

**MELROSE TOWNSHIP FIRE & RESCUE  
RESCUE FIRE APPARATUS**

# MELROSE TOWNSHIP FIRE & RESCUE

## INTENT OF SPECIFICATIONS

It is the intent of these specifications to cover the furnishing and delivery to the **Melrose Township Fire Department** of a complete fire apparatus equipped as hereinafter specified. With the view of obtaining the best results and the most acceptable apparatus for service, 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 to furnish 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 NATIONAL FIRE PROTECTION ASSOCIATION pamphlet #1901 current edition for Motor Vehicle Apparatus, unless otherwise specified in these specifications shall prevail.

ONLY THE SPECIFIED FIREFIGHTING SUPPORT EQUIPMENT LISTED IN THESE SPECIFICATIONS SHALL BE PROVIDED.

The apparatus shall conform to all Federal motor vehicle safety standards.

Bids will only be considered from companies that have an established reputation in the field of fire and/or rescue apparatus manufacturing.

Each bid must be accompanied by a set of detailed contractors specifications consisting of a detailed description of the apparatus and equipment proposed. These specifications shall include size, location, type, and model of all component parts being furnished. Detailed information shall be provided on the materials used to construct all facets of the apparatus body. Any bidder who fails to submit detailed construction specifications shall be considered non-responsive and shall render their proposal ineligible for award.

Each bidder shall furnish a computer generated weight and balance analysis for the unit being proposed. It shall address individual and combined axle weights and include an analysis on the vehicle's center of gravity. It shall also include a figure for excess payload capacity. Any bidder who fails to submit the weight and balance analysis in this format shall be considered non-responsive and shall render their proposal ineligible for award.

Each bidder shall furnish satisfactory evidence of the ability to construct the apparatus specified, and shall state the location of the factory where the chassis and apparatus will be built. They shall also show that they are in a position to render prompt service and to furnish replacement parts for the completed apparatus chassis, body and components.

The manufacturer shall specify in his bid the number of working days and/or calendar days after acceptance of the formal contract by the manufacturer that the completed apparatus will be delivered by the purchaser. The manufacturer will not be held liable for changes arising from its failure to make or delay in making deliveries because of fire, flood, riot, major component shortage, accidents, acts of God, or any circumstances beyond their control.

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## *QUALITY AND WORKMANSHIP*

The workmanship must be of the highest quality in its respective field. Special consideration will be given to the following points:

1. Accessibility of the various components which require periodic maintenance or monitoring
2. Ease of vehicle operation (pumping and driving)
3. Visibility for the driver
4. Symmetrical proportions

Construction must be rugged and design must be certified to carry the loads as specified and to meet the road and speed requirements as set forth under "PERFORMANCE TESTS AND REQUIREMENTS" of NFPA Pamphlet #1901 current edition.

Welding shall not be employed in the assembly of the apparatus in a manner that will prevent the removal of major components for service and/or repair.

## *DESIGN*

The successful bidder shall be solely responsible for the design, construction and material used in the construction of the vehicle. The apparatus shall be of the latest design and type while using the most current industry construction techniques.

Each bidder shall supply with their bid a detailed drawing consisting of the driver side, passenger side and rear views of the apparatus. This drawing shall be representative of the apparatus being bid. The drawing must include but not be limited to all principle dimensions (height/width/length). Pictures or brochures are also encouraged that represent the quality of construction being proposed.

The apparatus, assemblies, component parts, etc., shall be designed and constructed with consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subjected.

The apparatus shall be designed with great consideration given to overall vehicle weight and weight distribution. A computerized weight distribution calculation shall be included with the bid. A calculation shall include the chassis weight with all fluids and fuels topped off, estimated body weight, a 250-lb. allowance per seat for personnel and a 2,500 lb. distributed load allowance for equipment. Any bidder who fails to submit weight and balance calculations shall be considered non-responsive and shall render their proposal ineligible for award.

The apparatus shall be designed and constructed so component parts can be removed for service and repair with standard tools. Any special tools needed to service any component of the apparatus built or supplied by the component manufacturer shall be supplied with the apparatus. During the design and construction the apparatus manufacturer shall take into consideration the ease of access to various areas requiring lubrication, inspection, service or adjustment.

The design and materials must be of the highest quality in its respective field. Quality control inspections shall be performed at each step of the manufacturing process.

The manufacturer shall meet the minimum requirements of NFPA Pamphlet 1901 current edition, The Underwriter's Laboratories, Inc. and all State and Federal Department of Transportation vehicle regulations at the time of the bid for this apparatus.

## *ROAD TEST*

All road tests will be performed per NFPA Pamphlet #1901 current edition requirements.

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## *LIABILITY*

The successful bidder shall defend any and all suits and assume all liability for use of any patented process, device or article forming a part of the cab and chassis, or any appliance under the contract.

## *DELIVERY and/ DELIVERY DATA REQUIRED*

1. The completed apparatus shall be delivered at the point of final manufacture.
2. The successful bidder's representative shall remain at the Fire Department until released by the Fire Chief or Commission during which time he shall instruct Fire Department personnel in the proper operation, care and maintenance of the complete apparatus.

Information required at time of delivery to be supplied by the manufacturer:

- A. Manufacturer's statement of origin
- B. Electrical "as built" schematic booklet
- C. Final build data sheet showing serial numbers for the following:
  1. Cab and chassis VIN
  2. Engine serial number
  3. Transmission serial number
  4. Apparatus/Body serial number
- D. One copy of a complete operations and general maintenance instructions as delivered, including but not limited to the chassis, engine, transmission, axles, lubrication charts, rescue body and appropriate accessories.
- E. The Underwriters Laboratories Incorporated test Certification shall be provided on delivery of the apparatus.
- F. The successful bidder shall supply all data required in NFPA Pamphlet #1901 current edition chapter 14 -20.

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## *EXCEPTIONS TO SPECIFICATIONS*

Each bidder response shall include a returned copy of this Request for bid with the yes/no columns checked for compliance to specifications.

All exceptions, no matter how minor must be marked in the "NO" column.

Those exceptions shall be listed on a separate sheet and shall refer to specification page number and paragraph. It will be mandatory for any perspective bidder that deviates from the proposed specifications, to give a full description of all deviations.

Bidder and his/her manufacturer being represented will be held responsible for deviations not specifically addressed or approved by the Fire Department. Items not addressed will be considered as being bid with no exception and will be included on the apparatus in the form presented in our specifications. Non-compliance will be grounds for rejection of the completed vehicle - **NO EXCEPTION.**

Failure to follow this method will add a considerable time to the bid review process and may be cause for rejection of the bid.

The purchaser will not consider proposals or demonstrators taking total exception to the bid specifications.

Where bidder's specifications and/or construction differ in any way from the bid specification, a full and complete description in the specification will be required. Drawings will also be required to show alternative construction methods. Partial descriptions or general clarifications covering groups or sections of the specifications will be unacceptable.

## *CLARIFICATIONS TO SPECIFICATIONS*

Clarifications shall refer to specification page number and paragraph. Any such clarification that appears vague or misleading shall be considered an exception. Complete clarifications are required describing the reason for the deviation. Apparatus will be inspected upon delivery for compliance with specifications.

## *CONTRACT AWARD*

The purchaser reserves the right to reject any or all bid proposals and purchase the equipment it deems most suitable to its needs. Since all components and materials are commercially available these specifications shall in no way be considered proprietary.

Price shall be based on payment upon receipt of the completed apparatus by the purchaser. No discounts or prepayment schedules shall be listed on the proposal page. All bidders are required to detail any payment terms for the apparatus and these terms shall be listed on a separate page entitled OPTIONS. These options may or may not be considered at the discretion of the purchaser.

All bids shall remain valid for 30 days after opening.

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## *PAYMENT TERMS*

The Purchaser agrees to purchase and pay cash for the apparatus and miscellaneous equipment pursuant to the following terms and conditions:

1. All prices shall be less any taxes.
2. The final payment for the apparatus shall be paid upon delivery and acceptance by the fire department per enclosed payment terms. An invoice shall be presented on or before delivery of the apparatus.
3. The apparatus, without exception, shall not be placed "In Fire Service" prior to full payment of apparatus.

## *SUBMISSION OF BIDS*

Bids shall be submitted in accordance with the following instructions:

1. The bidder's proposed specifications shall be provided in full. Any deviations and clarifications shall be clearly marked.
2. The bidder's proposed specifications detailing their construction methods shall be provided. This is necessary to evaluate each bidder's actual intent of building the equipment as specified herein.
  - **The bidder's proposed format shall be the same as these specifications to allow the customer to easily compare the bids; NO EXCEPTIONS.**
  - **Bids are to be submitted in the same order as our specifications; NO EXCEPTIONS.**
3. Bids shall be returned in a sealed envelope clearly marked "BID FOR FIRE APPARATUS".
4. The purchaser reserves the right to accept or reject any and all bids, to waive irregularities and to make the award in any manner deemed to be in their best interest.

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## NFPA REQUIRED ITEMS

Y\_\_N\_\_

The purchaser shall be responsible for providing all equipment items required by NFPA pamphlet that are not otherwise indicated or addressed in these specifications.

## SINGLE SOURCE BODY BUILDER AND CONSTRUCTION

Y\_\_N\_\_

The apparatus manufacturer shall be the prime (single source) builder of this severe duty all aluminum fire apparatus quality body.

All engineering, design, fabrication, testing, paint and finish shall take place at the apparatus manufacturer's privately owned top tiered manufacturing facility.

Bodies that are mass produced from lower quality materials such as thin stamped utility style designs, bolted together designs or those that are manufactured by a third party for the apparatus manufacturer shall be considered sub-standard and shall not be acceptable for this project.

The body shall be designed and manufactured entirely from formed and welded aluminum plate and aluminum extrusions to ensure a high quality design and finish that shall provide years of uninterrupted service. Bodies that incorporate steel as structural support or that utilizes steel in any way shall be considered sub-standard and shall not be acceptable for this project. **NO EXCEPTIONS**

## CONSTRUCTION DRAWINGS

Y\_\_N\_\_

A basic drawing will be included with the proposal. Upon award a fully detailed drawing will be supplied to the Fire Department. The drawing shall be signed and returned to the manufacturer and kept on file for future reference.

## PRECONSTRUCTION CONFERENCE

Y\_\_N\_\_

The prime contractor will have a Pre-Construction Conference prior to any manufacturing. The purpose of meeting is to finalize all construction details. The location shall be at the manufacturing facility. All expenses for transportation, lodging and meals are paid for by the bidder. The selling dealer and/or representative will be present at the pre-construction conference.

## INSPECTION TRIPS

Y\_\_N\_\_

**Three (3)** inspection trips for **two (2)** customer personnel will be arranged with all expense for transportation and meals paid for by the dealer. Transportation will be by motor vehicle unless otherwise indicated in the proposal.

Timing of the trips shall be coordinated between the customer and selling dealer.

- Pre-Construction
- Pre-Paint/Chassis Inspection
- Final Inspection

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Y\_\_N\_\_

## **PERIODIC APPARATUS INSPECTIONS**

At any time during the build process, representatives of the department are always encouraged to visit the factory at any time during business hours to check-in on the progress of their new custom built apparatus. A factory representative will always be on site to give updates and let department members see their truck as it is being built.

Appointments are never necessary for these periodic visits, but for safety reasons we do ask that you arrive wearing appropriate clothing in order to enter the fabrication areas. Eye protection and additional safety equipment will be provided as needed.

Y\_\_N\_\_

## **PROGRESS PICTURES**

Progress pictures will be provided once body has started construction. Pictures will be provided throughout each phase of construction, paint and assembly.

Y\_\_N\_\_

## **DELIVERY**

The completed apparatus will be delivered under its own power to the customer's designated location. A factory delivery technician will accompany the apparatus.

Apparatus review will be provided by an authorized representative of the manufacturer as prescribed by the customer.

Y\_\_N\_\_

## **SEATING CAPACITY PLATE**

A permanent plate indicating seat belt use and occupancy shall be installed in a visible location.

Y\_\_N\_\_

## **HELMET WARNING PLATE**

A permanent plate stating "DO NOT WEAR HELMET" shall be installed in a visible location.

Y\_\_N\_\_

## **FLUID CAPACITY PLATE**

A permanent plate listing all fluids and capacities shall be installed in a visible location.

Y\_\_N\_\_

## **OVERALL HEIGHT PLATE**

A plate indicating overall height, overall length, overall width and the vehicle GVRW shall be installed in a location visible to driver.

Y\_\_N\_\_

## **TAILBOARD PLATE**

A permanent plate shall be installed at the rear indicating "DO NOT RIDE ON REAR STEP".



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Y\_\_N\_\_

## FORD COMMERCIAL CHASSIS

2020 Ford F550 Regular Cab Chassis Cab dual rear wheels

*Selected Options - Selected options override below standard options*

- 145" wheelbase/60" CA
- 6.7L Diesel V8 engine
- 10 speed automatic transmission
- 4.10 Regular rear axle
- 18,000# GVWR
- XLT Trim level – includes
  - Power Equipment Group – power windows, power door locks, manual telescoping power remote exterior mirrors w/heated glass, remote entry
  - Cruise Control
  - Chrome grill and bumpers
  - Sync
- Carpet delete -rubber floor
- Electronic shift on the fly
- Snow Plow Prep
  - Aft axle fuel tank – 40 gallon
- SYNC 3 hands free Bluetooth, 8" center screen, Smart-Charge USB port
- Dual Xtra HD alternator
- 6- Max Traction tires
- Polished aluminum wheels
- Rapid Red paint

### *Standard Options*

#### Powertrain/Functional

- 7.3L gasoline V8 Engine/10 Speed Torq shift Automatic Transmission
- Alternator - 220 amp Extra HD w/ 6.7L Diesel
- Brakes- 4 Wheel Anti-lock, Power Front/Rear Disc
- Battery- Dual 750 CCA/78 AH 6.7L Diesel
- Fuel Tank – 40 Gallon Aft Axle
- Shock Absorbers Gas Heavy Duty
- Springs, rear auxiliary
- Stabilizer Bar- Front & Rear
- Stationary Elevated Idle Control
- Steering – Power w/damper
- Tow Hooks- Front
- Trailer Wiring 7 wire harness w/relays, blunt cut w/ labels
- Transfer Case

#### Interior

- Air Conditioning
- Cabin air particulate filter
- 2 auxiliary power points in instrument panel
- Dome Lamp w/map lights- LH/RH door activated
- Floor covering – full length black vinyl w/insulation
- Ford Pass connect WiFi modem
- Grab Handles- Driver & Passenger – over rear doors on Crew Cab

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Headliner-color coordinated cloth w/dual sun visors  
Horns – dual electric  
Hood Release - inside  
Instrumentation – tachometer, speedometer, oil pressure gas/turbo diesel, coolant temperature, transmission temperature, fuel gauge, and 2.3” productivity screen w/ trip odo & engine hour

meter

Outside temperature display  
Radio- AM/FM Stereo w/digital clock & 2 speakers  
Seat- Heavy Duty Vinyl 40/20/40 split bench w//center armrest  
Steering column – tilt & telescoping  
SYNC hands free Bluetooth phone connection  
Wipers – Intermittent  
Upfitter Switches - 6 in overhead console

Exterior

Front bumper and grille – black painted  
Quad beam halogen jewel effect headlamps w/auto lamp  
Glass-solar tinted  
LED Roof Marker/Clearance Lights  
Mirrors – Telescoping Dual Fold Away w/Spotter mirror  
Wheels/Tires – 6 Steel-225/70Rx19.5G BSW A/P

Safety/Security

Advance Trac w RSC (roll stability control)  
Air Bags – driver & passenger with side and curtain  
Air Bag deactivation switch, passenger side (not w/ crew cab)  
Safety Belts – Dual with height adjustable shoulder harness

Y\_\_N\_\_

## **EXHAUST MODIFICATION**

The chassis exhaust pipe and muffler shall be extended to the front of the right rear wheel and shall be pointed out. Any heat shields required to protect body and/or compartments from heat shall be installed.

Y\_\_N\_\_

## **CHASSIS SETUP**

The chassis shall have adjustments made to insure the proper configuration for accepting pumps and/or bodies. This shall include the repositioning air tanks, frame cross members, step adjustments, etc.

Y\_\_N\_\_

## **CAB RUNNING BOARDS**

There will be two (2) aluminum open grit running boards provided and mounted to the chassis cab. The running boards will run from the front wheel well to the back of the chassis cab, one (1) each side. The running boards shall be powder coated black.

Y\_\_N\_\_

## **TIRE PRESSURE MONITORING SYSTEM:**

A six (6) wheel tire monitoring system shall be installed on the chassis. LED valve caps shall be installed on each tire valve stem. The LED cap is self-calibrating during initial installation. The valve cap starts flashing red if the tire pressure drops more than 8 psi. Ultra-bright LED allow for visual checks in daylight.

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Y\_\_N\_\_

## **BATTERY CONDITIONER / INVERTER**

A KUSSMAUL model 091-263-12-1500 battery conditioner/inverter will be installed in the apparatus body in a safe, dry location.

### **Auto Power1500W Inverter Charger ( AP 1500 )**

- **Inverter:** 1500 Watt Continuous /4500 Watt surge
- **Charger:** 55 Amps Max
- Pure Sine Wave
- Built-in automatic load transfer relay
- Built-in high output 3 stage charger (1-hr boost) for rapid battery replenishment- programmable for various battery types; Gel, Lead Acid, or AGM battery
- Automatic over temperature shutdown, and AC output circuit breakers
- Charger will recharge depleted batteries with <1V
- Automatic low battery shutdown at 10.5 VDC with in-rush delay
- Power Save mode feature: automatically detects when a load is not connected to minimize energy consumption.
- Heavy duty powder coated aluminum construction and conformal coated circuitry
- Built to meet **NFPA 1917 (KKK)** Specification
- Works with Super Auto Eject with Deluxe Covers
- **UL 458** Listed

Location: Body compartment, locatitoon to be determined at Pre-construction

Y\_\_N\_\_

## **SHORE POWER RECEPTACLE WITH DELUXE COVER - BAR GRAPH DISPLAY**

A KUSSMAUL 20-amp super auto-eject type receptacle shall be provided. This receptacle shall eject the male shore line from the apparatus when the engine starter switch is energized. The receptacle will be provided with a weather-proof cover, than includes a bar graph display . An appropriate end shall be provided.

Location: Rear of body - driver side

Y\_\_N\_\_

## **WEATHER PROOF COVER**

The cover for the shore power receptacle shall be Yellow in color.

Y\_\_N\_\_

## **BACKUP ALARM**

There shall be an electronic beeper that sounds when the truck is placed in reverse. The beeper shall be heard over all engine noise to warn persons on or near the truck.

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## **BRUSH GUARD**

Y\_\_N\_\_

A heavy duty steel replacement bumper and tubular brush guard will be installed on the apparatus chassis. The bumper shall replace the factory bumper and brush guard will extend to approximately the same level as the hood and to the sides of the vehicle fenders. The front bumper shall include mounting provisions for a permanent mounted front winch and electronic speaker mounts.

The unit will be powder-coated BLACK.

## **TRAILER HITCH**

Y\_\_N\_\_

There shall be a Class III trailer hitch securely installed to the rear frame rails.

## **TRAILER WIRING**

Y\_\_N\_\_

Wiring to accommodate the trailer hitch shall be installed on the apparatus. A weather resistant cover shall be included.

Location: Above tailboard

## **REAR TOW EYES**

Y\_\_N\_\_

There shall be two (2) rear tow eyes below the body that will be attached to the rear of the chassis frame.

## **WINCH - PERMANENT MOUNT**

Y\_\_N\_\_

A Warn, model 16.5ti-S, 12-volt electric winch, with 16,500 lb. capacity shall be provided and mounted behind the front bumper of the chassis. The winch shall be secured directly to the chassis frame rails by a heavy steel support structure designed to withstand the pulling force of the winch.

The winch shall include 80 ft. of spydura pro rope with clevis hook, 12 foot remote control pendant, 4-way roller fairlead through the bumper.

## **WIRELESS CONTROL**

The WARN Wireless Control System lets you remotely control your WARN truck/SUV winch from up to 50 Foot away. Weatherproof transmitter has two large buttons making it easy to operate, even while wearing gloves. Two-color LED provides clear operator feedback.

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Y\_\_N\_\_

## EXTRUDED ALUMINUM BODY SUPERSTRUCTURE

The body subframe is to be entirely welded, constructed of 6061-T6 extruded aluminum tubing with **minimum** dimensions of 2"x3"x1/4" and 2"x2"x3/16".

The body sides are to be constructed from 2"x3"x1/4" and 2"x2"x3/16" 6061-T6 structural aluminum tubing welded to form a continuous support matrix for the hose body and compartments. The interior components will be welded along perimeter and along each side for additional support.

The upper body side panels shall be constructed with a single sheet to present a seamless construction and maximum corrosion protection.

Fender liners will be independent from the compartment sides to provide maximum corrosion and impact protection. Wheelwell fastening support angles shall be welded and be made from 1" x 1" x 1/4" angle.

The apparatus body shall be entirely independent from the chassis frame. It is to be attached to the frame over 1/2" x 3" 60# rubber pads running the full length of body. The unit is to be designed so as to be removable from the chassis in the event of future chassis replacement.

Y\_\_N\_\_

## EXTRUDED ALUMINUM APPARATUS BODY

The apparatus body compartments are to be constructed from 1/8"-3/16" aluminum alloy. All compartments are to be formed and welded to the substructure and sidewalls. Lower compartment floors are to be fitted with hat section supports to allow for loading of heavy equipment.

### *COMPARTMENTATION:*

Each compartment shall be "sweep-out" style. The compartments shall not share a common wall and shall be individually vented. The compartments shall be divided as follows:

### *SIDE:*

There shall be two (2) compartments ahead of the rear wheels, one (1) each side. The compartments shall be approximately **31" wide x 57" high x transverse/20" deep**.

There shall be two (2) compartments over the rear wheels, one (1) each side. The compartments will be approximately **44" wide x 33" high x 21" deep**.

There shall be two (2) compartments behind the rear wheels, one (1) each side. The left side compartment shall be approximately **31" wide x 57" high x 21"/15" deep**. The right side compartment shall be approximately **31" wide x 57" high x 21" deep**.

### *REAR:*

There shall be one (1) compartment in the rear of the apparatus. The compartment shall be approximately **48" wide x 57" high x 80" deep**.

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Y\_\_N\_\_

## **ROOF CONSTRUCTION**

The apparatus body and roof panel construction shall be integral, and reinforced for maximum strength. The roof shall be 1-8"-3/16" 3003H-12 aluminum tread plate fastened to the interior roof members with roof cross members every 16" for added strength. The roof perimeters shall be constructed of aluminum radius extrusions. The roof sheeting shall extend past the body and bend down slightly to act as the drip molding for protecting the body. The roof members shall be 2" x 2" x 3/16" wall tubing welded in place on approximately 16" centers and supported by the side vertical wall members.

The center portion of the roof shall be a recessed design sized to fit the specified lighth tower.

Y\_\_N\_\_

## **SUPERSTRUCTURE AND BODY WARRANTY - LIFETIME**

The manufacturer shall warrant to the original purchaser that the apparatus superstructure and body is structurally sound and free of all structural defects of workmanship and material and further warrants that it will maintain its structural integrity for the life of the apparatus. This warranty shall not pertain to issues of paint finish, hardware, moldings or accessories. The warranty shall terminate upon transfer of possession or ownership by the original purchaser.

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Y\_\_N\_\_

## **L1 COMPARTMENT**

- *The following is a description of items included with the compartment.*

Y\_\_N\_\_

## **ROLL UP DOOR - BRUSHED**

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

Y\_\_N\_\_

## **ROLL UP DOOR SILLS**

An extruded aluminum door sill shall be provided for each roll up door.

Y\_\_N\_\_

## **ROLL UP DOOR LOCK**

An electric door lock with manual override shall be installed on this roll-up door.

The switch for the door shall be located in the cab console.

Y\_\_N\_\_

## **ADJUSTABLE SHELF TRACKING**

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

Y\_\_N\_\_

## **ROLL OUT TRAY - FLOOR MOUNTED**

A Slide-Master aluminum heavy duty roll-out tray with a minimum capacity of 700# shall be provided and installed on the upper compartment floor. The tray shall be constructed of 3/16" aluminum with a 2" lip on each side. The roll-out mechanism shall include a push/pull spring lock for the full open and closed positions.

Y\_\_N\_\_

## **ROLL OUT TRAY - ADJUSTABLE**

A Slide-Master aluminum heavy duty roll-out tray with a minimum capacity of 700# shall be provided and installed on the adjustable tracking. The tray shall be constructed of 3/16" aluminum with a 2" lip on each side. The roll-out mechanism shall include a push/pull spring lock for the full open and closed positions.

Y\_\_N\_\_

## **VERTICAL COMPARTMENT DIVIDER**

A bolt in vertical compartment divider fabricated from 3/16" aluminum shall be provided and installed with angles at the top and bottom of the compartment.

Location: Centered in transverse area between L1/R1 compartments

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## **SCBA CYLINDER STORAGE TRAY**

Y\_\_N\_\_

Two (2) Zico QS-PC-TDS poly bottle storage trays with straps shall be provided and mounted to the lower compartment floor.

## **COMPARTMENT HEATER**

Y\_\_N\_\_

A compartment heater shall be supplied in the lower portion of the L1 compartment.

## **LED COMPARTMENT LIGHTS**

Y\_\_N\_\_

Two (2) extruded aluminum LED strip lights shall be installed in the compartment. The strip lights shall be installed in a vertical position and run the full height of the compartment, one (1) each side.



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## **L2 COMPARTMENT**

Y\_\_N\_\_

- *The following is a description of items included with the compartment.*

## **ROLL UP DOOR - BRUSHED**

Y\_\_N\_\_

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

## **ROLL UP DOOR SILLS**

Y\_\_N\_\_

An extruded aluminum door sill shall be provided for each roll up door.

## **ADJUSTABLE SHELF TRACKING**

Y\_\_N\_\_

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

## **ADJUSTABLE SHELVES - FULL DEPTH**

Y\_\_N\_\_

There shall be two (2) adjustable shelves made from 3/16" aluminum with 2" sides provided and installed on the adjustable tracking.

## **LED COMPARTMENT LIGHTS**

Y\_\_N\_\_

Two (2) extruded aluminum LED strip lights shall be installed in the compartment. The strip lights shall be installed in a vertical position and run the full height of the compartment, one (1) each side.

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## **L3 COMPARTMENT**

Y\_\_N\_\_

*The following is a description of items included with the compartment.*

## **ROLL UP DOOR - BRUSHED**

Y\_\_N\_\_

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

## **ROLL UP DOOR SILLS**

Y\_\_N\_\_

An extruded aluminum door sill shall be provided for each roll up door.

## **ADJUSTABLE SHELF TRACKING**

Y\_\_N\_\_

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

## **ADJUSTABLE SHELVES - FULL DEPTH**

Y\_\_N\_\_

There shall be two (2) adjustable shelves made from 3/16" aluminum with 2" sides provided and installed on the adjustable tracking.

## **ROLL OUT TRAY - FLOOR MOUNTED**

Y\_\_N\_\_

A Slide-Master aluminum heavy duty roll-out tray with a minimum capacity of 700# shall be provided and installed on the compartment floor. The tray shall be constructed of 3/16" aluminum with a 2" lip on each side. The roll-out mechanism shall include a push/pull spring lock for the full open and closed positions.

## **LED COMPARTMENT LIGHTS**

Y\_\_N\_\_

Two (2) extruded aluminum LED strip lights shall be installed in the compartment. The strip lights shall be installed in a vertical position and run the full height of the compartment, one (1) each side.

# MELROSE TOWNSHIP FIRE & RESCUE

## **REAR COMPARTMENT**

Y\_\_N\_\_

*The following is a description of items included with the compartment.*

## **ROLL UP DOOR - BRUSHED**

Y\_\_N\_\_

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

## **ROLL UP DOOR SILLS**

Y\_\_N\_\_

An extruded aluminum door sill shall be provided for each roll up door.

## **ROLL OUT TRAY - FLOOR MOUNTED**

Y\_\_N\_\_

A Slide-Master 100% aluminum heavy duty roll-out tray with a minimum capacity of 1000# shall be provided and installed on the upper compartment floor. The tray shall be constructed of 3/16" aluminum with a 2" lip on each side. The roll-out mechanism shall include a latch for the full open and closed positions.

## **VERTICAL COMPARTMENT DIVIDERS ON ROLL-OUT TRAY**

Y\_\_N\_\_

Two (2) bolt in vertical compartment dividers fabricated from 3/16" aluminum shall be provided and installed on the compartment roll-out tray.

## **STORAGE CUBBIES**

Y\_\_N\_\_

Four (4) full length storage cubbies shall be supplied and installed on the roll-out tray, between the vertical dividers, stacked on top of one another. The upper cubbie height shall be sized to fit a standard backboard by 8" wide. The lower three cubbies height shall be split evenly x 8" wide for the storage of long handled tools.

# MELROSE TOWNSHIP FIRE & RESCUE

## TRACKING AND STORAGE DIVIDERS

Y\_\_N\_\_

Adjustable tracking shall be installed horizontally on each outside surface of the vertical compartment dividers, running full length of the roll-out.

There shall be four (4) adjustable compartment dividers provided and installed, two (2) on each side of the dividers. The compartment dividers shall run from the outside edge of the roll-out by full height.

## EXTRICATION TOOL MOUNTS

Y\_\_N\_\_

Mounts for three (3) department supplied TNT battery extrication tools shall be supplied.

## POLY STORAGE BOXES

Y\_\_N\_\_

Two (2) poly storage boxes shall be supplied and installed on the lower compartment floor, under the roll-out. The boxes shall be sized evenly to fit the available space.

## LED COMPARTMENT LIGHTS

Y\_\_N\_\_

Two (2) extruded aluminum LED strip lights shall be installed in the compartment. The strip lights shall be installed in a vertical position and run the full height of the compartment, one (1) each side.

# MELROSE TOWNSHIP FIRE & RESCUE

Y\_\_N\_\_

## **R1 COMPARTMENT**

- *The following is a description of items included with the compartment.*

Y\_\_N\_\_

## **ROLL UP DOOR - BRUSHED**

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

Y\_\_N\_\_

## **ROLL UP DOOR SILLS**

An extruded aluminum door sill shall be provided for each roll up door.

Y\_\_N\_\_

## **ADJUSTABLE SHELF TRACKING**

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

Y\_\_N\_\_

## **ROLL OUT TRAY - FLOOR MOUNTED**

A Slide-Master aluminum heavy duty roll-out tray with a minimum capacity of 700# shall be provided and installed on the upper compartment floor. The tray shall be constructed of 3/16" aluminum with a 2" lip on each side. The roll-out mechanism shall include a push/pull spring lock for the full open and closed positions.

Y\_\_N\_\_

## **ROLL OUT TRAY - ADJUSTABLE**

A Slide-Master aluminum heavy duty roll-out tray with a minimum capacity of 700# shall be provided and installed on the adjustable tracking. The tray shall be constructed of 3/16" aluminum with a 2" lip on each side. The roll-out mechanism shall include a push/pull spring lock for the full open and closed positions.

# MELROSE TOWNSHIP FIRE & RESCUE

## VERTICAL COMPARTMENT DIVIDER

Y\_\_N\_\_

A bolt in vertical compartment divider fabricated from 3/16" aluminum shall be provided and installed with angles at the top and bottom of the compartment.

Location: Centered in transverse area between L1/R1 compartments

## SCBA CYLINDER STORAGE TRAY

Y\_\_N\_\_

Two (2) Zico QS-PC-TDS poly bottle storage trays with straps shall be provided and mounted to the lower compartment floor.

## LED COMPARTMENT LIGHTS

Y\_\_N\_\_

Two (2) extruded aluminum LED strip lights shall be installed in the compartment. The strip lights shall be installed in a vertical position and run the full height of the compartment, one (1) each side.

# MELROSE TOWNSHIP FIRE & RESCUE

## **R2 COMPARTMENT**

Y\_\_N\_\_

- *The following is a description of items included with the compartment.*

## **ROLL UP DOOR - BRUSHED**

Y\_\_N\_\_

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

## **ROLL UP DOOR SILLS**

Y\_\_N\_\_

An extruded aluminum door sill shall be provided for each roll up door.

## **ADJUSTABLE SHELF TRACKING**

Y\_\_N\_\_

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

## **ADJUSTABLE SHELVES - FULL DEPTH**

Y\_\_N\_\_

There shall be two (2) adjustable shelves made from 3/16" aluminum with 2" sides provided and installed on the adjustable tracking.

## **LED COMPARTMENT LIGHTS**

Y\_\_N\_\_

Two (2) extruded aluminum LED strip lights shall be installed in the compartment. The strip lights shall be installed in a vertical position and run the full height of the compartment, one (1) each side.

# MELROSE TOWNSHIP FIRE & RESCUE

## **R3 COMPARTMENT**

Y\_\_N\_\_

*The following is a description of items included with the compartment.*

### **ROLL UP DOOR - BRUSHED**

Y\_\_N\_\_

ROM series 4 roll-up door will be installed in this compartment. The shutters will be constructed from extruded aluminum with a brushed finish. Internally sealed for weather resistance and quiet operation. Rubber seals will be installed on the vertical components. The door will close/lock with a combination handle/locking bar on the exterior at the bottom.

The door will roll-up in the top of the compartment to allow for maximum use of the compartment interior. Lighting will be located on the vertical compartment walls for maximum effectiveness.

### **ROLL UP DOOR SILLS**

Y\_\_N\_\_

An extruded aluminum door sill shall be provided for each roll up door.

### **ADJUSTABLE SHELF TRACKING**

Y\_\_N\_\_

There shall be tracking installed in one (1) compartment to accommodate the installation of adjustable shelves and/or roll-outs. The tracks shall be installed vertically on the walls of the compartment.

### **ADJUSTABLE SHELVES - FULL DEPTH**

Y\_\_N\_\_

There shall be two (2) adjustable shelves made from 3/16" aluminum with 2" sides provided and installed on the adjustable tracking.

### **ROLL OUT TRAY - FLOOR MOUNTED**

Y\_\_N\_\_

A Slide-Master aluminum heavy duty roll-out tray with a minimum capacity of 700# shall be provided and installed on the compartment floor. The tray shall be constructed of 3/16" aluminum with a 2" lip on each side. The roll-out mechanism shall include a push/pull spring lock for the full open and closed positions.

### **LED COMPARTMENT LIGHTS**

Y\_\_N\_\_

Two (2) extruded aluminum LED strip lights shall be installed in the compartment. The strip lights shall be installed in a vertical position and run the full height of the compartment, one (1) each side.



# MELROSE TOWNSHIP FIRE & RESCUE

## ROLL-UP DOOR WARRANTY - SEVEN YEARS

Y\_\_N\_\_

ROM series 4 doors and parts shall be warranted for a period of seven (7) years.

## COMPARTMENT INTERIOR FINISH

Y\_\_N\_\_

All exterior compartments of the pumper/rescue apparatus will be constructed from fire apparatus quality aluminum material. All exterior seams will be welded and sealed from weather and dust. The interior compartment seams will all be carefully caulked with a gray sealant for further protection and cosmetics.

The apparatus compartment interiors will be polished aluminum diamondplate.

## RUBRAILS

Y\_\_N\_\_

Poly rub rails shall be provided along the lower edge of the apparatus body. The rub rail assemblies shall be spaced-out and isolated from the body with non-metallic materials. Each rub rail shall be a minimum of 1" thick and tapered at each end.

## BODY FACE PACKAGE

Y\_\_N\_\_

The front face of the apparatus body will be trimmed with 1/8" polished diamondplate aluminum. Body support extrusions will be drilled and tapped for application of stainless steel fasteners to hold the panels in place. The panels are to be easily removable for service.

The rear face of the body will be trimmed with 1/8" smooth plate aluminum to allow easy application of chevron material.

All exterior edges will be sanded and rounded to prevent the catching of equipment or any injuries. The exterior seams shall be carefully caulked for water prevention and cosmetics.

## REAR TAILBOARD

Y\_\_N\_\_

An 11" rear tailboard step will be provided. The step will be constructed from 1-1/2" extruded aluminum. Extrusion shall have a non-slip surface with punched holes. Tailboard shall be supported by heavy 2" x 2" x 3/8" angles welded directly to the body superstructure.

## REAR WHEELWELL TRIM

Y\_\_N\_\_

The area around the rear wheel openings shall be constructed from aluminum diamondplate. The wheelwells shall be completely removable for ease of service and replacement.

## RUBBER FENDERETTES

Y\_\_N\_\_

Rubber fenderettes shall be installed on the rear wheelwells. They shall be bolted so as to be easily removable for service and/or replacement.

# MELROSE TOWNSHIP FIRE & RESCUE

## MUDFLAPS

Y\_\_N\_\_

Mud flaps shall be made from black hard rubber and shall be installed on the cab fenders, behind the front tires and on the body fenders, behind the rear tires.

## MISCELLANEOUS HARDWARE

Y\_\_N\_\_

One bag of miscellaneous hardware shall be supplied with the finished apparatus. This hardware shall consist of nuts, bolts, screws, washers, etc. used in the manufacture of the apparatus.

## FUEL INLET

Y\_\_N\_\_

There shall be a cast aluminum bezel around the fuel inlet. The bezel will be clearly marked "DIESEL FUEL ONLY".

## DEF INLET

Y\_\_N\_\_

There shall be a DEF fill locataed on the front of the body, driver side. The bezel will be clearly marked "DEF ONLY".

## REAR BODY HANDRAILS

Y\_\_N\_\_

There shall be two (2) 30" long handrails manufactured from 1-1/4" diameter extruded aluminum with chrome end stanchions. They shall be mounted vertically at the rear of the apparatus body.

In the event there is telescoping scene light, ladder or folding step installed in the same location(s), these items may be substituted in an effort to conserve mounting space on the body.

# MELROSE TOWNSHIP FIRE & RESCUE

Y\_\_N\_\_

## ALUMINUM BODY PAINT FINISH

All paintable surfaces shall conform to the following procedure, ensuring a durable finish:

- Aluminum body exterior shall not have components mounted to paintable surfaces prior to application of protective anti-corrosion and topcoat refinish materials.
- All paintable aluminum surfaces shall be sanded/ground to remove all burrs, rough edges and other imperfections from the fabrication process.
- All paintable metal surfaces shall have an anti-corrosion coating and an epoxy-based primer applied to them before the application of body fillers.
- After application and finishing of all filler work, any bare metal areas shall be recoated with an anti-corrosion coating and an epoxy-based primer before continuing the refinish process.
- The unit shall be sprayed with a high quality urethane primer-surfacer. The primer-surfacer shall be sanded to provide a smooth appearing surface that will facilitate adhesion of a urethane-based sealer. The urethane-based sealer shall be applied in such a manner to provide a uniform surface for the application of subsequent topcoats. The apparatus body shall be top-coated with basecoat/clear coat polyurethane paint system. The finished paint surface shall have a high gloss- >85 using a 60° gloss meter.
- Any location where aluminum is penetrated after the refinish process has been completed, shall be treated with a corrosion inhibiting compounds.

Color/Code:

Y\_\_N\_\_

## PAINT WARRANTY - SEVEN YEARS

The paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of seven (7) years beginning the day the vehicle is delivered to the purchaser.

The areas as outlined on the Guarantee Certificate will be covered for the following paint failures:

### *GUARANTEE INCLUSIONS:*

### FULL APPARATUS BODY MANUFACTURED AND PAINTED BY THE MANUFACTURER:

- Peeling or de lamination of the topcoat and/or other layers of paint.
- Cracking or checking.
- Loss of gloss caused by cracking, checking, or hazing.
- Any paint failure caused by defective finishes which are covered by this guarantee.

All guarantee exclusions, limitations, and methods of claims are covered in the full certificate provided to the original purchaser.

The paint warranty is a full term (non-prorated) warranty.

# MELROSE TOWNSHIP FIRE & RESCUE

## TOUCH UP PAINT

Y\_\_N\_\_

A container with touch-up paint shall be provided with each truck. The container shall have a small touch-up brush that is attached to the top of the container.

## DISSIMILAR METALS

Y\_\_N\_\_

The body and components shall be thoroughly protected against corrosion and/or oxidation caused by contact between dissimilar metals. These areas shall be protected by the use of corrosion resistant primers, gaskets and "ECK" (electrolic corrosion material) or any equivalent material.

## BODY UNDERCOATING

Y\_\_N\_\_

Undercoating of the apparatus body shall conform to the following;

- The rubberized undercoating shall be black in color and uniform in texture.
- The underside (chassis frame rails downward) of the apparatus body shall be sprayed with rubberized undercoating.
- The wheel well sections of the apparatus will be undercoated completely (above and below the chassis frame rail).
- The undercoating shall have corrosion-preventative properties.
- The undercoating material shall contain no asbestos.

## IMITATION GOLD LEAF LETTERING

Y\_\_N\_\_

The lettering will be imitation gold leaf and will be on the cab doors and/or body of the vehicle. Immitation gold leaf lettering shaded in black shall be applied as directed by the fire department.

Per customer design  
Sixty (60) Characters  
3-1/2" Shaded

## DEPARTMENT LOGO/EMBLEM

Y\_\_N\_\_

One set of department logo will be supplied with the truck and put on front doors of chassis unless otherwise specified or approved.

## MADE IN MICHIGAN

Y\_\_N\_\_

One set of "Made in Michigan" lettering with state image will be supplied with the truck and put on the apparatus body, one (1) each side.

## NFPA BODY STRIPE

Y\_\_N\_\_

A 4" body stripe of white reflective is to be furnished around the entire apparatus with the exception of the wheel wells, pump panels, grille and rear of the apparatus over the chevron material.

Straight pattern apparatus chassis and body

# MELROSE TOWNSHIP FIRE & RESCUE

Y\_\_N\_\_

## CHEVRON STRIPING - REAR

Chevron striping shall be applied to the entire rear wall of the apparatus body. The chevrons shall consist of 6" wide Diamond Grade reflective striping at 45 degree angles from the tailboard in an inverted "V" pattern. The stripes shall alternate red reflective, lime reflective, red reflective, etc.

Y\_\_N\_\_

## CAB DOOR REFLECTIVE

The interior of each door shall include high visibility reflective tape. A white reflective tape that measures 1" in width shall be provided vertically along the outer rear edge of the door.

Y\_\_N\_\_

## APPARATUS BODY ELECTRICAL SYSTEM

All electrical equipment installed by the apparatus builder shall conform to current automotive electrical system standards and the latest standards as outlined in NFPA #1901.

All electrical wire installed by the apparatus builder shall be rated to carry 125 percent of the maximum current for which the circuit is protected. A high-temp automotive primary wire that is insulated with chemically cross-linked Polyethylene and withstands prolonged temperatures of up to 350 degrees F. without melting or fusing shall be used. Wire shall be highly resistant to grease, oil, acids, brake fluid and abrasion. Wire shall meet or exceed S.A.E. specifications J1127.

Electrical connections in exposed areas outside of the cab shall be made using heat shrink or weather-proof connections. All connections shall have a corrosion preventative compound applied to them. All weather exposed lights shall have the sockets coated with this same compound.

Wire shall be individually color coded and be labeled every six (6") inches on the insulation. Wiring installed by body builder shall be run in a heat protective loom that is held in place with a rubber coated bracket that is fastened in place with stainless steel screws.

There will be two (2) wire terminal points that will be used as test points and for service. The location of these points will be in the apparatus cab and in an enclosed box recessed into the side or back wall of a rear compartment. All wire connections shall be protected to promote a lasting, corrosion-free connection. All exterior terminal blocks will be installed in a weather resistant box. All wire harnesses will be easily accessible and replaceable. All wires shall be protected by automatic circuit breakers that will reset.

Y\_\_N\_\_

## 12-V NFPA TEST

The following NFPA 9-14 test requirements shall be performed:

- Reserve capacity test
- Alternator test at idle
- Alternator test at full load
- Low voltage alarm test

# MELROSE TOWNSHIP FIRE & RESCUE

Y\_\_N\_\_

## CLEARANCE LIGHTS AND REFLECTORS

Clearance lights and reflectors shall be installed to meet current DOT standards and include:

- Two (2) Red LED marker lights
- Four (4) Red reflectors
- Two (2) Amber reflectors
- One (1) Red LED three-light cluster under the rear step.

Y\_\_N\_\_

## AUXILIARY TURN / RUNNING LIGHT

Two (2) auxiliary LED amber marker/turn lights shall be mounted just forward of rear axle, in the rear wheel well area. The lights shall be wired into the chassis light system and shall be flush mounted within a rubber grommet.

Y\_\_N\_\_

## STOP/TAIL, TURN AND BACKUP LIGHTS

Whelen M6 series lights shall be installed at the rear of the apparatus as follows:

- Red LED stop/tail/turn light, one (1) each side
- Clear LED backup light, one (1) each side

Each shall be installed inside a one-piece housing, one each side. The lower rear warning light shall be included in the 3 light housing.

Y\_\_N\_\_

## REAR LOWER LIGHTS BEZEL COLOR

The surface mounted lower stop/tail/turn and back up lights shall include chrome bezels.

Y\_\_N\_\_

## LICENSE LIGHT AND BRACKET

A polished aluminum LED license plate light and bracket shall be installed on the rear of the vehicle.

Y\_\_N\_\_

## LED CAB GROUND LIGHTS (2)

Under body lighting will be provided for the apparatus cab doors. Two (2) LED strip lights with clear lenses will be mounted below the apparatus cab, one (1) under each cab door. The lights will be controlled by the transmission park engagement.

Y\_\_N\_\_

## LED REAR TAILBOARD / BUMPER GROUND LIGHTS (2)

Under tailboard/bumper lighting will be provided for the rear of the apparatus. Two (2) LED strip lights with clear lenses will be angle mounted below the rear tailboard/bumper. The lights will be controlled by the transmission park engagement.

# MELROSE TOWNSHIP FIRE & RESCUE

## RECESSED STEP LIGHTS - LED

Y\_\_N\_\_

There shall be LED recessed step lights mounted in such a manner as to light the area around the runningboards, tailboard, and rear intermediate step.

## COMPARTMENT DOOR SWITCHES

Y\_\_N\_\_

All exterior compartment doors will be provided with a door switch that shall activate the "Door Ajar" indicator light.. The switch shall be installed not to interfere with loading or unloading the equipment stored within the compartment.

## DOOR AJAR INDICATOR

Y\_\_N\_\_

There shall be a red flashing door-ajar indicator located on the cab in easy view of the driver. The light shall be illuminated automatically whenever the apparatus transmission is shifted from park and the following conditions exist:

- Any passenger or equipment door is open.
- Any ladder or equipment rack is not in the stowed position.
- The aerial stabilizer system not in its stowed position.
- Powered light tower is extended.
- Any other device is opened, extended or deployed that creates a hazard, or is likely to cause damage to the apparatus if it is moved.

## REMOTE SPOT LIGHT

Y\_\_N\_\_

The cab shall include one (1) Golight model 30004 (white) remote controlled spotlight. The Stryker LED spotlight has:

- 10 High Flux LED's
- Wireless or Hardwired Remote Control Options
- Permanent or Portable Mounting Options
- 370° Rotation x 135° Tilt
- 320,000 Candela, Max Beam Distance 3,711 ft
- 2.8 amps
- 8° Beam Angle
- 40 watts
- UV Ray and Saltwater Resistant
- Weather Proof for Land and Sea Applications
- Stainless Steel Mounting Plate for permanent mount units
- 5 Year Limited Warranty

The spotlight shall be mounted on the cab roof in a location determined at the preconstruction conference.

## FRONT SCENE LIGHTS

Y\_\_N\_\_

The front upper body shall include two (2) Whelen M6 scene lights, one (1) each side which shall be surface mounted. The Whelen lights shall offer LED directional lighting from 2 to 40-degrees with internal and external optics.

# MELROSE TOWNSHIP FIRE & RESCUE

## **SIDE SCENE LIGHTS**

Y\_\_N\_\_

The front upper sides of the body shall include two (2) Whelen M6 scene lights, one (1) each side which shall be surface mounted. The Whelen lights shall offer LED directional lighting from 2 to 40-degrees with internal and external optics.

## **SIDE SCENE LIGHTS**

Y\_\_N\_\_

The rear upper sides of the body shall include two (2) Whelen M6 scene lights, one (1) each side which shall be surface mounted. The Whelen lights shall offer LED directional lighting from 2 to 40-degrees with internal and external optics.

## **REAR SCENE LIGHTS**

Y\_\_N\_\_

The rear of the body shall include two (2) Whelen M9 scene lights, one (1) each side which shall be surface mounted. The Whelen lights shall offer LED directional lighting from 2 to 40-degrees with internal and external optics.

## **SCENE LIGHTING BEZEL COLOR**

Y\_\_N\_\_

The surface mounted scene lights shall include chrome bezels.

## **SCENE LIGHTING SWITCHING**

Y\_\_N\_\_

The body and/or cab mounted scene lights shall include switches in the cab. Each side of the apparatus will include its own switch if applicable.

## **SCENELIGHT BACKUP RELAY**

Y\_\_N\_\_

A relay will be provided in the rear scene light circuit to allow automatic use of the lights when the vehicle is placed in reverse.



# MELROSE TOWNSHIP FIRE & RESCUE

Y\_\_N\_\_

## **WILL-BURT LIGHT TOWER SPECIFICATIONS**

**Night Scan Chief NS 2.3-500-4 Will-Burt Night Scan XL 200 12/24 VDC  
Model Number 720700135**

A Will-Burt Night Scan Chief Series light tower shall be provided. The horizontal surface mounted tower shall be raised electrically and pneumatically.

Mounting provisions shall be provided with the assembly. The installation of unit shall be as follows:

- 1. Light tower installation location: Body Roof**
- 2. Floodlight and tower control location: L1**

### **Design and Construction**

The tower shall be a series of graduated extruded aluminum tubes that nest one inside another. The tower shall have an extended height of approximately 7.5 ft. / 2.3 m above the mounting location and a stowed height of approximately 9.4375" / 24 cm above the mounting surface. The tower shall be approximately 39.0625" / 99.2 cm wide by 53.75" / 136.5 cm in length. The tower shall be designed to sustain the intended top load with a 125 percent safety factor and shall exceed NFPA requirements of a minimum 50 mph (80 kph) wind when in a fully raised and unguyed position. The tower shall be of a compact design with a total weight of approximately 131 lbs. / 59.4 kg. The light tower shall not exceed 150 lbs. / 68 kg.

The tower tubular sections shall be constructed of high strength, heat-treated 6061-T6 aluminum tubes and collars. Each tube shall be protected by low friction synthetic collars for smooth operation and long life. Bumpers shall be designed to reduce shock on extension and retraction. All exterior surfaces shall be anodized for long life and fasteners shall be stainless steel for corrosion resistance.

### **Nesting System**

The tower shall have an "auto-stow" function. A double click of the mast down button will stow, retract, and shut power off to the unit. An integrated saddle assembly with synthetic, non-marring rests shall be provided for the tower and flood light assembly in the nested position.

### **Floodlight Rotation and Tilt Operation**

The tower shall be equipped with a Will Burt Model RCP (remote control positioner) to control the rotation and direction of the light. The remote control positioner unit shall be equipped with two (2) gear motors; one for rotation and one for the floodlight bank. The positioner shall also rotate the floodlight assembly from zero to 355 degrees and tilt the floodlight assembly from 0 to 337 degrees.

# MELROSE TOWNSHIP FIRE & RESCUE

(Include Wired or Wireless Controls)

## **Hand-held Wired Remote Control**

A safety yellow in color for high visibility, hand held remote control pendant, connected to a quick-disconnect, 25 ft. (7.62 meter) coiled cord shall be provided to control the tower. All functions of the tower shall be accessible through this remote control including elevating with “auto-up” ability, lowering with “auto-stow” ability, rotation and tilting of the floodlight assembly and floodlight switching. An auxiliary power button shall also be included to control optional equipment such as strobe lights or a camera that is mounted to the mast. An emergency stop button shall be integrated into the hand held control for added safety or shall be located on the junction box. Each button of the controller shall have a corresponding LED light that provides operational feedback. An LED display that includes alphanumeric feedback shall be located in the center of the controller. This display shall provide operational feedback and error codes if they occur.

## **Hand-held Wireless Remote Control**

A safety yellow in color for high visibility, wireless hand held remote control with a range of 100 feet (30.5 meters) and unique transmitting and receiving addresses to eliminate interference shall be provided to control the tower. All functions of the tower shall be accessible through the wireless remote control including elevating with “auto-up” ability, lowering with “auto-stow” ability, rotation and tilting of the floodlight assembly and floodlight switching. An auxiliary power button shall also be included to control optional equipment such as strobe lights or a camera that is mounted to the mast. Each button of the controller shall have a corresponding LED light that provides operational feedback. An LED display that includes alphanumeric feedback shall be located in the center of the controller. This display shall provide operational feedback and error codes if they occur.

## **Panel-mount Control**

A panel mount controller for installation on the vehicle shall be provided to control the tower. All functions of the tower shall be accessible through the panel mount controller including elevating with “auto-up” ability, lowering with “auto-stow” ability, rotation and tilting of the floodlight assembly and floodlight switching. An auxiliary power button shall also be included to control optional equipment such as strobe lights or a camera that is mounted to the mast. Each button of the controller shall have a corresponding LED light that provides operational feedback. An LED display that includes alphanumeric feedback shall be located in the center of the controller. This display shall provide operational feedback and error codes if they occur.

## **Pneumatic Controls**

The pneumatic controls to raise and lower the tower shall include an air regulator and solenoid valves. Lights will be operational within approximately 8 seconds from elevation initiation. The tower shall be able to be fully elevated in approximately 50 seconds. In the event of malfunction of the elevating system while the tower is in operation or being deployed, a method of limiting the rate of descent shall be provided to prevent injury to personnel or damage to the equipment.

Two allen keys as well as directions are included under the cover to fold the mast into the saddle if manual stowage of mast is required.

The air supply for pneumatic operation of the tower shall be from an integral compressor with air regulator.

# MELROSE TOWNSHIP FIRE & RESCUE

## **Electrical Installation**

The wiring harness for the floodlights, accessories, and remote control positioner shall be internally routed through telescoping aluminum tubing with a highly flexible coil cord.

Installer supplied 12 or 24 volt electrical wiring shall be provided with electrical connections at the tower assembly in conjunction with appropriate electrical power for the floodlights. The installer as required by manufacturer's installation guidelines shall provide appropriate wiring from the circuit breaker panel for connection to the tower. The electric power to the tower and light units shall automatically disconnect whenever the tower is in the nested position.

The tower operation area shall be illuminated automatically by a look up light whenever the tower is in operation. Any upward movement of the tower from the nested position shall energize a red warning light in the cab and a secondary light located at the tower control area. In addition, the installer shall provide parking brake interlocks and other equipment as required by applicable NFPA standards.

## **Floodlight System**

Four (4) Night Scan XL 200 lamps shall be provided. The 125 watt 12/24 VDC lighthouse shall incorporate a combination of 8 spot lenses and 8 flood lenses installed in an IP-69k rated die-cast white powder coated aluminum housing. The configuration shall consist of a total of 16 white LEDs with a clear optic reflector assembly, and a clear non-optic polycarbonate lens. The Night Scan XL 200 shall have 20,000 usable lumens for a total of 80,000 lumens. The lens/reflector assembly shall utilize a liquid injection molded silicon gasket to be resistant to water, moisture, dust, and other environmental conditions. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The light shall be vibration resistant. The Night Scan XL 200 shall have a warranty of 10 years. The fixture shall measure H=4.4" / 11 cm, W=13" / 33 cm, D=3.6" / 9.1 cm

## **Warranty**

The tower assembly shall carry a two (2) year parts and labor warranty. Exact provisions of such warranty shall be provided with the proposal and at time of delivery of product.

## **Labeling and NFPA Compliance**

Essential operating instructions and warning labels shall be provided in compliance to applicable OSHA, SAE, and NFPA standards. Appropriate labels on the "hazards of electrocution" associated with the operation of a light tower shall be installed in the appropriate areas.

A label shall be provided at the operator's position by the installer with the following information:

1. Extended height of the tower from the ground.
2. Bulb replacement data.

The tower and installation shall be in full compliance to applicable sections of the current NFPA 1901 Standard.

## **Testing and Quality Assurance**

The tower manufacturer shall be ISO 9001:2008 certified. In addition, quality control and manufacturer testing shall be completed prior to shipment of the tower. The final installer shall test the operation of the tower for a minimum of 2 hours at full load, with testing documentation provided upon delivery.

## **Manuals**

Detailed service, parts, operating, and installation manuals shall be provided by the tower manufacturer. Samples of such manuals shall be provided on request. A CD ROM manual will be provided to the end user.

# MELROSE TOWNSHIP FIRE & RESCUE

## LIGHT TOWER INSTALLATION

Y\_\_N\_\_

The light tower shall be installed on the reinforced body roof in the recessed portion.

## HOUSEHOLD DUPLEX RECEPTACLE- SHORE POWER/INVERTER

Y\_\_N\_\_

There shall be three (3) 120-volt/20 amp household duplex receptacle(s) mounted as directed by the Fire Department. A hinged weatherproof cover shall be installed over any exterior mounted receptacle(s).

Location(s): To be determined at pre-construction

## RADIO WIRING

Y\_\_N\_\_

Radio wiring shall be supplied in the cab for the installation of a customer supplied radio.

## RADIO INSTALLATION

Y\_\_N\_\_

The apparatus shall have a customer supplied single head radio installed as directed. Programming of the radio is not included.

## ANTENNA WIRING (2)

Y\_\_N\_\_

The apparatus shall have two (2) antenna bases and cables supplied and installed as directed. The whip shall be customer supplied. The antennas cables shall be ran to the cab dash area.

## BACKUP CAMERA

Y\_\_N\_\_

A back-up camera with color monitor shall be installed on the apparatus. The monitor shall be a minimum 7" color LCD display and be on the dash, center console or in place of the rear view mirror. A waterproof I/R camera shall be mounted on the rear of the apparatus. The camera shall provide not less than 270 pixel resolution. The system shall automatically activate when the vehicle is placed in reverse. An on/automatic selector switch shall be mounted on the chassis dash.

## NFPA WARNING LIGHTS

Y\_\_N\_\_

The optical warning system on the fire apparatus shall be capable of two separate signaling modes during emergency operations. One mode shall signal that the apparatus is responding to an emergency and is calling for the right of way. The other mode shall signal that the apparatus is stopped and is blocking the right of way.

The switching for the two different modes shall be through switches and relays that sense the position of the parking brake.

# MELROSE TOWNSHIP FIRE & RESCUE

## **CAB FRONT LIGHTBAR**

Y\_\_N\_\_

One (1) Whelen brand Justice JE2NFPA lightbar shall be mounted centered on the front of the cab roof. The lightbar shall be 56.00 inches in length. The lightbar shall feature eight (8) red LED lights and two (2) clear LED lights. The clear lights shall be disabled with transmission park engaged. The cable shall exit the lightbar on the right side of the cab.

## **FLASHING HEADLIGHTS**

Y\_\_N\_\_

The chassis high beam headlights will have an alternating flash pattern and will be controlled by a rocker switch.

## **INBOARD FRONT WARNING LIGHTS**

Y\_\_N\_\_

The front grille shall include two (2) Whelen M6 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn. The lights shall be mounted to the grille within a bezel.

The warning lights shall be red.

## **INBOARD FRONT WARNING LIGHTS**

Y\_\_N\_\_

The front grille shall include two (2) Whelen M6 LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn. The lights shall be mounted to the grille within a bezel.

The warning lights shall be green.

## **INTERSECTION WARNING LIGHTS**

Y\_\_N\_\_

The front bumper tail or the corner of a commercial cab hood shall include two (2) Whelen M2 series Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the sides of the apparatus within a bezel.

The warning lights shall be red.

## **REAR WHEEL WELL WARNING LIGHTS**

Y\_\_N\_\_

The rear wheel wells shall include two (2) Whelen M4 LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn. The lights shall be mounted to the sides of the body within a bezel.

The warning lights shall be red.

# MELROSE TOWNSHIP FIRE & RESCUE

## REAR TAILBOARD SIDE WARNING LIGHTS

Y\_\_N\_\_

The rear tailboard shall include two (2) Whelen M6 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn. The lights shall be mounted within a cast housing located on the top of the tailboard sides.

The warning lights shall be red.

## FRONT UPPER BODY WARNING LIGHTS

Y\_\_N\_\_

The front upper body shall include two (2) Whelen M6 series Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the front of the apparatus within a bezel.

The warning lights shall be red/white split. The clear lights shall be disabled with transmission park engaged.

## FRONT UPPER BODY SIDE WARNING LIGHTS

Y\_\_N\_\_

The front upper body sides shall include two (2) Whelen M6 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the sides of the apparatus within a bezel.

The warning lights shall be red.

## REAR UPPER BODY SIDE WARNING LIGHTS

Y\_\_N\_\_

The rear upper body sides shall include two (2) Whelen M6 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the sides of the apparatus within a bezel.

The warning lights shall be red.

## UPPER REAR WARNING LIGHTS

Y\_\_N\_\_

The upper rear of the apparatus shall include two (2) Whelen M9 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the apparatus within a bezel.

The warning lights shall be red.

## MID REAR WARNING LIGHTS

Y\_\_N\_\_

The middle rear of the apparatus shall include two (2) Whelen M6 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the apparatus within a bezel.

The warning lights shall be green.

# MELROSE TOWNSHIP FIRE & RESCUE

Y\_\_N\_\_

## LOWER REAR WARNING LIGHTS

The lower rear of the apparatus shall include two (2) Whelen M6 Super LED warning lights, one (1) on each side. The lights shall feature multiple flash patterns including steady burn for solid colors and multiple flash patterns for split colors. The lights shall be mounted to the apparatus within a bezel.

The warning lights shall be red.

Y\_\_N\_\_

## WARNING LIGHTING BEZEL COLOR

The body and/or cab surface mounted warning lights shall include chrome bezels.

Y\_\_N\_\_

## WARNING LIGHTING LENS COLOR

The body and/or cab surface mounted warning lights shall include colored lenses to match the warning light color.

Y\_\_N\_\_

## WARNING LIGHTING SWITCHING

The body and/or cab mounted warning lights shall include switches in the cab. Each side of the apparatus will include its own switch if applicable.

A master warning light switch shall also be included.

Y\_\_N\_\_

## TRAFFIC ADVISOR

A Whelen TAL85 LED traffic advisor shall be installed on the rear of the apparatus, as high as is practical. The light is an eight (8) head LED bar and will be operated by the Whelen control head.

Y\_\_N\_\_

## SIREN CONTROL HEAD

A Whelen CCSRNT36 siren/light/traffic advisor controller head shall be installed and mounted in the cab dash area. The siren control box shall be located in the cab in a dry location.

Y\_\_N\_\_

## ELECTRONIC SIREN SPEAKER

The bumper shall include one (1) Whelen Engineering Inc. model SA315P, 100 watt speaker which shall be mounted within the bumper fascia.

Y\_\_N\_\_

## TRAIN HORNS

HornBlasters conductors special 232 train horn kit shall be supplied and installed. The kit shall come with separate tank and compressor units that are fully sealed. The horns shall be activated by a switch in the cab.

# MELROSE TOWNSHIP FIRE & RESCUE

## ROAD SAFETY KIT

Y\_\_N\_\_

One (1) 2-1/2# ABC DOT approved fire extinguisher shall be provided. It shall be mounted in a accessible location to the driver.

One (1) set of DOT approved hazard triangles shall be supplied with the chassis. They shall be stored in a case and shipped loose with the apparatus.

## APPARATUS WARRANTY - ONE YEAR

Y\_\_N\_\_

The completed apparatus shall be warranted to be free from defects in workmanship and materials under normal use and service for a period of one (1) year from the date of delivery to the Fire Department. This warranty shall cover the costs for parts and labor for this period of time.

## WHEEL CHOCKS

Y\_\_N\_\_

One (1) pair of Worden model HWG Grip-Lock aluminum wheel chocks shall be mounted on the apparatus. They shall be mounted in model U815 slide-out brackets.

## WHEEL CHOCKS LOCATION

Y\_\_N\_\_

The wheel chocks shall be shipped loose in a body compartment.

## STREAMLIGHT FLASHLIGHT

Y\_\_N\_\_

There shall be two (2) Streamlight FIRE VULCAN, LED rechargeable flashlight(s) supplied and installed.

Location(s): Determined at preconstruction conference.

## PURCHASER'S RESPONSIBILITY

Y\_\_N\_\_

These specifications are as complete, accurate and up to date as possible; however, it is the purchaser's responsibility for the safe, legal operation and maintenance of this apparatus and equipment.

## DELIVERY PREP

Y\_\_N\_\_

The apparatus shall be detailed and cleaned prior to delivery.

All metal edges shall be carefully sanded and rounded. All compartment and exterior sheeting seams shall be carefully caulked.

Any loose equipment shall be stored on the truck.