS

Lightweight aluminum couplings shall be provided on the suction hose. A long handle female swivel shall be provided on one end and a rocker lug male shall be provided for the other end.

Y___N___

8.5 FOLDING PORTABLE WATER TANK

One (1) 3000 US gallon, 22 oz vinyl, portable water tank shall be provided. The tank shall include an aluminum support frame. Tank shall be Husky brand with integrated floor handles for ease of draining.

Y___N___

8.6 HAND LIGHTS

All NFPA required portable hand lights supplied by the Customer must be installed before the apparatus is placed into service.

Y___N___

8.7 HELMET SECUREMENT

Two (2) On Scene Solutions Talon (or equivalent) helmet holders shall be supplied on the apparatus.

Y___N___

9.1 BODY PAINT PROCESS

All bright metal fittings, if unavailable in stainless steel shall be heavily chrome plated. Iron fittings shall be copper plated prior to chrome plating. If applicable, any and all accessory times shall be removed from the body prior to cleaning and painting. Any accessory items that are to be painted, shall be painted separately, and installed after the body is painted and cured.

Paint on apparatus body shall match the colour paint codes of the commercial chassis.

All seams shall be caulked, both inside and along the exterior edges, with a urethane automotive sealant to prevent moisture from entering between any body panels.

All primers, final colour and clear coat materials shall be supplied by one supplier to ensure compatibility

Y___N___

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

9.11 INTERIOR COMPARTMENT FINISH

The interior of the six (6) compartments shall be finished with a commercial gray splatter type coating.

Y__N__

9.12 ROLL UP DOOR FINISH

All roll up doors are to be painted white.

Y__N__

9.13 TOUCH-UP PAINT

One (1) two (2) ounce bottle of touch-up paint shall be furnished with the completed truck at final delivery.

Y__N__

9.2 UNDERCOATING

The entire underside of the tandem axle apparatus body is to be cleaned and properly prepared for application of a sprayed on automotive type undercoating for added corrosion resistance. Undercoating is to be applied by a Krown dealer following the delivery of the apparatus.

Y__N__

9.3 LETTERING

The dealer shall supply and install the apparatus lettering for the following:
KEEP BACK 150M – rear of vehicle
FIRE RESCUE – above compartment doors on left side and above portable tank on right side

Y__N__

9.4 CAB AND BODY STRIPE

A straight Scotchlite reflective stripe, white, 4" minimum in width, with a reflective stripe, gold, 1" in width, with 1" between the stripes shall be applied horizontally around the cab and body in a "Z" pattern in compliance with applicable NFPA 1901 standards.

Y__N__

9.41 COLOR OF STRIPING MATERIAL

The color of the 3M brand striping materials shall be white and gold.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

9.5 CHEVRON STRIPING

The entire rear portion of the body shall have Oralite V98 reflective red and yellow striping installed. The chevron style striping shall be applied at a 45-degree upward angle pointing towards the center upper portion of the rear panel.

Y__N__

10.1 BODY WARRANTY

The manufacturer shall warrant each new motorized fire apparatus manufactured for a period of ONE YEAR from the date of delivery.

Y__N__

10.2 ALUMINUM BODY WARRANTY - TEN YEAR

The manufacturer shall warrant the body, under normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of TEN (10) years.

Y__N__

10.3 GALVANIZED SUBFRAME WARRANTY

The manufacturer shall warrant warrants that each new hot dip galvanized body subframe (exclusive of paint finish and hardware) is structurally sound and free of all structural defects of both material and workmanship and further warrants that it will maintain such structural integrity for the duration of ownership by the original purchaser. This warranty terminates upon transfer of possession or ownership by original purchaser.

Y__N__

10.4 PAINT WARRANTY FIVE YEAR

The PPG paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of FIVE (5) years beginning the day the vehicle is delivered to the purchaser.

Y__N__

10.5 FIRE PUMP WARRANTY

Five (5) years shall be the minimum acceptable warranty provided for the fire pump.

Y__N__

10.6 STAINLESS STEEL PLUMBING WARRANTY

The manufacturer shall provide a ten (10) year warranty on the stainless-steel plumbing components and installation. The manufacturer shall supply details of their warranty information with their bid submission.

Y__N__

NORTH ALGONA FIRE DEPARTMENT TANKER SPECIFICATIONS

10.7 WATER TANK WARRANTY

UNITED PLASTIC FABRICATION INC. Warrants each UPF POLY-TANK IIE Booster/Foam tank to be free from manufacturing defects in material and workmanship for the service life of the vehicle (vehicle must be actively used in fire suppression). The UPF POLY-TANK IIE must be installed in accordance with the United Plastic Fabricating installation manual. Every UPF POLY-TANK IIE is thoroughly inspected and tested for leaks before leaving our facility. Should any problems develop with your UPF POLY-TANK IIE booster/foam tank and will not meet performance criteria during the service life of the vehicle, notify UPF in writing or call our TOLL FREE SERVICE HOT LINE 1-800-USA-POLY. Provide UPF with the serial number and a description of the problem. If the tank problem would render the truck out of service, UPF will dispatch a service technician WITHIN 48 HOURS (2 DAYS) to repair the tank. (This time period is for North America only). If the vehicle can remain in service, UPF will dispatch a service technician within a mutually agreed upon time period.

Y___N___