

Lexington Fire Department

One (1)
00-03-230A

Payment Terms - "P" Progress Payments, 50% 50%

Y__N__

PAYMENT TERMS

Progress payments shall be made as follows: The first payment shall be 50% of the purchase price, made upon completion of the chassis. The Final payment shall be 50% of the purchase price, made upon delivery to and acceptance by the Purchaser.

One (1)
00-04-0010

Proposal Expiration

Y__N__

PROPOSAL EXPIRATION

Unless this proposal is accepted within 30 days from the date of the quotation, Seagrave reserves the right to either change the price or any other terms or withdraw this proposal in its entirety.

One (1)
00-04-0015

Federal & State Regulations, NFPA Standards & Import Tariffs

Y__N__

FEDERAL & STATE REGULATIONS, NFPA STANDARDS & IMPORT TARIFFS

In the event that any applicable Federal or State Regulations (DOT, FMVSS, EPA, etc.), National Fire Protection Association Standards or import tariffs which are enacted during the course of this contract, and which requires a change in the contract specifications and purchase price in order for the Apparatus and Equipment to comply with such regulation, the parties will execute a change order describing the change in the specifications and increasing the purchase price by an amount equal to the increase in the costs of producing the Apparatus and Equipment.

One (1)
00-04-0120

Intent of Specifications

Y__N__

INTENT OF SPECIFICATIONS

It is the intent of these specifications to cover the design, manufacture and delivery to the purchaser of a complete fire apparatus equipped as specified herein. These specifications include the general requirements of design, material content and construction as well as certain equipment that shall be provided by the contractor. Not all details of the design, material content and construction of the fire apparatus are herein specified. Any such design, material content and construction not specified herein are left to the sole discretion of the seller contractor.

One (1)

Compliance with NFPA 1901

Y__N__

(Proposal)

02/04/19

Lexington Fire Department

00-04-01A0

COMPLIANCE WITH NFPA 1901

The National Fire Protection Association Standard “NFPA 1901 - Standard for Automotive Fire Apparatus - Current Edition” (hereinafter referred to as NFPA 1901) in effect at the time of the purchase shall be used as a reference and its requirements shall be met by the apparatus manufacturer. The apparatus shall be constructed in accordance with federal and state laws at the time of bid. Any federal, state or NFPA amended changes that shall affect the cost of producing said apparatus shall be charged to the purchaser. Mandatory minor apparatus equipment as stated in the applicable paragraphs of the NFPA standard shall not be provided unless specifically stated and listed in purchaser's written specifications.

Any and all references to “NFPA 1901” within this document shall refer to the current edition of NFPA 1901 in effect at the time of the purchase.

One (1)
00-04-01B0

Purchaser's NFPA 1901 Responsibilities

Y___N___

PURCHASER'S NFPA 1901 RESPONSIBILITIES

In accordance with NFPA 1901, current edition, it shall be the responsibility of the purchaser to specify the following details of the apparatus:

- Its required performance, including where operations at or above elevations of 2000 ft. or on grades greater than 6 percent are required.
 - The maximum number of firefighters to ride within the apparatus.
 - Specific electrical loads that are to be part of the minimum continuous electrical load as defined in current edition of NFPA 1901 at the time of bid.
 - Any hose, ground ladders, or equipment to be carried by the apparatus that exceed the minimum requirements of the NFPA 1901 standard in effect at the time of the bid.
- Equipment weight and location on the apparatus are the responsibility of the purchaser as a prerequisite of defining the loaded vehicle's vertical center of gravity for rollover stability calculations, when required.

One (1)
00-04-023E

Acquaintance with Specifications - meets Requirements

Y___N___

ACQUAINTANCE WITH SPECIFICATIONS

Seagrave Fire Apparatus LLC and its Sales Representatives have reviewed your bid specifications. It is our opinion that the fire apparatus as depicted in this proposal meets or exceeds the requirements of the bid specifications. The purchaser is required to review our Contractor's Specifications contained herein. Because of the intricacies in fire apparatus design, engineering and manufacturing, the Contractor's Specifications, along with any mutually approved changes, shall prevail in the event of a discrepancy between the purchaser's original bid specifications and the contractor's specifications.

One (1)

Single Source Manufacturer - SFA Custom Chassis

Y___N___

(Proposal)

02/04/19

Lexington Fire Department

00-04-0430

SINGLE SOURCE MANUFACTURER

Seagrave is a single source fire apparatus manufacturer. A single source manufacturer is defined as a manufacturer who designs, engineers and manufactures the entire apparatus in the factory of the bidder. The use of commonly incorporated components such as the diesel engine, the transmission, the pump, lighting fixtures, etc. is acceptable. However, calling the cab/chassis/drivetrain or the outriggers/torque box/aerial device a "component" shall not be acceptable. Single source warranty and service provision from Seagrave Fire Apparatus, LLC and its distributors, sales representatives and service network shall be provided to insure parts availability and undivided warranty responsibility. There shall be no exceptions to these conditions.

One (1)
00-04-1100

Third Party Manufactured Products - Discontinuance Policy

Y__N__

DISCONTINUANCE POLICY

The apparatus manufacturer furnishes and installs components which are manufactured by 3rd Party Vendors. From time to time, these products are either changed or discontinued by the manufacturer. The apparatus manufacturer reserves the right to replace a discontinued 3rd Party Vendor manufactured component with an equivalent model.

One (1)
00-04-1110

Standard Placement of Components

Y__N__

STANDARD PLACEMENT OF COMPONENTS

Any deviation from the apparatus manufacturer's standard placement shall incur additional charges.

Three Hundred
Sixty Five
(365)
00-04-5710

Completion Date (Enter Days in Qty)

Y__N__

COMPLETION DATE

Barring any significant change in our current backlog of orders, and delays due to strikes, war or international conflict, failures to obtain materials, or other causes beyond our control not preventing, the apparatus and equipment detailed in the attached specification shall be delivered to you within approximately **Three Hundred Sixty-Five (365) Calendar Days** after receiving the complete order and signed approval drawing. It shall be understood and agreed that changes requested after the order placement and the resulting signed change orders and approval drawings, if approved, after the order has been released to Engineering, shall constitute a valid cause for production delay and without penalty to the contractor.

Lexington Fire Department

One (1)
00-04-5910

Proposal Drawings

Y__N__

PROPOSAL DRAWINGS

Included with our proposal are line drawings of the apparatus being proposed. These drawings shall be drawn to scale on a CAD system to assure an accurate and professional drawing. The drawings show five (5) views of the vehicle: front, rear, both sides and top. The drawings show the wheelbase and overall dimensions of the apparatus, proposed compartment sizes and features, booster tank position and the location of all emergency warning equipment, work lights, seating and other major items that are to be provided on the apparatus.

One (1)
00-04-5B10

Turning Radius Drawing

Y__N__

TURNING RADIUS DRAWING

A turning radius drawing has been provided showing the turning radius of the vehicle as configured in the proposal. The diagram shall show the curb-to-curb and wall-to-wall clearance as well.

One (1)
00-04-6210

Bid Bond - 10%

Y__N__

BID BONDS

Each bidder shall supply with their bid proposal a bid bond in the amount of 10% of the proposed contract amount. Bid Bonds by salesmen or agents of the manufacturer are not acceptable. Bids shall expire after 30 days immediately following the date of the bid proposal. All required insurance coverage shall be underwritten by insurers legally allowed to conduct business in all states of the U.S. and shall have a policy holders rating of "A" or better in the latest evaluation by A. M. Best Co.

Proposals received from bidders who do not build the chassis shall provide a warranty that is issued jointly and severally by, and signed by, both the bidder and manufacturer of the chassis. Bidders who build their own chassis shall provide a warranty issued in their name only.

If the successful bidder does not manufacture the chassis, the bidder shall supply a separate warranty bond which guarantees all terms and conditions of the warranty and names, as co-principals, both the bidder and the chassis manufacturer. This warranty bond shall be issued for the contract amount and shall remain in force for a term which is consistent with the term of the warranty quoted in the bid.

No exception to these requirements shall be allowed if the bid is to be considered compliant.

One (1)

Performance Bond - 100%

Y__N__

(Proposal)

02/04/19

Lexington Fire Department

00-04-6410

PERFORMANCE BOND

The successful bidder shall furnish a 100% Performance Bond within 10 days after receipt of purchase order or signed contract. The bond is to be furnished by the company who will build the apparatus proposed. Bonds by salesmen or agents of the manufacturer are not acceptable. All required insurance coverage shall be underwritten by insurers legally allowed to conduct business in all states of the U.S. and shall have a policy holders rating of "A" or better in the latest evaluation by A. M. Best Co.

No exception to these requirements shall be allowed if the bid is to be considered compliant.

One (1)

Delivery Penalty

Y__N__

00-04-6810

DELIVERY PENALTY

Seagrave Fire Apparatus shall furnish and deliver the apparatus within 300 calendar days from receipt of order by Seagrave, Clintonville, WI; provided, however, the order shall be fully specified, accurate and completely defined. In the event that the order is not fully specified, accurate and completely defined, the delivery date shall be adjusted as determined by Seagrave. Any resulted delivery penalty will only be applicable after such amended delivery date. **Liquidated damages in the amount of \$500 per day shall go into effect on the 366th day or such amended delivery date unless due to force majeure events, change order or other actions of the purchaser that cause a delay and are beyond the control of Seagrave.**

One (1)

Approval Drawings

Y__N__

00-04-7000

APPROVAL DRAWINGS

Following the acceptance of a complete and approved order, three (3) sets of engineering, blueprint type drawings, specifically for this apparatus, shall be provided by the manufacturer and shall be approved by the Fire Department before construction begins. Both the Fire Department and the manufacturer's representative shall have a copy of this drawing. It shall become part of the total contract. These drawings shall be drawn to scale on a CAD system to assure an accurate and professional drawing. The drawing shall show five (5) views of the vehicle (front, rear, both sides and top). The drawings shall show the wheelbase and overall dimensions of the apparatus, final compartment sizes and features, booster tank position, the location of all emergency warning equipment, work and scene lights.

One (1)

Change Orders

Y__N__

00-04-7100

(Proposal)

02/04/19

Lexington Fire Department

CHANGE ORDERS

To ensure the proper engineering and construction of the purchaser's custom fire apparatus in a timely manner, the contractor shall consider the order final and complete at placement of the order. Change orders requested after the order placement are discouraged. It shall be understood and agreed that any changes, if approved, after the order has been released to Engineering, shall constitute a valid cause for production delay and without penalty to the contractor.

One (1)
00-04-811C

Order Clean-Up Conference, Travel Included

Y__N__

ORDER CLEAN-UP CONFERENCE

One (1) "Order Clean-Up" conference trip for representatives of the purchaser shall be included in the bid. The conference shall be held at a company facility or an authorized representative's facility during normal business hours, Monday - Friday. All cost of transportation, meals and lodging shall be included. A distributor or sales representative shall accompany the purchaser on the trip. The conference shall be held prior to the commencement of any work being done on the apparatus. Factory sales and engineering personnel shall participate in the conference as needed to ensure that the apparatus fulfills all the requirements of the accepted bid. Authorized representatives from both the purchaser and manufacturer shall approve and sign any changes made during these meetings prior to the commencement of any work being done on the apparatus.

It is understood and agreed that delays beyond thirty (30) days of contract approval for Order Clean-Up conference changes in specifications shall be cause for delay in delivery.

Four (4)
00-04-813Z

Number of Fire Dept Representatives Attending Order Clean-Up Conference (Ea)

Y__N__

Four (4) fire department representatives shall attend the Order Clean-Up Conference.

One (1)
00-04-8200

In-Process Inspection Trip

Y__N__

IN PROCESS INSPECTION TRIP

One (1) In Process Inspection trip for representatives of the purchaser shall be included in the bid. All cost of transportation, meals and lodging shall be included. A distributor or sales representative shall accompany the purchaser on the trip. The Purchaser requires that this inspection occur when at least one of the units has the body and cab mounted to the chassis.

Four (4)
00-04-820X

Number of Fire Dept Representatives Attending Order In Process (ea)

Y__N__

Four (4) fire department representatives shall attend the In Process Inspection

Lexington Fire Department

One (1)
00-04-831C

Final Inspection, Travel Included

Y__N__

FINAL INSPECTION TRIP

One (1) "Final" inspection trip for representatives of the purchaser shall be included in the bid. The inspection shall take place at a Company facility or an authorized representative's facility of the Company's during normal business hours, Monday - Friday. The selection of the inspection location shall be done at the sole discretion of the Company. The reasonable and customary cost of transportation, meals and lodging shall be included. An authorized distributor or manufacturer's sales representative may accompany the Purchaser on the inspection trip.

Four (4)
00-04-834Z

Number of Fire Department Representatives Attending Final Inspection (Ea)

Y__N__

Four (4) fire department representatives shall attend the Final Inspection.

One (1)
00-04-8400

Pre-Delivery Road Trip and Final Factory Checklist

Y__N__

PRE-DELIVERY ROAD TRIP AND FINAL FACTORY CHECKLIST

Prior to delivery, the completed apparatus shall be thoroughly inspected by the factory. This inspection shall include a road test of the apparatus. During the factory inspections and road testing, a checklist shall be utilized by factory personnel to document the inspection and road test results. The checklist shall include:

- Documentation of the make, model and serial numbers of all major components such as the engine, transmission, pump, axles, etc.
- Complete, comprehensive operational check of all chassis/drive train components and fluid levels.
- A comprehensive review of the entire exterior and interior of the apparatus for fit and finish, checked against the customer's order specifications, and any ensuing change orders.
- A thorough test of all driving systems under actual highway and city driving conditions.

One (1)
00-04-8463

Final Delivery - Zone 3

Y__N__

DELIVERY

The fire apparatus shall be delivered over the road and under its own power to insure proper break-in of all driving components while still under warranty. Rail or truck freight shipment of the apparatus is not acceptable.

Delivery shall be to an area located in Zone 3.

Lexington Fire Department

One (1)
00-04-8520

Familiarization - Aerials

Y__N__

FAMILIARIZATION

An experienced and qualified distributor or sales representative shall familiarize Fire Department personnel (as designated by the authority in charge) in the proper operation, care and maintenance of the apparatus delivered.

The representative must be a qualified, trained agent of the local authorized distributor or sales representative, or a direct employee of the manufacturer of the apparatus.

A factory field service technician shall provide instruction to the Fire Department regarding the aerial device. The familiarization period shall consist of up to three (3) daytime sessions over a period of three (3) consecutive days during the normal work week (Monday - Friday). The number, length and time of the sessions may vary due to the nature of the apparatus and availability of attendees and must be approved by the factory in advance. Evening sessions may be arranged in advance with the Seagrave Fire Apparatus Service Department under special circumstances. Due to scheduling, advance notice must be received in writing at least three (3) weeks prior to shipment or date of instruction and will be considered on a first come, first serve basis. The balance of any time remaining in a session may be devoted to minor adjustments or corrections to the apparatus for items which may have developed while in transit from the factory.

One (1)
00-04-8570

Familiarization - Extra Days for Aerial Device (Ea)

Y__N__

FAMILIARIZATION

One (1) extra days of familiarization shall be provided and will be scheduled consecutive to the standard three (3) day familiarization of the aerial device.

One (1)
00-04-8700

Documentation - NFPA Requirements

Y__N__

DOCUMENTATION - NFPA REQUIREMENTS

All NFPA required documentation and certifications shall be supplied with the apparatus at the time of delivery.

One (1)
00-05-013A

General Design Requirements - S/S Custom Cab, S/S Body

Y__N__

GENERAL DESIGN REQUIREMENTS

The specified apparatus shall be a custom cab type; designed, engineered and manufactured specifically for the fire service in North America. The apparatus meets or exceeds the requirements of the NFPA 1901, current edition, in all respects.

Lexington Fire Department

Seagrave's deluxe custom cab chassis shall be provided. It incorporates an all steel cab for strength, durability and safety. The cab and body sheet metal shall be constructed of stainless steel, no exception. The Seagrave cab incorporates a protective safety-cage design that totally surrounds and protects the seat belted driver, officer and crew. The safety-cage, composed of heavy gauge stainless steel, makes the Seagrave deluxe cab an extremely strong cab.

One (1)
00-05-0210

Gross Vehicle Weight - with Certificate at Delivery

Y__N__

GROSS VEHICLE WEIGHT

The manufacturer shall be responsible for proper weight distribution upon the chassis and axles.

The apparatus when loaded, shall have not less than 25% nor more than 45% of the weight on the front axle and not less than 55% nor more than 75% on the rear axle. A certified weight certificate showing weights on the front axle, rear axle and total weight for the completed apparatus with the water and fuel tanks full, but without personnel, equipment and hose shall be provided at the time of delivery.

In accordance with NFPA 1901, it shall be the responsibility of the purchaser to notify the manufacturer in the purchaser's specification of any hose, ground ladders, or equipment to be carried by the apparatus that exceeds the minimum requirements of the NFPA 1901 standard in effect at the time of the bid.

One (1)
00-05-032Z

Customer Declared Equipment Weight - 2001 To 2500 LB Evenly Distributed

Y__N__

CUSTOMER DECLARED EQUIPMENT WEIGHT

The customer declared equipment weight shall be from 2001 to 2500 pounds. This weight shall be evenly distributed.

One (1)
00-05-0420

Vehicle Performance Analysis Report

Y__N__

VEHICLE PERFORMANCE ANALYSIS

A performance analysis report shall be run on the vehicle, as ordered, using computer software to determine top speed, gradeability, optimum shift points and acceleration on various grades. The report shall be delivered with the completed vehicle, but shall be available prior to engineering of the vehicle.

One (1)
00-05-1010

Apparatus Overall Height --not to exceed 130"

Y__N__

APPARATUS OVERALL HEIGHT

Lexington Fire Department

The overall height of the completed apparatus **shall not exceed 130 inches**. This measurement shall be taken with the water tank empty and no hose, equipment or personnel on the apparatus. All permanently mounted equipment shall be in the stowed/travel position.

One (1)
00-05-1110

Apparatus Overall Length--no greater than 567 inches.

Y___N___

APPARATUS OVERALL LENGTH

The overall length of the completed apparatus **shall not exceed 567 inches**. This measurement shall be taken with all permanently mounted equipment in the stowed/travel position.

One (1)
00-05-2000

General Construction, Quality and Workmanship

Y___N___

GENERAL CONSTRUCTION, QUALITY AND WORKMANSHIP

The design and construction of the apparatus shall embody standard automotive heavy vehicle engineering practices. The apparatus shall be designed, engineered and constructed with due consideration for the severe service nature of the fire service. All parts of the apparatus shall be installed in accordance with the OEM specifications

Distribution of load between the front and rear axles shall be engineered so that all specified equipment, including a filled water tank, full complement of personnel and fire hose shall be carried without damage to the apparatus. Weight balance and distribution shall be in accordance with the recommendations of the National Fire Protection Association and current standard automotive practices.

All welding personnel that shall be utilized in the fabrication and construction of structural components of the apparatus chassis, body and aerial device shall hold a valid certificate from the AWS - American Welding Society.

The apparatus shall be designed to conform to applicable ANSI and NFPA 1901 standards. The following design criteria shall be applicable to this specification to the extent specified herein:

- American Society for Testing Materials (ASTM) - A-36, Specification for Structural Steel
- Society of Automotive Engineers, Inc. (SAE) - SAE Handbook
- American Welding Society (AWS) - AWS014.4-77 Classification and Application of Welded Joints for Machinery and Equipment
- American Society for Non-Destructive Testing (ASNT)

All sensitive components shall be protected against adverse weather conditions. Any exposed metal surface which is not painted or otherwise coated shall have a bright finish. Corrosion protection shall be provided between any dissimilar metals joined in the construction of this apparatus.

Lexington Fire Department

One (1)
00-05-2110

NFPA 1901 Stepping Surface Certification

Y___N___

STEPPING SURFACE CERTIFICATION

A certification that all materials used for exterior surfaces designated as stepping, standing and walking areas, all interior steps and all interior floors meet the slip resistance requirements of the applicable edition and section of NFPA 1901 shall be provided with the delivery documentation.

One (1)
00-05-320U

Tower Test and Certification - UL

Y___N___

TOWER TEST AND CERTIFICATION

The tower shall be tested by Underwriter's Laboratories (UL) at the manufacturer's facility and shall conform to NFPA requirements and standards. Copies of all tests shall be provided with the delivery documentation.

One (1)
00-05-4000

Performance Requirements and Test - NFPA

Y___N___

PERFORMANCE REQUIREMENTS AND TEST - NFPA

A road test shall be conducted with the apparatus loaded per NFPA recommendations (unless otherwise specified) and a continuous run of ten (10) miles or more shall be made during which time the apparatus shall show no loss of power or overheating. The transmission drive shaft or shafts and rear axles shall run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus.

The apparatus must be capable of accelerating to 35 mph from a standing start within 25 seconds on a level concrete highway without exceeding the maximum governed rpm of the engine.

The fully loaded vehicle shall be capable of obtaining a minimum top speed of 50 mph on a level concrete highway with the engine not exceeding its governed rpm (full load).

The apparatus shall be able to maintain a speed of 20 mph on any grade up to and including 6%.

The service brakes shall be capable of stopping the fully loaded vehicle in 35 feet at 20 mph on a level concrete highway.

The apparatus shall be tested and approved in accordance with NFPA standard practices.

Lexington Fire Department

One (1) **Capitol S/S Tilting Cab - 95' Aerialscope Non-Quint Mid Mt Platform** Y__N__
10-00-3740

GENERAL

Chassis shall be a new, heavy duty, custom fire apparatus design built expressly for the fire service. All standard components that have not been specified shall be provided.

Chassis shall be designed, engineered and built by the bidder and be the manufacturer's first line custom chassis.

The chassis shall be suitable for heavy duty service with all components having adequate strength and capacity for the intended load to be sustained and the type of service required.

One (1) **Wheelbase 249"** Y__N__
10-00-9910

WHEELBASE

The wheelbase shall be: **249.00 inches**

Five (5) **Seating Capacity** Y__N__
10-00-9920

SEATING CAPACITY

The safe seating capacity of the cab for properly belted passengers shall be: Five (5)

One (1) **Approach - Departure Angles** Y__N__
10-00-9935

APPROACH - DEPARTURE ANGLES

An angle of approach and an angle of departure of at least 8 degrees shall be maintained at the front and the rear of the vehicle when it is loaded to the estimated in-service weight, as defined by NFPA 1901 current edition.

One (1) **Gross Vehicle Weight Ratings** Y__N__
10-00-9940

GROSS VEHICLE WEIGHT RATINGS

Front Vehicle Weight Rating shall be: #22,800

Rear Vehicle Weight Rating shall be: #57,200

Gross Vehicle Weight Rating shall be: #80,000

One (1) **Frame - 11.0"/13.25" Vari. Sect. Rail w/Liner, 4.41m RBM - Min. 95' Aerialscope** Y__N__
10-10-1350

Lexington Fire Department

FRAME

The frame is to be specifically designed and produced for the vehicle as specified. Each hole made in the frame rails must be used for a specific chassis component and any holes for non-required options are not acceptable.

The chassis frame shall be built using two variable section steel channels and a minimum of six (6) formed steel cross members. The frame rails shall be 120,000 psi heat treated steel alloy with tapering measurements and continuous top and bottom flanges. The cross members shall be of heavy duty, fabricated, all-welded design, made out of a minimum of 50,000 psi material.

A full length "C" straight channel frame inner liner with top and bottom flanges shall be provided.

At the narrow rail section, each rail shall have a combined minimum section modulus of 39.44 and a combined minimum resisting bending moment of 4,413,538 inch pounds.

At the deep rail section, each rail shall have a maximum section modulus of 46.26 at the largest cross section, which shall provide a resisting bending moment of 5,551,200 inch pounds.

The frame rails and cross members shall be assembled using 5/8" flange head, grade eight bolts and "Spiralock®" flanged nuts. Spiralock® nuts shall be used exclusively in the frame assembly for mounting spring hangers, steering gear, engine, transmission, etc. to maintain constant torque tension and prevent loosening from vibration. Spiralock® nuts shall provide even thread load over the bolt, increasing fatigue strength and clamping torque.

Frame rails less than or equal to 480" in length shall receive a duo-coat primer: an E-coat followed by a powder coating. This duo-coat process meets 1000 hours of salt spray testing per ASTM B117 test procedure. Frame rails greater than 480" in length shall be powder coated only. The inside of the rails shall be hand re-sprayed to insure coverage. This process meets 240 hours of salt spray testing per ASTM B117 test procedure.

One (1)

Bumper - 10.25" High, Painted for 18" Extension on Attacker/Capitol Aerialscope

Y ___ N ___

10-11-0015

BUMPER

A heavy duty 10.25" high 1/4" thick painted steel bumper shall be mounted to the front of the chassis. It shall be fabricated in the factory of the bidder. Bumper shall be channel shaped with 2-1/4" flanges. It shall be painted to match the lower cab color.

Lexington Fire Department

As part of the bumper extension, a second 1/4" thick by 9.44" high formed channel with 2" flanges shall be provided directly behind the full width of the bumper. The bumper extension support shall be of channel (minimum 9-7/16" x 3" x 3/8") construction, bolted to the chassis frame. A 3/16" aluminum tread plate gravel pan (deck) contoured to fit just below the front face of the cab and just below the upper bumper flange shall be provided. Sides (between bumper and cab corners) of the deck shall be boxed in and tapered up to meet bottom of front cab face. Pan shall not be fastened to the top flange of the bumper.

One (1)
10-11-0095

LINE-X Edge on Top Flange of Bumper

Y__N__

LINE-X EDGE

Black LINE-X shall be applied to the top flange of the bumper and shall terminate 1" down on the front and sides of the extension.

One (1)
10-12-001A

Bumper Extension - 18", Aerialscope

Y__N__

18" BUMPER EXTENSION

A bumper extension shall be installed at the front of the cab. The front of the bumper shall be approximately 18" from the front face of the cab. A gravel pan made of 3/16" aluminum tread plate shall be installed between the front bumper and the cab. The bumper extension shall be designed and constructed so that the apparatus can be pulled by the extension.

One (1)
10-12-00A0

Bumper Extension shall be Lifiable & Towable

Y__N__

LIFTABLE AND TOWABLE BUMPER EXTENSION

The bumper extension shall be designed and constructed so that the apparatus can be lifted and towed by the extension.

One (1)
10-12-8010

Bumper Extension Not a Step - Sign, FAMA26 No-Step

Y__N__

FAMA26 NO-STEP SIGN

In accordance with NFPA 1901 chapter 15.7.1.6, a FAMA26 "No-Step" sign shall be attached to the top of the gravel pan. The sign reads: "Fall Hazard-Railings NOT provided. Surface may be slippery - Not intended for stepping, standing or walking. Fall will injure or kill".

One (1)
10-12-153P

Opening in Front Bumper for Surface-Mounted Q2B - Center

Y__N__

BUMPER PREPPED FOR CENTER Q2B SIREN

Lexington Fire Department

The center of the bumper shall be prepared to accommodate a surface-mounted Federal Q2B siren. When installed, the Q2B vanes shall stick out in front of the bumper.

One (1)
10-20-0550

Front Tow Eyes - (2) Cut Plate, Chrome, Thru Pan

Y__N__

FRONT TOW EYES

Two (2) chrome plated "cut plate" type tow eyes shall be furnished. They shall be installed through the top of the aluminum tread plate "gravel" pan, directly behind bumper, and securely attached to the bumper extension frame. The eyes shall be fabricated of 1" thick steel plate with a 3" diameter opening.

One (1)
10-22-0500

Rear Tow Eyes - (2) Cut Plate, Chrome Plated, Bolted to Frame Rails

Y__N__

REAR TOW EYES

Two (2) rear tow eyes, bolted to the frame rails, one (1) each side shall be provided. The eyes shall be fabricated of 1" chrome plated, heavy duty steel plate, with a 3" diameter opening designed so that stress will be applied to each chassis frame rail, when utilized.

One (1)
10-25-0100

Power Steering Installation

Y__N__

STEERING

A heavy duty 18,000 lb. capacity power steering system shall be provided. The hydraulic pump shall be engine gear driven. The steering gear "box", or fixture that the gear is mounted to, shall be fabricated in the factory of the bidder. It shall be a welded assembly constructed of 3/8" formed steel with a 3/4" face plate. Vertical gussets shall be provided between the face plate and the frame mounting plate to insure against frame flex while the vehicle is stationary.

One (1)
10-25-1300

Auxiliary Cylinder - Power Steering

Y__N__

AUXILIARY CYLINDER FOR POWER STEERING

An auxiliary power assist cylinder shall be provided in the power steering system.

One (1)
10-25-1300

Power Steering Cooler

Y__N__

POWER STEERING COOLER

A Hayden 1215 power steering cooler shall be provided in addition to the power steering reservoir.

One (1)
10-25-2000

Chassis Alignment

Y__N__

Lexington Fire Department

CHASSIS ALIGNMENT

The chassis frame rails shall be cross checked for length and square. Front and rear axles shall be laser aligned. The front axle shall be aligned at the manufacturer's facility.

One (1)
10-28-0200

Air System - Chassis, Three Axle

Y__N__

AIR PIPING

The service brake system shall be full air type. The system is to meet or exceed current FMVSS-121 requirements. Other components or accessories shall be as follows:

- Pressure protection valve
- Quick build up system
- Engine mounted, gear driven air compressor
- Bendix Model E-6 dual circuit brake treadle valve
- Two (2) air pressure gauges on cab dash with indicator light and buzzer
- Air reservoirs with capacity to meet FMVSS-121

The Bendix SR-7 valve, in conjunction with the double check valve, shall enable modulation of the spring brakes in the event of a service brake air system failure to allow the vehicle to be stopped.

Brake piping shall consist of SAE approved, DOT rated "Synflex" reinforced colored nylon tubing. The lines shall be wrapped in a heat protective loom where necessary in the chassis. Braided hoses shall provide flexibility between axle and frame connections. Brake air lines shall be color-coded. Air inlet to air brake compressor shall be from the engine intake manifold, i.e. after transition through the engine air cleaner. A stainless braided Teflon hose and/or copper tubing shall be provided from the compressor to the air dryer. Fittings shall be brass.

The parking brake system is to be the spring set type operated by control valve on driver's console. A brake indicator light shall also be provided.

One (1)
10-28-0290

Air Lines

Y__N__

AIR LINES

All air lines used in the chassis air brake system shall utilize compression fittings. No exception to this requirement.

Four (4)
10-28-0410

Main Air System Drain Valve(s) - Cable Controlled

Y__N__

MAIN AIR SYSTEM DRAIN VALVE(S)

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The drain valve(s) on the main air system reservoirs shall be cable controlled. The pull cable shall be extended to the side of the truck with a loop provided at its end. It shall be labeled: Drain Daily.

One (1)
10-28-0600

Wet Tank

Y__N__

WET TANK

A 1250 cubic inch wet air tank shall be provided with the air system.

One (1)
10-28-0610

Wet Tank Drain Valve - Cable Controlled

Y__N__

WET AIR RESERVOIR DRAIN CONTROL

A cable controlled drain valve shall be provided on the wet tank. The pull cable shall be extended to the side of the truck with a loop provided at its end. It shall be labeled: Drain Daily.

One (1)
10-28-2800

Isolated Air Reservoir - 1250 Cubic Inch, (Ea)

Y__N__

ADDITIONAL AIR RESERVOIR

One (1) additional 1250 cubic inch air reservoir(s) shall be provided and installed. Each extra reservoir shall be isolated and be plumbed with an 85 PSI pressure protection valve on the reservoir supply side.

One (1)
10-28-290Q

Isolated Air Tank Drain Valve(s) - Cable Controlled (Ea)

Y__N__

One (1) drain valve(s) on the isolated air reservoirs shall be cable controlled. The pull cable(s) shall be extended to the side of the truck with a loop provided at its end. They shall be labeled: Drain Daily.

One (1)
10-28-2910

Air Reservoir Tank Shall be Used for Air Horn

Y__N__

Air reservoir tank shall be used for air horn.

One (1)
10-28-3120

Emergency Brake - Officer

Y__N__

OFFICER'S EMERGENCY BRAKE CONTROL

An additional emergency brake control shall be provided on the right hand side of the cab

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dash in easy reach of the officer. Control shall actuate the rear axle spring brakes only. In addition, the control shall disable the driver's accelerator pedal and shift the transmission into neutral. Brake control shall be a heavy duty toggle type electrical switch equipped with a spring loaded safety cover to prevent accidental brake engagement. Cover shall be red in color. Control switch shall have an identification label and a warning that it is "For Emergency Use Only".

One (1)
10-28-3820

Air Dryer - Meritor WABCO System Saver 1200

Y__N__

AIR DRYER

A Meritor WABCO 1200 System Saver air dryer shall be installed in the air brake system. It shall have a minimum capacity of 30 cfm air flow. Dryer shall be equipped with an integral, automatic, 12 volt heated moisture ejector which is thermostatically controlled. System shall include a pressure controlled check valve installed between the wet tank and the secondary air reservoir.

One (1)
10-28-48SW

Aux Air Outlet - Shutoff Valve, DS Step Well

Y__N__

AUXILIARY AIR OUTLET

There shall be a 1/4" female air outlet with NPT plug mounted towards the front of the driver's side step well. A 1/4 turn shutoff valve shall be located adjacent to the outlet. The outlet shall be connected to the apparatus air reservoir tank.

One (1)
10-28-56SW

Aux Air Inlet - Manual, DS Step Well

Y__N__

AUXILIARY AIR INLET

There shall be an auxiliary air inlet installed on the front of the driver's side step well to maintain the chassis air pressure while the engine is not running. A check valve shall be installed in the line to prevent outflow of air pressure from the "wet" or "supply" tank.

One (1)
11-00-501A

Front Axle - Dana D2200, 22.8K with Meritor Disc Brakes/4" Spring Suspension

Y__N__

FRONT AXLE

A Dana D2200 front axle with a 22,800 pound rating shall be provided. It shall include composite low-friction bushings with diagonal grooves to better distribute lube, camber settings of +1/4 degree for both left and right sides to help improve tire life and a large diameter, heat treated kingpin with a lube retaining seal.

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DISC BRAKES

The front axle shall be provided with Meritor #EX225H air disc brakes with internal automatic adjustment, sealed synchronized twin pistons and robust sealing of slide pins for environmental protection. The #EX225H air disc brakes shall have 17" rotors and a fully sealed lever mechanism with variable mechanical ratio. A visual indicator of brake wear shall also be provided.

FRONT SEMI-ELLIPTICAL SPRING SUSPENSION, 4" X 52"

The front suspension shall be semi-elliptical 4" x 52" constant rate type springs with a military wrapped eye. The correct material, spring length, width, thickness and number shall be provided to match the leaf spring rating with that of the gross axle weight rating of the vehicle.

SHOCK ABSORBERS

Gabriel heavy-duty telescoping shock absorbers shall also be provided on the front axle.

One (1)
91-75-0012

Warranty - Dana Front Axle, 5 Yr, P&L

Y__N__

WARRANTY

Dana Corporation provides a five (5) year parts and labor warranty on the front axle.

One (1)
91-75-0020

Warranty - Meritor Disc Brakes, 3 Yr, P&L

Y__N__

WARRANTY

Meritor Corporation provides a three (3) year parts and labor warranty on the EX225H disc brakes.

One (1)
11-00-9000

Auxiliary Park Brake - Front Axle, Air Applied (Aerials)

Y__N__

AUXILIARY AIR APPLIED FRONT AXLE PARKING BRAKE

An auxiliary air applied front axle parking brake shall be supplied with a separate control switch and properly labeled indicator light in the cab. This front parking brake will only be able to be activated when the parking brake for the rear axle is set.

One (1)
11-00-9500

Oil Seals - with Viewing Window, Front Axle

Y__N__

FRONT AXLE OIL SEALS

The front axle shall be equipped with oil type seals with viewing windows.

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One (1) **Rear Axle - Dana D/R60-190, with 16-1/2"x7" Bendix S-Cam, 60,000#, for Telma** Y__N__

11-10-507T

REAR AXLE

The rear tandem drive axle shall be a Dana model D/R60-190 with a capacity of 60,000 pounds at the hub. Each rear axle shall include Bendix 16 1/2" x 7" S-Cam brakes with dust shields and automatic slack adjusters. Stroke indicators shall be incorporated to provide a visual indicator of brake wear.

An inter-axle differential control switch shall be provided on the cab dash, easily accessible from the driver's seating position.

All axles shall be purchased complete from and certified by the axle manufacturer for the specific application. Brake chamber brand and size shall be determined by the axle manufacturer.

One (1) **Axle Application Certification** Y__N__

11-10-9900

All axle applications must be certified by the axle manufacturer.

One (1) **Rear Axle Ratio Shall be Set at Time of Order** Y__N__

11-10-9910

REAR AXLE RATIO

The rear axle ratio shall be determined at the time of order.

One (1) **Top Road Speed 60 MPH** Y__N__

11-10-9998

ROAD SPEED

Per NFPA, the maximum top road speed shall be 60 mph.

One (1) **Anti-Lock Brakes (ABS) - 6 Channel** Y__N__

11-20-2500

ANTI-LOCK BRAKING SYSTEM (ABS)

The vehicle shall be equipped with a WABCO 6S6M anti-lock braking system (ABS). The ABS shall provide six (6) channel anti-lock-up braking control on the (2) front and (4) rear wheels. The system shall employ a digital electronics system with microprocessor controls divided into two (2) diagonal circuits. In the event of one circuit malfunction the second circuit shall operate unaffected. Each wheel shall be constantly monitored by the system when the vehicle is in motion. When any wheel begins to lock-up during braking, a signal shall be transmitted to the processor from the wheel sensor. The control unit shall instantly reduce the braking force applied to the wheel and immediately re-apply braking

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force so that the wheel rapidly slows without locking. The system shall control all wheels simultaneously to provide maximum vehicle braking in a relatively straight line.

An ABS warning light shall be installed in the warning light panel of the driver's dash.

The ABS system shall automatically disengage the auxiliary braking system whenever the anti-lock braking mode is active.

One (1)
91-75-003A

Warranty - Meritor Anti-Lock Braking System, (ABS), 3 Years/300,000 Miles

Y___N___

WARRANTY

A three (3) year or 300,000 miles parts and labor warranty shall be provided by Meritor WABCO Vehicle Control Systems for the Anti-Lock Braking System (ABS).

One (1)
11-20-4000

Inter-Axle Differential Lock (IAD)

Y___N___

INTER-AXLE DIFFERENTIAL LOCK

The rear tandem axle set shall be equipped with an air actuated primary traction device that allows for speed differences between the forward and rear tandem axles while providing equal pulling power from each axle. When disengaged, one wheel set of the forward drive axle and the opposite side wheel set of the rear drive axle shall operate in drive action to minimize wear on drive components. When the IAD lock is engaged, both wheel sets of each tandem axle provides drive action and does so until one side encounters slip or the vehicle is turning, thereby maximizing traction without diminishing turn radius.

A dash mounted locking rocker switch shall engage and disengage the IAD lock. While the IAD lock may be engaged or disengaged at rest or at road speed, it should not be engaged whenever any drive wheel is slipping.

It is understood that the IAD should be unlocked for normal dry road condition operation to avoid premature ring gear, clutch and tire wear.

One (1)
91-75-0030

Warranty - Dana Rear Axle, 5 Yr, P&L

Y___N___

WARRANTY

Dana Corporation provides a five (5) year parts and labor warranty on the rear axle.

One (1)
11-20-2760

Electronic Roll Stability (ESC) - for Tandem Axle

Y___N___

VEHICLE STABILITY COMPLIANCE – ELECTRONIC CONTROL

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In compliance with NFPA 1901, current edition standard 4.13.1, the vehicle, as specified, shall be equipped with a Meritor-WABCO electronic Roll Stability Control system that shall utilize a centrally mounted pitch and yaw sensor and steering shaft position sensor interacting with the chassis' ABS traction control, auxiliary braking system and the engine ECM to minimize the vehicle's potential for rollover in a turning at speed maneuver.

One (1)
11-20-2795

Automatic Traction Control w/ Deep Mud & Snow Switch

Y___N___

AUTOMATIC TRACTION CONTROL WITH DEEP SNOW AND MUD SWITCH

Automatic Traction Control, working in concert with the ABS system, shall be provided which shall reduce wheel slip on acceleration on wet or slippery road conditions. A light shall illuminate on the driver's dash when the drive wheels slip during acceleration.

A deep snow and mud option switch shall be provided in addition to the ATC option. This function increases available traction on extra soft surfaces like snow, mud or gravel by slightly increasing the permissible wheel spin.

One (1)
11-30-7800

Rear Suspension - Hendrickson Ultimaax, Tandem, 58,000#

Y___N___

REAR SUSPENSION

The rear suspension shall be a heavy duty Hendrickson Brand Ulitmaax fire & rescue severe duty rubber suspension rated at 58,000 lb.

Two (2)
12-18-0120

Front Tires - Continental/425/65R22.5/HTC1, 11,400# (Ea)

Y___N___

FRONT TIRES

The two (2) front tires shall be Continental 425/65R22.5, HTC1, load range "L", with a nominal rating of 11,400 pounds at a top speed of 68 mph.

Eight (8)
12-19-0070

Rear Tires - Continental/315/80R22.5/HDR2, 8,270# (Ea)

Y___N___

REAR TIRES

The eight (8) rear tires shall be Continental 315/80R22.5, HDR2, load range "L", with a nominal rating of 8,270 pounds at a top speed of 75 mph.

One (1)
12-50-1500

Wheels - Aluminum Disc, Polished, on Tandem Rear Axles

Y___N___

WHEELS

Wheels shall be Alcoa polished aluminum disc type and hub piloted. Chrome plated nut covers shall be furnished.

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One (1) **Hub Caps - (2) S/S, "Baby Moon", Front Axle w/ Front Axle Oil Seal Cutout** Y__N__
12-80-01C0

FRONT AXLE "BABY MOON" HUB CAPS

Stainless steel "Baby Moon" type hub caps shall be provided on the front axle. The hub caps shall be cut out for viewing of the front axle oil seals.

Two (2) **Hub Caps - (2) S/S, "High Hat", Rear Axle** Y__N__
12-90-0200

REAR AXLE "HIGH HAT" HUB CAPS

Stainless steel "High Hat" type hub caps shall be provided on the rear axle(s).

One (1) **Tire Pressure Indicators - Accu-Pressure H.D. Safety Caps, Tandem Axle** Y__N__
12-90-1020

TIRE PRESSURE INDICATORS

Tires shall have non-pressure indicators installed for shipment.

Accu-Pressure Heavy Duty Safety Caps shall be provided and shipped loose. This valve stem inflation pressure sensitive monitor shall provide a visual color indication of when the tire pressure is below the manufacturers recommended level. The chrome safety cap shall show green when the tire is properly inflated and red once the tire becomes under inflated.

All inner wheels shall be equipped with a valve stem extension that shall allow the inner wheel to be filled without removing the outer wheel.

One (1) **Tire Balance - Equal, Front Tires Only** Y__N__
12-90-1210

TIRE BALANCE

EQUAL Tire Performance Balancing Compound shall be inserted into the front tires to balance and maintain a vibration-free rotation.

One (1) **Engine - Cummins X12, 500 HP, for Tandem Axle wo Water Pump, EPA17/OBD17 Cert.** Y__N__
13-00-5320

ENGINE

The chassis shall be powered by an EPA17/OBD17 certified and compliant Cummins X12 diesel engine, as described below:

Model	X12
Number of Cylinders	Six

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Bore and Stroke	5.2 x 5.67 in
Displacement Liter (Cu. In.)	11.8 (720)
Rated BHP	500 @ 1800 RPM
Torque	1695 ft.lb. @ 1000 RPM
Governed RPM	2000
Oil Capacity / Type	11.5 gallons / SAE CK-4
Fuel Requirement	Ultra low sulfur diesel (15 ppm max.)

Standard equipment on the engine shall include the following:

- Selective Catalytic Reduction (SCR) after treatment
- Cooled Exhaust Gas Recirculation system
- Fan – 32”, 11 blade
- Charge air cooling
- High pressure, common rail fuel system
- Fuel filter with check valve and water separator
- Fuel strainer
- Governor – electronic, interact system
- Injectors – electronically controlled full authority injection
- Lube oil cooler – integral
- Lube oil filter – full flow
- Turbocharger – variable geometry type
- Air compressor – Wabco 26.0 CFM

The engine exhaust system shall be a horizontal design constructed from heavy-duty truck components. Flexible couplings shall be utilized to absorb the torque and vibration of the engine. The outlet shall be directed to the forward side of the rear wheels, exiting the right side, with a straight tip. A heat-absorbing sleeve shall be used on the exhaust pipe in the engine compartment area to reduce stored heat, providing protection for the alternator, and also to protect hands when checking or adding oil in the engine compartment.

ENGINE AND CHARGED AIR COOLING SYSTEMS

A serpentine core type radiator with continuous louvered copper fin design shall be provided. Radiator shall be fitted with formed steel side frames. The top tank shall have a built-in de-aeration system. A drain shall be located at the lowest point.

The engine charged air heat exchanger shall be located directly in front of the radiator and be bolted to its side rails. It shall be all aluminum-brazed construction. Air cooler shall be cross flow design with cast aluminum side tanks, horizontal inlet and outlet at top and aluminum louvered serpentine external air fins. Plastic tanks shall not be acceptable, no exceptions. Cooler tubers shall also be constructed of aluminum and have internal fins that eliminate laminar airflow.

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The charge air cooler and the radiator shall be produced by the same manufacturer as a single assembly to provide continuity throughout the cooling system. This shall ensure a certified "balanced" package for the chassis engine air and fluid cooling systems.

The radiator and charger cooler shall be mounted to the chassis stub. Fabricated mounting bracket for the fans ring shall be attached to the front of the engine in a manner so that it "floats" with the engine and increases the fan's efficiency by tightening the tip clearance. This mounting design eliminates engine fan and radiator shroud contact due to engine torque movement and promotes more efficient airflow. The radiator and charger cooler shall be held in place at the bottom by two (2) large bolts equipped with anti-stress rubber biscuits. The top of the radiator shall be supported by two (2) $\frac{3}{4}$ " tubular braces, bolted to the chassis stub. Anti-vibration rubber biscuits shall be installed at the top threaded end of the braces where they attach to the radiator.

One (1)
13-00-7000

Engine Cooling Certification

Y___N___

ENGINE COOLING CERTIFICATION

"EPQ" (End Product Questionnaire) certification shall be provided by the chassis manufacturer. Certification shall be documented with reference to each specific chassis model by the chassis manufacturer.

One (1)
13-00-7520

Fan Clutch for X12 Engine

Y___N___

FAN CLUTCH

A fan clutch shall be provided for the engine cooling fan. The clutch shall be of a failsafe design, in that it shall fail in the "on" mode and thus prevent overheating in the event of component or air line failure. Manufacturer shall also wire the clutch so that it remains "on" in the pumping mode to prevent water pressure fluctuations.

One (1)
13-03-1200

Transmission - Allison, 4000-EVS

Y___N___

TRANSMISSION

An Allison, Model 4000 - EVS, electronically controlled automatic transmission with integral fluid filter shall be provided. A transmission cooler shall be installed in the radiator bottom tank. A warning light and buzzer shall be provided on the cab dash to alert the driver should the transmission overheat.

The transmission shall include the following: an oil life monitor, a filter life monitor, and a transmission health monitor. The oil life monitor determines fluid life remaining by monitoring various operating parameters. The filter life monitor determines when fluid filter(s) need to be replaced. The transmission health monitor determines when clutch system inspection is required. The monitors send a message via a blink code to a special prognostic light on the shift pad. Also on the shift pad shall be installed a digital,

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double-digit display that identifies the level of transmission oil. The display shall identify the oil level as “Ok”, “Lo” or “Hi”, also indicating the number of quarts lo or hi.

The transmission shall include the following emergency vehicle specifications:

Maximum gross input power:	600 hp
Maximum gross input torque:	1850 ft.lb.
Input speed range:	1700 to 2300 rpm
Direct gear lock-up:	4 th @ 1.00 to 1.00
Overdrive gear and ratio:	5 th @ 0.74 to 1.00

Gear ratios shall be as follows:

1 st	3.51 to 1
2 nd	1.91 to 1
3 rd	1.43 to 1
4 th	1.00 to 1
5 th	0.74 to 1
6 th	0.64 to 1
Rev	-4.80 to 1

The transmission shall automatically shift into neutral whenever the chassis parking brake is applied.

One (1)
13-03-2015

Transmission Fluid - Synthetic SAE Standard for 4000-EVS

Y___N___

TRANSMISSION FLUID

The Allison 4000-EVS transmission shall be delivered from the factory with a synthetic SAE standard ATF.

One (1)
13-03-3000

Transmission Programming - 5th On Mode

Y___N___

TRANSMISSION PROGRAMMING

The transmission shall be programmed as a 5-speed with 5th gear (overdrive) selected by mode button only.

One (1)
13-03-4000

Transmission Shift Control - Allison Touch Pad

Y___N___

TOUCH PAD TRANSMISSION SHIFT CONTROL

Touch pad control shift module shall be mounted to the right of the driver on the console and be indirect lighted for after dark operation.

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One (1) **Warranty - Allison Transmission, 5 Yr, P & L** Y__N__
91-75-0065

WARRANTY

Allison provides a 5 year warranty on the EVS transmissions.

One (1) **Driveline - Spicer 1810, for Tandem Axle, No Water Pump Selected** Y__N__
13-05-0240

DRIVELINE

Drivelines shall be built with heavy-duty metal tubes and utilize Spicer 1810 series or "Equal" mechanics type universal joints with "half round" end yokes. This quick disconnect strap and bolt design type end joint shall allow the driveline to be easily disassembled and dropped straight down for ease of service and maintenance. They also shall be dynamically balanced by the truck manufacturer before installation in the chassis. A splined slip joint is to be provided in each shaft assembly. A grease zerk shall be provided for lubrication of the slip joint.

One (1) **Fuel Water Separator/Alarm/Heater - Racor Greenmax™ 4400R1210, X12 Engine Only** Y__N__
13-08-5630

FUEL WATER SEPARATOR WITH ALARM & HEATER

A Racor Greenmax™ model 4400R1210 fuel water separator with 10 micron Aquabloc filter, water sensor alarm and heater shall be provided.

One (1) **Engine Starter - Delco 39 MT-HD, 12 Volt** Y__N__
13-09-0020

ENGINE STARTER

A Delco, 12 volt, 39 MT-HD starter shall be installed.

One (1) **Air Compressor - Wabco 26.0 cfm** Y__N__
13-11-0410

AIR COMPRESSOR

A Wabco 26.0 cfm air compressor shall be furnished. The air compressor shall be gear driven off the engine.

One (1) **Exhaust - Single Module, DPF/SCR, Outboard of Frame Rail, X12 Engine Only** Y__N__

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13-13-0008

EXHAUST

A single exhaust module containing an SCR chamber and a DPF chamber shall be installed on the right side of the vehicle, immediately behind the cab. The exhaust module shall ingest urea from a remote storage tank to remove NOx from the exhaust. The exhaust assembly shall be mounted outboard of the frame rail.

One (1)
13-13-0900

Tailpipe - Plymovent, Extended for Exhaust Evacuation System

Y__N__

TAILPIPE EXTENSION

The tailpipe shall be provided to accommodate a Plymovent exhaust evacuation system. The tailpipe shall be mounted perpendicular to the side of the truck and be flush with the body. 12" of clearance between the pipe and the tire will be provided. The tailpipe mounting shall be straight out from the body.

It is understood that the 2013 engine exhausts can not be connected to exhaust evacuation systems when the Diesel Oxidation Catalyst and Diesel Particulate Filter on the engine are regenerating.

One (1)
13-15-1530

Engine Brake - Cummins Brake with Telma Focal Retarder on Cummins X12 Engine

Y__N__

ENGINE BRAKE

A Jacobs engine brake shall be installed with controls within easy reach of the driver. Brake shall automatically be actuated when the accelerator pedal is released. The engine brake shall be wired in conjunction with the rear brake lights so that they are activated when the engine brake is engaged. It shall have a three position switch; "LOW", "MEDIUM" and "HIGH" along with an "OFF" and "ON" switch.

TELMA FOCAL RETARDER

A Telma Focal retarder shall be installed in the drive line to provide an auxiliary braking device for the vehicle. Telma application shall be achieved by depressing the brake pedal. There shall also be a four lamp indicator system to indicate the progressive stages of vehicle retardation. A momentary on/off switch with indicator light defaults on, resetting with the battery switch. The retarder shall be reset with the ignition or by pressing the switch a second time. The Telma relay box shall be mounted at the manufacturer's discretion in an easily accessible location for service.

One (1)
13-15-159B

Telma Operation - First Stage off Throttle

Y__N__

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The Telma operation shall be first stage off throttle.

One (1)
91-75-004E

Warranty - Cummins X12 Engine, 5 Year/100,000 Mile

Y__N__

WARRANTY

Cummins provides a 5 year or 100,000 mile warranty on the X12 engine.

One (1)
13-00-760S

Coolant Overflow Reservoir - 6 QT, Attacker/Capitol

Y__N__

COOLANT OVERFLOW RESERVOIR

A six (6) quart coolant overflow reservoir shall be provided. It shall be accessed in the officer's step well. A hinged aluminum tread plate door with small D-ring handle shall be provided for access. A visual inspection shall be possible without tilting the cab (NO EXCEPTIONS). The aluminum tread plate door shall be properly labeled.

One (1)
13-01-2100

Silicone Hoses - Coolant/Heater

Y__N__

SILICONE HOSES

All hoses in the cooling system shall be silicone type with stainless steel constant torque Oetiker clamps.

One (1)
13-01-2400

Skid Plate - Painted To Match Frame Rails

Y__N__

SKID PLATE

A radiator skid plate shall be provided to protect the radiator from debris. The skid plate shall cover the lower radiator tank and shall be painted to match the frame rails.

One (1)
13-08-2800

Fuel Tank - 85 Gallon, S/S, Rear Mount, w/Steel Rods & Cradle, w/Step Well Inlet

Y__N__

FUEL SYSTEM

The vehicle shall be furnished with a 85 gallon fuel tank mounted behind the rear axle and just below the frame rails using steel rods and cradle. The tank shall be constructed of stainless steel and equipped with a swash partition and vent. The fuel tank shall meet all FHWA requirements and all DOT and FMVSS regulations for rollover protection. A 2" diameter fill inlet shall be provided. The fuel cap shall be of brass or bronze construction, non-vented and have lead safety fuses. It shall be chained to inlet tube or to the body sheet metal to prevent loss. Braided hoses shall be provided for the fuel lines. A 1/2" NPT drain plug shall be located at the bottom of the tank.

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Fuel lines shall have an additional four (4) feet of length at the fuel tank.

The stainless steel fuel fill inlet shall be located on the left (drivers) side of the apparatus in the step well cavity. It shall be concealed behind a door. The inside of the door shall be marked "ULTRA LOW SULFUR DIESEL FUEL ONLY". The fuel inlet area, recessed behind the door, shall be completely enclosed to prevent dirt and debris from entering. Provision shall be provided inside the fill recess for drainage of any spilled fuel within the cavity.

One (1)
13-08-3040

Fuel Fill Door - S/S, Brushed, LS Hinge, Aerialscope

Y___N___

The fuel door shall be constructed of stainless steel and shall have a brushed finish. It shall be hinged on the left side. A spring loaded device with brass roller shall be provided to hold the door in the open or closed position. A black pull knob shall be installed on the door for opening and closing it.

One (1)
13-08-5100

Shutoff Valve - Fuel Line

Y___N___

FUEL LINE SHUTOFF VALVE

A fuel line shutoff valve shall be provided near the tank to prevent fuel from draining back while changing fuel filters.

One (1)
13-08-5410

Fuel Cooler - Engine, No Water Pump Present

Y___N___

ENGINE FUEL COOLER

An engine fuel cooler shall be provided on the apparatus. The engine fuel cooler shall cool the returning fuel from the engine.

One (1)
13-08-5600

Fuel Pump - Electric, for Priming Only

Y___N___

ELECTRIC FUEL PUMP

An auxiliary electric fuel pump shall be provided in the fuel line to assist in priming the fuel system. Switch for pump shall be located on cab instrument panel and labeled "For Priming Only".

One (1)
13-10-2500

Alternator - Delco, 430 Amp, Model 55SI

Y___N___

ALTERNATOR

A 430 amp Delco alternator, model 55SI, shall be provided.

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One (1) **Air Cleaner - Racor Ecolite®, Attacker/Capitol** Y__N__
13-12-0510

AIR CLEANER

A Racor Ecolite® dry type engine air cleaner shall be provided. It shall be installed in a location above the chassis frame rails and no less than 40" above the ground. A visual inspection shall be possible without tilting the cab (No Exceptions). The air cleaner shall be serviceable through an access opening of no less than 30" wide by 13" high.

One (1) **Air Restrict Indicator - Information Display Center** Y__N__
13-12-5500

AIR RESTRICTION INDICATOR IN INFORMATION DISPLAY CENTER

An electrical engine air restriction indicator shall be provided and installed in the cab information display center.

One (1) **DPF Regeneration Process** Y__N__
13-13-0030

DPF REGENERATION PROCESS

NFPA 12.2.6.7.1 The regeneration process shall be activated by two methods:

1) Automatically by the engine system but only when the transmission is in gear and the speedometer indicates a speed above 5 mph (8km/hr) whether the apparatus is in motion or is operating in stationary pump mode with an engine rpm sufficient to register 5 mph (8 km/hr) on the speedometer.

2) Manually when initiated by activation of a switch located in the driver's area of the driving compartment.

There shall also be an inhibit switch placed near the driver to inhibit an automatic reburn.

One (1) **Diesel Exhaust Fluid (DEF) & DEF Access, Attacker/Capitol** Y__N__
13-13-0055

DEF & DEF ACCESS

The urea mixture, a solution of 2/3 water and 1/3 urea which reacts with NOx to create nitrogen and water, shall be stored in a 10 gallon tank equipped with a level sensor and alarm to prevent run-out.

The filling or adding of DEF to the DEF tank shall be available without tilting the cab (No Exceptions). Access to the urea tank fill connections and level sensor shall be available without tilting the cab.

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One (1)
13-13-0059

DEF Fill Access Door - ATP, Capitol

Y__N__

DEF FILL ACCESS DOOR

An aluminum tread plate hinged door shall be provided for access to the DEF fill cap and neck. The DEF fill access shall be located on the left hand side of the cab, under the crew cab floor behind the crew cab step well battery access hinged door. The DEF fill access area shall contain a fill neck.

One (1)
13-13-1130

Exhaust Heat Shielding

Y__N__

EXHAUST HEAT SHIELDS

Heat shields shall be provided as needed to prevent damage to body and wiring from excessive exhaust temperatures. The exhaust pipe shall be wrapped in multi-layered insulation blankets, from just aft of the turbo down to inlet side of the DPF. Each blanket shall have a fiberglass inner layer and a silicone impregnated fiberglass cloth outer layer

The cab shall receive 1.25" thick foil back insulation blanket under the crew floor to reduce floor temperatures.

All harnesses and cables, in proximity to exhaust system components, shall be protected with insulation.

One (1)
13-15-4100

Fast Idle - Switched on Dash

Y__N__

FAST IDLE SWITCH

A fast idle switch shall activate an engine high idle. The circuit shall be wired through the neutral safety/parking brake interlock to prevent activation when the transmission is in the road mode. Fast idle shall be set at 1000 RPM's. A switch located inside the cab convenient to the driver shall be provided for this system.

One (1)
13-15-5010

Nameplate- Lubrication Capacity, On Driver's Door, Interior Face

Y__N__

LUBRICATION NAMEPLATE

A nameplate shall be installed that specifies the quantity and type of the following fluids used in the vehicle and tire information:

- Engine oil
- Engine coolant
- Chassis transmission fluid
- Pump transmission lubrication fluid

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- Pump priming system fluid, if applicable
- Drive axle(s) lubrication fluid
- Air condition refrigerant
- Air conditioning lubrication fluid
- Power steering fluid
- Cab tilt mechanism fluid
- Transfer case fluid
- Equipment rack fluid, if applicable
- CAFS air compressor system lubricant, if applicable
- Generator system lubricant, if applicable
- Front tire cold pressure
- Rear tire cold pressure
- Maximum tire speed ratings

A layer of Velvet Polycarbonate shall overlay the lettering to protect it. The lubrication nameplate shall be installed on the interior face of the driver's door, near the hinge and below the window controls.

One (1)
20-00-550D

Cab - S/S, Full Tilting, 142" Capitol

Y__N__

STAINLESS STEEL FULL TILTING CAPITOL CAB

The cab shall be designed specifically for the fire service and shall provide roll cage strength and safety. The cab shall be made in the factory of the bidder and must be the bidder's top-of-the-line stainless steel model. The cab shall be of the open interior design.

The entire cab shall tilt forward 45 degrees for engine access. In order to provide the strongest, safest cab design possible, no extrusions shall be used in the construction of the cab structure. No plastic or fiberglass shall be used in the construction of the cab sub-frame, floor assembly, front assembly, side assemblies, back wall assemblies or roof assembly.

FRONT CAB DIMENSIONS

The front face of the forward cab shall measure 68" from the center of the front axle. The cab shall have an inside width of 91" and outside width of 96". Entrance step wells to the driver's and officer's positions shall be a minimum of 26" wide. Entrance steps shall be made of expanded grating.

CREW CAB DIMENSIONS

The back wall of the cab shall measure 74" from the center of the front axle. The cab shall have an inside width of 91" and outside width of 96". Entrance step wells to the crew cab positions shall be a minimum of 34" wide. Entrance steps shall be made of expanded grating.

CAB MOUNTING

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A four point mounting system shall be provided for the front cab. The mounting system shall consist of two (2) front pivot mounts fabricated of steel and two (2) rearward lock plates attached to the rear cab sub-structure. Each front pivot mount shall consist of a greaseless pin and a multi-layered, self-lubricating, composite bearing. The outer layer of the bearing shall be high-durometer rubber to isolate road vibrations and shock. Each rear lock plate assembly shall consist of two hydraulic actuated locks isolated from the chassis by center bonded rubber mounts.

SUB-FRAME

The sub-frame shall be stainless steel reinforced welded safety-cage construction utilizing a 3" x 4" rectangular structural steel tube sub-frame. All joints shall have continuous welds; stitch welding shall not be acceptable. The sub-frame shall be designed as a one-piece structure from the front to the back of the cab. It shall be used to support the cab while tilting, join front pivots to the cab locks, and to join the cab to the chassis. Pocketing of the sub-frame shall not be acceptable.

FRONT ASSEMBLY

The safety-cage section at the front of the cab shall be constructed of 1.25" stainless steel tubing and shall join the front door posts together with the main sub-frame. There shall be a 2.50" x 1.50" x .25" heavy wall lower cross tube that joins the cab sills together to prevent cab twisting when tilting the cab. The front fire walls shall be set back from the front assembly structure to provide added protection in a frontal crash. The outer cab skin shall not be an integral structural member, although it shall help stiffen the cab front face.

The front cab door hinge mount (aka "A" pillar) shall be a 2" x 2" tube with a .19" thick wall.

CAB FLOORS

All floor components shall be welded directly to the sub-frame. The floor shall be constructed of 50,000 psi stainless steel. Cab floors shall be covered with a sound barrier mat with a heavy-duty wear surface.

SIDE WALL ASSEMBLIES

The safety-cage on the sides shall be constructed of 1.25" stainless steel tubing. Both side wall assemblies shall be joined to the sub-frame via thick tubular structures, using heavy fillet welds. This shall strengthen the walls to withstand high roof loading. The side wall outer skins shall be integral with the cab structure as well as additional formed components to help stiffen side wall assemblies. There shall be 1.25" of insulating foam between the exterior and interior side walls. The structure shall be reinforced for cab entry grab handle mountings.

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The rear cab door hinge mount (aka "C" pillar) shall be equivalent to a 2.5mm formed channel with .19" thick tapping bar.

ROOF ASSEMBLY

The 1.25" stainless steel tubing used in the construction of the roof section of the safety-cage shall support 2 psi of loading across the whole roof. The fabricated and welded roof sills and front header shall be made of 50,000 psi stainless steel material. The corner caps shall utilize spun metal technology thus retaining the metal's strength while producing a very rigid corner joint. The side roof covering (rolled edges) shall be constructed of stainless steel formed in a quarter round. It shall form a hollow double wall, angle reinforced roof edge with an integral drip rail. The roof top outer wall shall not be an integral structural member, although it shall stiffen the roof. There shall be 1.25" of insulating foam between the exterior roof and interior ceiling.

One (1)
20-00-821C

Cab Entrance Doors - Barrier Style, Capitol

Y___N___

CAB DOOR CONSTRUCTION - BARRIER CLEARING

The forward and crew cab doors shall be barrier clearing and fabricated from stainless steel (No exceptions). The forward and crew cab doors shall be 34.5" wide. The interior and exterior door handles to be flush mounted paddle style with a keyed lock incorporated in the exterior handle and lever control lock incorporated in the interior handle. The crew cab doors shall not include a taper and maintain full width from top to bottom for maximum crew entry and exit access.

The door check straps shall be six (6) inch wide 9800 lb woven nylon strap with sewn integral steel reinforcement bars for attachment to cab and cab door. The door's latch locking mechanism shall make it impossible to lock oneself out of the cab unless locked with the supplied key. The door rotary latch mechanisms latch linkage shall be accessible through an access panel integral to the interior door panel. Doors shall be hung on stainless steel full length hinges attached to cab and door with .25" bolts. The hinges for each door shall be of one-piece 304-2B stainless steel construction with stainless steel pins and 0.090 gauge leaves with 2" joints and a 3" width opening. Doors shall meet Federal Motor Vehicle Safety Standard #206. The doors shall be designed so as to allow the tempered laminate windows to roll completely down

One (1)
20-00-8420

Front Door Opening - Approximately 70 Degrees

Y___N___

The front cab doors shall open approximately 70 degrees.

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One (1) **Rear Crew Door Opening - Approximately 90 Degrees** Y__N__
20-00-8450

The rear crew cab doors shall open approximately 90 degrees.

One (1) **Inner Cab Door Panels - Black LINE-X (4)** Y__N__
20-50-501B

INNER DOOR PANELS – BLACK LINE-X (4)

The upper inside bolt-on panel on each cab door shall be removable and shall be constructed of aluminum covered with black LINE-X.

One (1) **Reflective Chevron on (4) Inner Cab Door Panels** Y__N__
20-50-6000

All four (4) cab passenger compartment doors shall have at least 96 square inches of reflective material affixed to the inside of each door to alert traffic when the door is open. The reflective material shall be a chevron design that complies with NFPA requirements.

One (1) **Cab Tilt Mechanism - S/S, Full Tilt, Capitol** Y__N__
20-00-850C

CAB TILT

The cab shall tilt a minimum of 45 degrees for normal servicing of the engine and other equipment. The tilt cab locking system shall be a two-point type that locks automatically when the cab is lowered into its nested position. The cab tilt package is custom designed for safety and ease of vehicle maintenance. The hydraulic tilting system consists of two (2) heavy-duty single acting cylinders. The power supply is a high efficiency electric over hydraulic system with an integral mechanical override in case of battery failure. All components and parts are designed for installation with a minimum of 3 to 1 safety factor based on current S.A.E. standards.

In addition to the velocity fuses, a secondary safety system shall be provided to hold cab in the fully raised position in the event of a failure in the primary lift mechanism. It shall consist of a metal channel device, which automatically drops over the extended rod of the right side hydraulic lift cylinder thereby preventing its retraction. The safety channel can only be released through an overt action made by the operator such as pulling a lever or cable from the right side of the apparatus, near the safety channel. Automatic release of the safety system shall not be acceptable.

The cab tilt system shall be remotely controlled utilizing a cable with a hand held push button device which is located, stored in an enclosed compartment on the officer's side of the vehicle in the crew cab area. There shall be a receptacle to plug in the tether located just forward of the officer's door and aft of the bumper extension on the exterior of the vehicle.

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One (1)
20-25-4700 **Cab Floor - Forward Cab, Pebble Finish Matting, Attacker/Capitol** Y__N__

FORWARD CAB FLOOR

The forward cab floors shall be covered with a black mat that functions as a sound barrier. The mat shall have a pebble textured heavy-duty wear surface and be laminated to a foam underlay. The mat shall be composed of a vinyl-nitrile blend, which is the base material used in IV tubes and blood bags; it is not affected by blood or other body fluids.

One (1)
20-25-482A **Cab Floor - 68"/74" Crew Cab, Pebble Finish Matting, Attacker/Capitol** Y__N__

CREW CAB FLOOR

The crew cab floors shall be covered with a black mat that functions as a sound barrier. The mat shall have a pebble textured heavy-duty wear surface and be laminated to a foam underlay. The mat shall be composed of a vinyl-nitrile blend, which is the base material used in IV tubes and blood bags; it is not affected by blood or other body fluids.

One (1)
20-00-68B1 **Rear Cab Wall Exterior Finish - Full ATP** Y__N__

ATP OVERLAY ON BACK OF CAB

An aluminum tread plate overlay shall be provided over the entire exterior rear wall of the cab.

One (1)
20-00-6910 **Cab Grille - Front, Raised Bezel Surround, Vertical Bars** Y__N__

CAB GRILLE - VERTICAL BARS AND RAISED BEZEL SURROUND

The cab front opening shall be covered with a custom made polished stainless steel grille that shall be fabricated in the bidder's factory. The grille shall have formed vertical bars spaced apart on 2" centers. The upper polished stainless steel grille shall have a matching lower counterpart to further facilitate engine cooling. The two (2) stainless grilles shall be housed in a custom, raised and chrome plated bezel.

One (1)
20-00-SR10 **Front Grille Script Nameplate - Mirror Finish,for Grille w/Raised Bezel Surround** Y__N__

FRONT GRILLE SCRIPT NAMEPLATE

An 19.43" long "Seagrave" nameplate, fabricated from AISI 304 stainless steel, with mirror finish, shall be located on the lower front engine cooling intake grille of the cab.

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One (1) **Engine Air Inlet Grille & Ember Separator, Attacker/Capitol** Y__N__
20-00-69MX

ENGINE AIR INTAKE GRILLE WITH WATER/EMBER SEPARATOR

A highly polished stainless steel removable grille for engine air intake shall be provided. The air intake grille shall contain the replaceable water and ember separator filter in an integral housing.

The air intake grille and water/ember separator cartridge shall be located on the side of the fixed crew cab, above and to the rear of the driver's side steer axle. The engine air intake grill shall be no less than 60" above the ground.

One (1) **Cab Roof - S/S, Flat, Attacker/Capitol** Y__N__
20-00-741S

FLAT ROOF

A flat roof shall be provided with an interior floor to ceiling height of 59".

One (1) **Exterior Cab Roof Finish - Paint** Y__N__
20-00-78A1

PAINTED CAB ROOF

The exterior surface of the cab roof shall be painted in compliance with the cab paint specifications detailed elsewhere in this specification document.

One (1) **Step - Auxiliary Cab, Entrance, Under Each Door, Below Cab** Y__N__
20-00-9100

AUXILIARY ENTRANCE STEPS

Auxiliary cab entrance steps shall be provided at each cab door opening, below the cab, to reduce the cab entrance step height by approximately 9.5 inches.

One (1) **Folding Steps in Cab Stepwells** Y__N__
20-00-910X

FOLDING STEPS IN CAB STEPWELLS

Four (4) fold up intermediate cab steps shall be provided in the step well beneath each door.

One (1) step shall be mounted on the forward vertical surface of the step well for each of the cab doors. The steps shall not interfere with the operation of any access doors built into the step wells when folded. The folding intermediate step shall be positioned to divide the height of the step well in half.

One (1) **Doors - (2) Cab, B to C Pillar Side Access, 27" High, Capitol** Y__N__
20-00-951C

CAB SIDE ACCESS DOOR

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Two (2) stainless steel cab side access doors shall be provided on the cab, one each side, to the rear of the front cab entrance doors. Door openings shall be approximately 13.00" wide x 27.00" high. The doors shall fit flush with the exterior skin of the cab and be hung on 304 stainless steel full length hinges attached to the cab and door by 0.25" bolts. The doors shall open a minimum of 90 degrees.

One (1) **Cab Side Access Doors Hinged at Front Edge** Y__N__
20-00-960A

The cab side access doors shall be vertically hinged at the front edge.

One (1) **Cab Side Access Door Stays- (2) Chain Style** Y__N__
20-00-960F

The doors shall each have a chain style door stay.

One (1) **Cab Side Access Door Latch Position - Upper Part of Door** Y__N__
20-00-960Q

The "D" handle type latches shall be provided on the upper part of the door.

One (1) **Sill Protectors - (2) Cab Side Access Door, Brushed S/S** Y__N__
20-00-9640

CAB SIDE ACCESS DOOR SILL PROTECTORS

Brushed stainless steel sill protectors, approximately .50" wide, shall be provided on the cab side access door sills to protect the painted finish.

One (1) **Inner Liners - Front, Aluminum** Y__N__
20-05-2020

FRONT ALUMINUM INNER LINERS

Semi-circular inner liners shall be provided in each front wheel housing. They shall be constructed of aluminum and shall be bolted in place so they may be removed if damaged. Self-tapping sheet metal screws are not acceptable. The outside edge of the inner liner shall be bolted along its entire length. The bottom edge of liner shall not have a formed reinforcement flange to avoid trapping dirt and debris.

One (1) **Fenderettes - Front, Rubber** Y__N__
20-05-2120

FRONT FENDERETTE

Black rubber fenderettes shall be installed in the front wheel openings. They shall be sufficiently wide to completely cover the outside rear tire and reduce wheel splash along the sides of the cab. They shall be installed with 1/4" hex head bolts (self-tapping sheet metal screws are not acceptable). There shall be a stainless steel backing strip between

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the rubber and the mounting flange to add support. Fenderette shall incorporate a vertical flange to cover the area where the cab side and wheel opening mounting surface meet. The fenderettes shall be a minimum of 1/4" thick, have a mold formed outer radius and a rounded bead at the wheel opening edge.

One (1)
20-07-010R

Mud Flaps - Front, Rubber

Y__N__

FRONT MUD FLAPS

Heavy duty mud flaps with the manufacturer's "script and flame logos" placed on the rear face shall be provided and installed to the rear of the front wheels. Flaps shall be 14" wide and be made of 0.38" heavy duty rubber material to prevent "sailing".

One (1)
20-07-020R

Mud Flaps - Rear, Rubber

Y__N__

REAR MUD FLAPS

Heavy duty rear mud flaps with the manufacturer's "script and flame logo" placed on the rear face shall be provided and installed to the rear of the rear dual wheels. Flaps shall be 24" wide and be made of 0.38" heavy duty rubber material to prevent "sailing".

One (1)
20-10-1800

Mirror - Crossover, Stainless Steel, Approx 8" Dia

Y__N__

CROSSOVER MIRRORS

An approximately 8" diameter mirror with polished stainless steel housing shall be provided on the right front of the cab above the windshield. The main adjustment bar shall be mounted to the cab roof.

One (1)
20-10-2050

Crossover Mirror Style - Convex

Y__N__

The crossover mirror shall be convex.

One (1)
20-10-2070

Crossover Mirror Bracket Location - Inboard

Y__N__

The crossover mirror bracket shall have an inboard location.

One (1)
20-10-1500

Mirrors - (2) Rosco Accustyle, Heated/Remote w/Convex, Black Finish

Y__N__

MIRRORS

Two (2) Rosco Accustyle heated mirrors with remote shall be installed on the cab doors, one on each side of the cab. The flat upper mirror shall measure 7" x 14" and the lower convex section shall measure 6.5" x 6". The mirrors shall have a black finish.

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One (1)
20-10-4600

Mirror - K-10, 10" Eyeball for Rear Curb Side Corner

Y__N__

REAR MIRROR

A K-10, 10" stainless steel eyeball mirror shall be installed on the outside of the rear wall on the curb side of the cab for viewing of mid-body outrigger on that side. The bracket holding the mirror shall be constructed of 3CR12 and shall be painted job color.

One (1)
20-10-460X

Crew Door Mirror(s)

Y__N__

CREW CAB DOOR MIRRORS

A crew door exterior mirror (2) shall be provided and installed--ref #P3428712 for concept

It shall be installed on each crew door forward of the window. Ref picture for placement andf mirror concept.



One (1)
20-12-0300

Windshield - Tinted

Y__N__

WINDSHIELD

The windshield shall be of tinted automotive laminated safety plate glass with a curved two-piece design. The windshield shall have approximately 2900 square inches of visual area. Right and left hand windshield glass shall be symmetrical and interchangeable from side to side to minimize spare parts stock and expense. Windshield shall be installed and held in place by an extruded rubber molding with a bright finish, decorative, locking bead. Cab shall be finish painted prior to windshield glass being installed.

One (1)

Windshield Wipers & Washers, Attacker/Capitol

Y__N__

(Proposal)

02/04/19

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20-12-0308

WINDSHIELD WIPERS AND WASHERS

One (1) wet arm operated windshield wiper shall be provided for each plate of windshield glass for accessibility and optimum windshield wiping surface areas. Wipers shall be two speed type with intermittent wiping feature. One (1) control switch shall be provided and located on the self-canceling directional switch for both wiper arms. The switch shall combine the on/off (automatic park position), two speed, intermittent and washer functions in one control. The turning switch shall activate the wipers and control speed, and pushing it shall operate the washers. The wiper arms shall park in a low, horizontal position to provide an unobstructed view when not in use.

One (1)
20-12-0309

Windsheild Wiper Operation Requirement

Y___N___

WINDSHEILD WIPER OPERATION REQUIREMENT

The wipers shall be wired through the parking brake, so they discontinue operation when the parking brake is applied.

One (1)
20-12-031S

Windshield Washer Fluid Reservoir - 5 QT, Attacker/Capitol

Y___N___

WINDSHIELD WASHER RESERVOIR

A five (5) quart windshield washer fluid reservoir shall be provided. It shall be accessed in the officer's step well. A hinged aluminum tread plate door with small D-ring handle shall be provided for access. A visual inspection shall be possible without tilting the cab (NO EXCEPTIONS). The aluminum tread plate door shall be properly labeled.

One (1)
20-12-271S

Door Glass - Electric Power Windows, Tinted, Attacker/Capitol

Y___N___

DOOR WINDOWS

A retractable window with automotive type laminated safety glass shall be provided in all four (4) forward hinged cab doors. All glass shall be tinted. Glass shall slide in stainless steel side channels with cloth/fiber liners. Rubberized fiber seals shall be located at the bottom of the window opening to prevent water and debris from entering the interior of the door when the glass is up (or down). A seal shall be placed on both sides (interior and exterior) of the glass. The front door glass shall be 23.75" high x 25.75" wide upper and 27.50" wide lower. The rear door glass shall be 23.75" high x 30" wide. The door window openings shall be trimmed on the exterior side with a smooth, black, poly vinyl chloride (PVC) molding

Electric power window regulator shall be manufactured by the Muncy Corporation and shall be the enclosed, sliding flexible shaft, gear type for ease of operation and reliability. The shaft shall enter a vinyl plastic protective sheath whenever it is exposed. A 12 volt electric motor with gear reduction box to slow driven gear rpm and increase power

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transmission shall be provided. Individual switches shall be provided so that the driver controls the left side forward door window, officer the right side and crew occupants the rear.

One (1)
20-12-2792

Driver's Door Glass Switch - on Driver's Dash

Y__N__

DRIVER'S DOOR GLASS SWITCH

An individual switch for the driver's electric door window shall be provided on the driver's dash.

Aftermarket add-on type electric power window conversion devices like the type that replaces the crank arm will not be acceptable.

One (1)
20-12-2796

Officer's Door Glass Switch - on Officer's Dash

Y__N__

OFFICER'S DOOR GLASS SWITCH

An individual switch for the officer's electric door window shall be provided on the officer's dash.

Aftermarket add-on type electric power window conversion devices like the type that replaces the crank arm will not be acceptable.

One (1)
20-12-2798

Crew Door Glass Switches - on Crew's Doors

Y__N__

CREW DOOR GLASS SWITCHES

An individual switch for the crew electric door windows shall be provided on the crew doors.

Aftermarket add-on type electric power window conversion devices like the type that replaces the crank arm will not be acceptable.

One (1)
20-12-3000

Additional Switches - (3) to Allow Driver to Operate all Power Windows

Y__N__

ADDITIONAL SWITCHES

Three (3) additional switches shall be provided to allow driver to operate all power cab door windows.

One (1)
20-14-111S

Glass - Side Crew Cab, Fixed, Tinted, Attacker/Capitol

Y__N__

CREW CAB SIDE GLASS

There shall be a side window on each side of the cab between the doors. They shall be

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tinted and be manufactured of automotive laminated safety glass. The curb side window shall measure 23" high x 12" wide. The street side window shall measure 23" high x 12" wide. They shall be installed and held in place by an extruded rubber molding with a chrome plated, decorative, locking bead. The cab shall be finish painted prior to window glass being installed.

One (1)
20-16-5000

Scuff Plates - (4) Cab Door Frame, S/S, Hi-Polished

Y__N__

CAB DOOR FRAME SCUFF PLATES

A highly polished stainless steel scuff plate shall be installed on the striker side of each cab door frame and shall run the full height of the door opening. The scuff plate shall be a single bend configuration that guards the outer door frame post from damage and chips to the paint.

One (1)
20-16-9010

Cab Door Hinges - Mill Finish

Y__N__

CAB DOOR HINGES

All piano hinges on the exterior cab doors shall be mill finished.

Two (2)
20-18-010X

Knurled Crew Door Cross Rail

Y__N__

KNURLED CREW DOOR CROSS RAIL

A Knurled Aluminum horizontal cross rail full width shall be provided on each crew door down near the bottom of the widow on the interior (REF E1451308 for concept)



One (1)
20-18-030R

Cab Handrails & Grab Handles - S/S, Knurled, Recessed Mount, Attacker/Capitol

Y__N__

CAB HANDRAILS (RECESSED MOUNT) AND GRAB HANDLES

Handrails shall be 1-1/4" diameter knurled stainless steel.

Handrails shall be continuous welded to 12 gauge stainless steel end plates and

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incorporated into a stainless steel box enclosure that is recessed into the cab side panels.

Handrails shall be installed as follows:

Four (4) 17" handrails shall be installed in the side of the cab, one just to the rear of each cab door.

Grab Handles shall be installed as follows:

Two (2) 6" chrome grab handles shall be provided, one on the inside of each front cab door.

Two (2) 12" rubber covered grab handles shall be provided, one on the inside of each crew cab door.

Two (2) 12" rubber covered grab handles shall be provided, one on the driver's side and officer's side front A-pillar, above the door hinge, to assist in entry to the cab.

Two (2) 12" rubber covered grab handles shall be provided, one on each rear crew door hinged-pillar, on the hinged side of the door, to assist in entry to the cab.

One (1) **Handrail - 18", AL, Knurled, Horiz, Front of Cab, Centered below Windshield** Y__N__
20-18-1015
FRONT OF CAB HANDRAIL

One (1) 18" knurled aluminum handrail shall be provided and installed horizontally on the front of the cab, centered below the windshields.

One (1) **Handrail - 18", Aluminum, Knurled, LS, Rear of Cab** Y__N__
20-18-1020
REAR CAB HANDRAIL

One (1) 18" handrail shall be installed on the rear of the cab on the driver's side at a 30 degree angle to provide a 3-point stance for accessing the turntable. The handrail shall be 1-1/4" diameter extruded aluminum, knurled, with a bright anodized finish.

All handrail stanchions shall be chrome plated. They shall be bolted to the body with 1/4" stainless steel hex head bolts. Stanchions shall have a rubberized gasket placed between them and the body surface they are mounted on. A drain hole shall be provided in each bottom stanchion

One (1) **Folding Step - LS, Rear of Cab, with Integral LED** Y__N__
20-19-0010
REAR CAB FOLDING STEP

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One large polished, chrome plated, cast aluminum folding step with integral LED light shall be installed on the rear of the cab on the driver's side to assist in accessing the turntable.

One (1)
20-20-0100

Crash Test Report - Chassis and Cab

Y__N__

CRASH TEST

The cab shall be certified for the following tests:

SAE J2420: Cab Over Engine (COE) Front Strength Evaluation - Dynamic Loading - Heavy Trucks

SAE J2422: Cab Roof Strength Evaluation - Quasi Static Loading - Heavy Trucks

ECE Regulation 29: Protection of Occupants of Cab in Commercial Vehicle

Performance Measure:

1. After undergoing each test, the cab of the vehicle shall exhibit a survival space accommodating a 50th percentile male ATD in the median position without contact between the manikin and non-resilient parts for all seating positions.
2. None of the doors shall open during the tests.
3. The cab attachments may be distorted or fractured, however, the cab shall remain attached to the vehicle frame in at least one attachment location.

Five (5)
20-20-4010

Helmet Holder - Cab, Ziamatic #UHH-2 (Ea, Qty must = # of seats)

Y__N__

HELMET HOLDER

Five (5) Ziamatic model UHH-2 helmet holders shall be provided and installed. Locations within the cab for the holders shall be determined at the time of the preconference meeting.

The helmets shall be released from the holders by pulling a retention strap down. No adjustments shall be required for the various sizes and styles of helmets.

The helmet hold shall be compliant with NFPA 1901 current edition requirements.

One (1)
20-20-4024

Helmet Caution Labels (for 4 door cabs)

Y__N__

CAUTION LABELS

Caution labels shall be posted in the cab so that they shall be visible from each seat position. The labels shall read: "Do Not Wear Helmets While Seated".

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One (1)
20-25-080G

Headliner - Padded, Acoustical, Gray

Y__N__

HEADLINER

The cab shall be provided with a removable gray headliner for ease of servicing the electrical wiring placed in the cab roof. The headliner shall consist of 3 layers of material. Next to the roof shall be a layer of acoustical insulation made of polyester and polypropylene fibers. The next layer is 1/4" thick Luann. Finally, there is a 1/4" thick layer of foam/perforated acoustical vinyl.

The headliner shall be the multi-piece type (minimum of three (3) sections) so that the entire liner does not have to be removed for localized maintenance.

One (1)
20-25-0910

Back Liner - ATP

Y__N__

BACK LINER

The cab shall be provided with an aluminum tread plate removable back liner. The back liner shall be the multi-piece type (minimum of three (3) sections) so that the entire liner does not have to be removed for localized maintenance.

One (1)
20-25-094G

Crew Door Head Bumpers - (2) Vinyl, Padded, Gray

Y__N__

HEAD BUMPERS

Two (2) padded gray vinyl head bumpers shall be provided each side on the interior of the cab above the crew doors in the header area.

One (1)
20-25-102B

Engine Enclosure - Black LINE-X, Attacker/Capitol

Y__N__

FRONT CAB ENGINE ENCLOSURE

The engine enclosure structure shall have a 1-1/4" thick inner lining, on the engine side, comprised of aluminized foil and foam/barrier composite for heat insulation. The tunnel cover shall have 1/2" decoupled foam lower and 1" decoupled foam upper covering, on the cab interior side, for noise insulation. The top forward portion of the hood shall have a full-width riser with a sloped face for the installation of the switch panel. The sloped panels shall be used for vehicle accessory controls. A minimum of 1" shall be provided between the right edge of the accelerator pedal and the side of the engine hood. A removable cover over the engine enclosure and insulation shall be coated with black LINE-X to act as an insulator for sound and engine temperature, as well as to provide an easy-to-clean work surface.

ACCESSORY MOUNTING STRUCTURE

The top portion of the engine enclosure shall have a stainless steel channel frame located

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between the engine tunnel structure and the cover to support the cover and facilitate mounting of accessories and equipment.

CREW CAB ENGINE COMPARTMENT ACCESS DOOR

An access door shall be provided at the rear of the engine enclosure for routine engine fluid checks. The access door shall be insulated from engine heat with aluminized foil/foam/barrier composite and sealed to prevent exhaust fumes from entering the crew cab.

One (1)
20-25-3000

Steering Wheel - Tilt/Telescoping

Y___N___

18" STEERING WHEEL WITH TILT/TELESCOPE

A padded 18" steering wheel with center horn ring shall be provided. The upper steering column shall be of the tilt and telescopic type. A self-canceling directional switch with wiper control and headlight dimmer control shall be mounted on the steering column with an ICC four way flash switch. The self-canceling directional switch shall be easily removable and replaceable without removing the steering wheel or column assembly. The junction of the shaft and the cab floor shall be sealed to prevent air exchange between the cab interior and exterior.

One (1)
20-25-400B

Cab Dash Finish - Black LINE-X

Y___N___

BLACK LINE-X FOR CAB DASH

The cab dash shall be sprayed with black LINE-X having a high resistance to abrasion and tearing. A vinyl cloth glued or laminated in some manner to a metal backing surface shall not be acceptable.

The LINE-X shall absorb impact without surface damage. The LINE-X shall be resistant to gasoline, diesel fuel, paints, bleaches, organic solvents and other cleaning agents and chemicals. It shall include sound dampening and vibration elimination properties.

The LINE-X shall be solvent free and be environmentally safe to apply with no VOC or CFC hazards. Its surface shall have a non-glare, granular texture and be easily cleaned with common cleansing compounds.

One (1)
20-25-407G

Overhead Dash - Dark Gray LINE-X Finish, Attacker/Capitol Only

Y___N___

OVERHEAD DASH

The overhead dash shall have a dark gray LINE-X finish.

One (1)
20-25-5100

Sun Visors - (2) Lexan (Smoked Transparent)

Y___N___

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SUN VISORS

Two (2) approximately 8" x 28" dark smoke colored transparent polycarbonate Lexan sun visors shall be provided, one on the driver's side and one on the officer's side. Visor shall be supported at both ends to prevent drooping.

Four (4)
20-25-6010

Cup Holder - Black Line-X Finish (Ea)

Y__N__

CUP HOLDER

Four (4) cup holder(s) with a black Line-X finish shall be installed in the cab. The cup holder shall be designed for mounting on top of the engine tunnel.

Four (4)
20-25-6053

Cup Holder Location - Ship Loose

Y__N__

The cup holder shall be shipped loose.

One (1)
20-25-8000

Sign - Vehicle Dimension & Weight

Y__N__

VEHICLE DIMENSION SIGN

A sign shall be provided in the front cab area indicating the height of the completed apparatus in feet and inches, length of the completed apparatus in feet and inches, and the gross vehicle weight rating (GVWR) in tons.

One (1)
21-00-B0AR

Seat - Driver's, Bostrom, Sierra, Air-100, Reclining (NA w RollTek)

Y__N__

DRIVER'S SEAT

The driver's seat shall be an H.O. Bostrom Sierra Air-100 reclining high back seat with air suspension. This seat shall have 5" horizontal adjustment.

One (1)
21-05-030D

Seat Riser - Driver 5" High, Not Available with RollTek, ATT/CAP

Y__N__

The driver's seat shall be held at NFPA regulated height by a 3CR12 stainless steel frame that measures approximately 18" wide x 5" high x 17" deep, front to back at the top and 13.5" deep, front to back at the bottom.

One (1)
21-12-700D

Seat Belt - Driver's, 3 Point, Vertically Adjustable

Y__N__

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SEAT BELT

The driver's seat shall have a 3-point vertically adjustable D Loop style shoulder harness, to meet FMVSS and NFPA 1901 current edition requirements. The seat belt shall be red in color.

One (1)
21-01-BSAF

Seat - Officer's, Bostrom, Tanker 450, Air-100, SCBA (NA w RollTek)

Y__N__

OFFICER'S SEAT

An H.O. Bostrom Tanker 450 Air-100 SCBA seat shall be provided for the officer. This seat shall have no forward/aft adjustment.

One (1)
21-05-0300

Seat Riser - Officer, 5" High, Not Available with RollTek, ATT/CAP

Y__N__

The officer's seat shall be held at NFPA regulated height by a 3CR12 stainless steel frame that measures approximately 18" wide x 5" high x 17" deep, front to back at the top and 13.5" deep, front to back at the bottom.

One (1)
21-08-0200

SCBA Bracket - SecureAll™, Bostrom Seats Only (Ea)

Y__N__

One (1) NFPA compliant H. O. Bostrom SecureAll™ universal SCBA bracket shall be installed in the seat(s).

One (1)
21-12-701D

Seat Belt - Officer's, 3 Point, Vertically Adjustable

Y__N__

SEAT BELT

The officer's seat shall have a 3-point vertically adjustable D Loop style shoulder harness, to meet FMVSS and NFPA 1901 current edition requirements. The seat belt shall be red in color.

One (1)
21-11-6D00

Seat - (1) Inboard, Forward Facing, Bostrom, 400 SCBA Flip-up

Y__N__

REAR SEATING

The rear crew cab section shall contain one (1) center forward facing H.O. Bostrom 400CT SCBA flip-up passenger seat. The seat shall be installed on the rear wall of the cab directly behind the engine enclosure. The seating area shall allow maximum room for fire fighters in full turn out gear.

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One (1) 21-08-0200	<u>SCBA Bracket - SecureAll™, Bostrom Seats Only (Ea)</u>	Y__N__
	One (1) NFPA compliant H. O. Bostrom SecureAll™ universal SCBA bracket shall be installed in the seat(s).	
One (1) 21-12-704E	<u>Seat Belts - Inboard, Fwd Facing, 3 Pt, Vertically Adjustable w ReadyReach (Ea)</u>	Y__N__
	<u>SEAT BELTS</u>	
	The one (1) inboard, forward facing seat(s) shall have a 3-point vertically adjustable D Loop style shoulder harness, to meet FMVSS and NFPA 1901 current edition requirements. The seat belts shall be red in color.	
	An IMMI ReadyReach shall be attached to each of the inboard forward facing seat belts. The ReadyReach positions the seat belt forward making the seat belt easier to reach.	
One (1) 21-11-7B0A	<u>Seat - (2) Outboard, Forward Facing, Bostrom, 400 SCBA Flip-up</u>	Y__N__
	<u>REAR SEATING</u>	
	The rear crew cab section shall contain two (2) outboard forward facing H.O. Bostrom 400CT SCBA flip-up passenger seats. The seats shall be installed on the rear wall of the cab. The seating area shall allow maximum room for fire fighters in full turn out gear.	
Two (2) 21-08-0200	<u>SCBA Bracket - SecureAll™, Bostrom Seats Only (Ea)</u>	Y__N__
	Two (2) NFPA compliant H. O. Bostrom SecureAll™ universal SCBA bracket shall be installed in the seat(s).	
Two (2) 21-12-705D	<u>Seat Belts - Outboard, Forward Facing, 3 Point, Vertically Adjustable, (Ea)</u>	Y__N__
	<u>SEAT BELTS</u>	
	The two (2) outboard, forward facing seat(s) shall have a 3-point vertically adjustable D Loop style shoulder harness, to meet FMVSS and NFPA 1901 current edition requirements. The seat belts shall be red in color.	
One (1) 21-12-7160	<u>Elbow Pads - Vinyl, For Driver & Officer, Inboard</u>	Y__N__
	<u>ELBOW PADS</u>	

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Two (2) "head bumper style" elbow pads shall be installed on the engine tunnel inboard of the officer and the driver. They shall be covered in vinyl and be fastened to a bracket outboard to the engine tunnel. The finish of the bracket shall match that of the engine tunnel. The assembly shall be positioned approximately 6 inches rearward of the center dash vertical surface.

Note: elbow pads may need to be removed in order to access other components.

One (1)
21-12-719B

Elbow Pad Color - Black

Y__N__

The color of the elbow pads shall be black.

One (1)
21-12-7400

Upholstery - Seat, Vinyl, Black

Y__N__

SEAT UPHOLSTERY

All cab seats shall be upholstered in black colored vinyl material.

One (1)
21-13-1510

Attacker HD Interior Decor, Miscellaneous Items

Y__N__

INTERIOR DÉCOR

The following components shall always be black in color:

Floor matting and floor mat edging
Headliner trim
Back liner trim
Crew heater, complete assembly
Electrical panels
Plastic snap plugs for wire access holes
Door seals
Seat risers
Under seat compartments
Seat belt retractor cover.
Rubber covered grab handles
Map desk, if present
Tilt control storage door

One (1)
21-13-2500

Sign - Seating Capacity

Y__N__

CAPACITY SIGN

A sign visible to the driver, that states the number of personnel the vehicle is designed to

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carry, shall be provided.

One (1)
21-13-7900

Seagrave Logos Only on Seats

Y__N__

SEAGRAVE LOGOS ON SEATS

The Seagrave Logo shall be embroidered onto the following seat locations, unless specified differently: on the headrest if present, or the front of the seat back cushion if not, and one on each side of the seat cushions.

Two (2)
21-15-1113

Cab Compt- Rear Facing, Outbd, 1 Hinged Door, 21wx18dx21h O.D. (Ea)

Y__N__

STORAGE COMPARTMENT(S)

Two (2) storage compartment(s) shall be provided in the cab. The compartment(s) shall be rear facing and in the outboard position. **The compartment(s) openings shall be covered with a webbing cargo net with metal buckles to secure the contents.** The overall outside dimensions of each compartment shall be **18" wide x 21" deep x 24" high**. The compartment(s) shall be constructed of 1/8" smooth aluminum. The compartment exterior(s) shall have a LINE-X finish that shall match the lower cab dash/engine tunnel.

Two (2)
21-15-11V3

Cab Compartment Location - Driver's Side & Officer's Side

Y__N__

The cab compartment shall be located on the driver's side and on the officer's side.

Two (2)
91-01-0210

Finish - Cab Compartment Interior, Mill Finish (Ea Compt)

Y__N__

FINISH – CAB COMPARTMENT INTERIOR(S)

Two (2) cab compartment interior(s) shall have no finish applied.

One (1)
21-23-071S

HVAC, Vent, Defrost - Forward Cab, 46,000 /33,000 BTU, ATT/CAP

Y__N__

HEATER/DEFROSTER/AIR CONDITIONING-FORWARD CAB

A front cab heater / defroster / air conditioning unit shall be provided. The HVAC unit shall distribute filtered, heated or cooled, fresh and / or recirculated, air through ducting of the cab front dash panels.

Heating capacity shall be rated at 46,000 BTU minimum.

Cooling capacity shall be rated at 33,000 BTU minimum.

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The HVAC unit shall be located in the cab RH firewall and have a variable speed 625 CFM blower assembly. The HVAC unit shall be designed for serviceability and be located behind a removable panel. Access to air intake filter, heater core, evaporator core, and fan assembly shall be provided without removing the HVAC housing from the installed location.

Intake air shall be filtered by a commercially available filter and can be mixed between fresh and recirculated for vent / defrost and heat / cool selections.

Output air can be distributed between the four (4) defroster vent located at the base of the windshield, four (4) rear facing dash vents, and two (2) lower rear facing vents.

Defrost function selection can provide heated or cooled output air, fresh or recirculated intake air, and utilizes the AC system for drying air to the windshield. Output air will be directed through six (6) vents. Four (4) fixed flow vents located at the base of the windshield positioned and designed to distribute the air up. Two (2) adjustable vents located, one (1) at the LH edge of the dash directed at the LH driver's door glass and one (1) at the RH edge of the RH passenger's door glass.

Vent function selection can provide heated or cooled output air, fresh or recirculated intake air. Output air shall be directed rearward through four (4) adjustable vents. Two (2) adjustable vents shall be located in the center dash panel with positioning optimized for LH driver and RH passenger air flow direction to the upper torso. Two (2) adjustable vents shall be located, one (1) each forward seating position, in the upper outboard area of each forward seating kick panel, below the dash.

The front HVAC unit shall utilize a dedicated condenser located on the forward cab roof. The condenser shall be a stacked type, low profile and feature two fans. All connections, hose and harness, shall be through weatherproof bulkheads. The condenser assembly shall include a white powder coated cover over the stacked condenser coils and a white painted protective cover over the Freon hoses, dryer, valves, switches and / or solenoids above the cab roof and connected to the condenser body. Condenser and cover mounting shall be made without perforating the cab roof skin for maximum resistance to water intrusion to the cab interior.

One (1)
21-23-079L

Air Conditioning Front Condenser Cover - Aluminum, Additional, ATT/CAP

Y___N___

FRONT CONDENSER COVER

The condenser body shall have one fabricated cover assembly providing complete protection for, and above the condenser fans. The design shall be modular to allow access to condenser components without removing the entire cover assembly.

The main condenser body and fan cover shall be approximately 10.5" high x 46" long x 19.75" wide with a base and sides fabricated from 3/16" wall 5052-H32 aluminum plate. Two removable covers, each over the top of each condenser fan, shall be constructed with 3/16" wall x 1" high aluminum expanded grating.

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Condenser cover mounting shall be made without perforating the cab roof skin for maximum resistance to water intrusion to the cab interior.

Note: Condenser location and orientation is dependent on other influential options.

One (1)
21-23-0820

Manual Coolant Shutoff Valve - Forward Cab HVAC Inflow (Inlet), ATT/CAP

Y__N__

MANUAL COOLANT SHUTOFF VALVE - INLET

The forward cab heater inlet flow shall be interrupted by one (1) manual engine coolant shutoff valve mounted on a plate utilized specifically for auxiliary engine coolant flow control. The mounting plate and valve location shall be in the forward, RH side of the chassis engine area. Valve to be 1/4 turn style with label for ease of identification.

One (1)
21-23-0900

Manual Coolant Shutoff Valve - Forward Cab HVAC Outflow (Return), ATT/CAP

Y__N__

MANUAL COOLANT SHUTOFF VALVE - RETURN

The forward cab heater return flow shall be interrupted by one (1) manual engine coolant shutoff valve mounted on a plate utilized specifically for auxiliary engine coolant flow control. The mounting plate and valve location shall be in the forward, RH side of the chassis engine area. Valve to be 1/4 turn style with label for ease of identification.

One (1)
21-23-271T

Rear Heat Addition - Crew Cab, 81,000 BTU Heat Combined, 20" Wide, Centered, A&C

Y__N__

REAR HEAT ADDITION CENTER REAR CREW CAB, 3 SPEED / ELECTRONIC CONTROL

A crew cab heater shall be provided. The heater unit shall provide filtered, engine coolant heated, air to the crew cab area through a ducted enclosure.

Crew heating capacity shall be rated at 35,000 BTU minimum and the combined heating capacity of the cab HVAC units shall be 81,000 BTU minimum.

The heater unit shall have a variable speed 430 CFM blower assembly. The heater unit shall be designed for serviceability and be centrally located against the rear crew cab wall in a vented and ducted enclosure approximately 16" deep x 14.5" high x 20" wide. Access to air intake filter, heater core, and fan assembly shall be provided.

Crew heater function shall feature two (2) controls with backlighting. One (1) rotary fan control switch with four positions (OFF, LOW, MEDIUM, HIGH) and one (1) rotary temperature control coupled to an electronic water valve. The heater control shall be located to the rear of the crew A/C evaporator.

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One (1) **Manual Coolant Shutoff Valve - Crew Cab Heater Inflow (Inlet), Attacker/Capitol** Y__N__

21-23-3020

MANUAL COOLANT SHUTOFF VALVE - INLET

The crew cab heater inlet flow shall be interrupted by one (1) manual engine coolant shutoff valve mounted on a plate utilized specifically for auxiliary engine coolant flow control. The mounting plate and valve location shall be in the forward, RH side of the chassis engine area. Valve to be 1/4 turn style with label for ease of identification.

One (1) **Manual Coolant Shutoff Valve - Crew Cab Heater Outflow (Return), ATT/CAP** Y__N__

21-23-3100

MANUAL SHUTOFF VALVE - RETURN

The crew cab heater return flow shall be interrupted by one (1) manual engine coolant shutoff valve mounted on a plate utilized specifically for auxiliary engine coolant flow control. The mounting plate and valve location shall be in the forward, RH side of the chassis engine area. Valve to be 1/4 turn style with label for ease of identification.

One (1) **Air Conditioner Addition - Crew Cab, 72,500 BTU Total, Attacker/Capitol** Y__N__

21-23-381S

AIR CONDITIONING SYSTEM ADDITION - CREW CAB

A crew cab air conditioning unit shall be provided on the cab ceiling, above the rear portion of the engine enclosure. The AC unit shall distribute cooled recirculated, air through six (6) outlets. The six air outlets include four (4) adjustable rear facing air diffusers and two (2) adjustable side outboard facing vents.

Cooling capacity of the crew AC evaporator unit shall be rated at 39,500 BTU minimum and the combined cooling capacity of the cab HVAC evaporator units shall be 72,500 BTU minimum.

The crew AC unit shall have a variable speed 577 CFM blower assembly. Intake air shall be filtered by a commercially available and serviceable filter. The AC unit shall feature independent fan speed and temperature controls. Evaporator condensate shall be evacuated by two independent drain hoses, each routed inside a single stainless pipe located beneath the AC unit, between the AC unit and the top of the engine enclosure. The two independent hoses route through the top of the engine enclosure cover, behind the engine block, and terminate outboard the LH chassis frame rail.

The crew AC unit shall utilize a dedicated condenser located on the, rear, crew cab roof. The condenser shall be a stacked type, low profile and feature two fans. All connections, hose and harness, shall be through weatherproof bulkheads. The condenser assembly shall include a white powder coated cover over the stacked condenser coils and a white painted protective cover over Freon hoses, dryer, valves, switches and / or solenoids above the cab roof and connected to the condenser body. Condenser and cover mounting

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shall be made without perforating the cab roof skin for maximum resistance to water intrusion to the cab interior.

The air conditioning system, front and rear combined, shall exceed the performance standard of cooling the cab from an ambient temperature of 100 degrees Fahrenheit at 50% relative humidity to an average cab temperature of 75 degrees Fahrenheit in less than 30 minutes.

One (1) **Air Conditioning Rear Condenser Cover - Aluminum, Additional, Attacker/Capitol** Y__N__

21-23-390L

REAR CONDENSER COVER

The condenser body shall have one fabricated cover assembly providing complete protection for, and above the condenser fans. The design shall be modular to allow access to condenser components without removing the entire cover assembly.

The main condenser body and fan cover shall be approximately 10.5" high x 46" long x 19.75" wide with a base and sides fabricated from 3/16" wall 5052-H32 aluminum plate. Two removable covers, each over the top of each condenser fan, shall be constructed with 3/16" wall x 1" high aluminum expanded grating.

Condenser cover mounting shall be made without perforating the cab roof skin for maximum resistance to water intrusion to the cab interior.

Note: Condenser location and orientation is dependent on other influential options.

Two (2) **Auxiliary Fan in Cab (Ea)** Y__N__

21-23-5000

AUXILIARY FAN(S)

Two (2) adjustable 7.5" auxiliary fan(s) shall be provided in the cab with a two (2) speed control switch on the mounting pedestal.

Two (2) **Auxiliary Fan Locations - (2) on Ceiling, Forward of Rear Facing Seat Positions** Y__N__

21-23-500T

AUXILIARY FAN(S)

The auxiliary fan(s) shall be located on the cab ceiling, directly forward of the rear facing seating positions, blowing rearward.

One (1) **HVAC Controls - Forward Cab, 4 Selectors, Dedicated AC, Attacker/Capitol** Y__N__

(Proposal)

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21-23-8020

HVAC CONTROL - FORWARD CAB

HVAC controls shall feature rotary switches, function labeling, backlighting, and have colored indicators. A single, lighted, AC engagement push switch shall be provided for engaging the AC system components as needed.

The HVAC panel shall have four (4) rotary control switches inline, from left to right, in the following order:

- Fan Speed (OFF, LOW, MEDIUM, HIGH)
- Water Temperature Blend Control (HEAT-COOL)
- Outlet Air Blend Control (DEFROST-VENT)
- Intake Air Blend Control (FRESH-RECIRC)

The HVAC panel shall have one (1) raised, “push to engage”, switch that illuminates when the air conditioning is engaged. This switch shall be centrally located on the control panel, between the second and third rotary control switches, along the top edge of the control panel.

The HVAC control panel shall allow the operator to make selections or adjustments to any one of the four (4) selectors without resetting or disturbing the selections of other three (3) controls.

The HVAC control shall feature an override to engage the air conditioning system when the operator has selected 100% Defrost on the Outlet Air Blend Control.

One (1)
21-50-1005

Map Box - (4) Slot High/Low w/ Black LINE-X Finish

Y__N__

MAP BOX

A map box shall be provided and installed between the driver and officer on top of the engine hood. The box shall have four (4) angled vertical slots space on 2.75 inch centers. The rear interior of the slots shall be 14.25 inches wide by 8.00 inches deep and shall run crossways of the cab. The front two (2) slots shall be 4.00 inches deep.

The box shall be constructed of a 0.125 inch thick aluminum sheet metal welded assembly. It shall be covered with black LINE-X.

One (1)
21-50-1201

Map Box Location - Determined at Final Inspection

Y__N__

The location of the map box shall be determined at the Final Inspection.

One (1)
22-00-0105

Electrical Wiring - 12V General

Y__N__

GENERAL 12-VOLT ELECTRICAL WIRING REQUIREMENTS 12-VOLT ELECTRICAL SYSTEM

(Proposal)

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The apparatus shall be equipped with a heavy-duty 12-volt electrical system. All 12-volt electrical equipment installed by the apparatus manufacturer shall conform to modern automotive practices. All electrical wiring and components installed in the apparatus shall be suitable for use in severe duty emergency vehicle applications.

GENERAL WIRING AND WIRE HARNESS CONSTRUCTION

Unless otherwise specified by the component supplier, all insulated wire and cable shall conform to SAE J1127 *Low Voltage Battery Cable* type SGX or STX, or SAE J1128 *Low Voltage Primary Cable* type SXL, GXL, or TXL.

Circuit feeder wires shall be stranded copper or copper alloy conductors of a gauge rated to carry 125 percent of the maximum current for which the circuit is protected.

Conductor materials and stranding, other than copper, shall be permitted if all applicable requirements for physical, electrical, and environmental conditions are met as dictated by the end application.

The overall covering of conductors shall be moisture-resistant loom or braid that has a minimum continuous rating of 194°F (90°C) except where good engineering practice dictates special consideration for loom installations exposed to higher temperatures.

The overall covering of jacketed cables shall be moisture resistant and have a minimum continuous temperature rating of 194°F (90°C) except where good engineering practice dictates special consideration for cable installations exposed to higher temperatures.

CIRCUIT IDENTIFICATION

All wiring shall be uniquely identified by a circuit number and color coding. The identification shall be referenced on a wiring diagram. Wires less than 8 AWG shall be permanently identified at least every 2.0 inches (50.8 mm) by a circuit and function code. Cables equal to or larger than 8 AWG and wires included in jacketed cables shall be permanently identified by circuit number at all terminations.

WIRING CONNECTIONS

All wiring connections and terminations shall use a method that provides a positive mechanical and electrical connection. The wiring connections and terminations shall be installed in accordance with the device manufacturer's instructions. Secondary locks shall be utilized on all connectors that are secondary lock capable.

Exterior exposed wire connectors shall be environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids. Seal plugs shall be installed in all unused sealed connector cavities.

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All ungrounded electrical terminals shall have covers or be in enclosures to protect against corrosion, excessive heat, excessive vibration, physical damage, liquid contaminants, dust, and other environmental factors.

Wiring splices shall be crimp-type, molded, or sonic weld type. Adhesive lined heat shrink tubing shall be used to seal and insulate splice joints.

WIRE AND CABLE ROUTING

Wiring routed through holes in sheet metal or castings shall have edges protected by an appropriately sized grommet.

Wiring shall be routed to avoid metal edges, screws, trim fasteners and abrasive surfaces. When such routings are not possible, protective devices (shields, caps, etc.) shall be used to protect the wires. When wires must cross a metal edge the edge shall be covered with a protective shield.

Wiring shall be routed to provide at least 3 inches (76.2 mm) clearance to moving parts, unless positively fastened or protected by a conduit.

Wire routings should avoid areas where temperatures exceed 180° F (82.2° C) and a minimum clearance of 6 inches (152.4 mm) shall be maintained from exhaust system components. Where compliance with this requirement is not possible, high temperature insulation and heat shields shall be utilized.

When wiring is routed between two members where relative motion can occur the wiring shall be secured to each member, with enough wire slack to allow flexing without damage to the wires.

Wiring to all circuit components (switches, relays, etc.) in exposed locations shall provide a drip loop to prevent moisture from being conducted into the device via the wire connection.

Routing wires into areas exposed to wheel wash shall be avoided if possible. When such routings cannot be avoided, adequate clipping or protective shields shall protect the wires from stone and ice damage.

Wiring shall be secured in its intended location with appropriately sized bolt-on clips and nylon wire ties.

Electrical components designed to be removed for maintenance shall include a sufficient length of wire to allow the component to be pulled away from the mounting area for inspection and service work.

Bulkhead type connectors or sealed fittings shall be used to prevent the entry of liquid contaminants into weather tight enclosures.

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SPARE WIRES

Wiring harnesses from/to major power and signal distribution areas of the apparatus shall include spare wires for future expansion of the system.

ELECTRICAL SYSTEM COMPONENTS

Serviceable components shall be readily accessible. Switches, relays, terminals and connectors shall have a dc rating of 125% of the maximum current for which the circuit is protected.

A distributed power and signal system shall be utilized on the apparatus to minimize power supply voltage drops. Power and signal distribution areas in the cab shall be concentrated in five (5) areas.

A lower cab power and signal distribution center shall be located in the center forward portion of the cab "dash". It shall be hinged and opened by unlocking two (2) top mounted, double hinged, lift and pull latches. This area shall contain relays and circuit breakers installed in a logical and serviceable fashion.

An additional lower cab power and signal distribution center shall be located below the officer's dash behind the kick plate.

An upper power and signal distribution area shall be located in the forward portion of the cab ceiling, above the engine tunnel. Components in this area shall be permanently labeled and easily accessible by opening a hinged cover.

A power and signal distribution area shall be located in the pump module, if applicable. Components in this area shall be permanently labeled and easily accessible.

A power and signal distribution area shall be located on the front of the forward body compartments. Components in these areas shall be permanently labeled and easily accessible.

All electrical components or devices installed in an exposed area on the outside of the cab or body shall be mounted in such a manner, or protected by a gasket, caulking or other means, so that moisture shall not accumulate in it.

CORROSION PROTECTION

Externally exposed, non-plug type, electrical connections shall be given a hand applied or sprayed application of an industrial standard insulation coating with a minimum rating of 2100 volts per mil thickness. Insulation shall protect the connection from water induced electrical corrosion and accidental short circuiting. Should the connection be loosened or removed during the manufacturing process another coating shall be applied after it has

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been refastened or replaced.

One (1)
22-00-0110

Main Battery and Starter Circuits

Y__N__

MAIN BATTERY AND STARTER CIRCUITS

BATTERY POWER BUSS

All positive cables from the batteries shall be connected directly to a battery positive buss bar located as close to the batteries as practical. The alternator shall be wired directly to the battery positive buss bar through the ammeter shunt, if one is provided.

ENGINE STARTER AND INTERLOCK CIRCUITS

The starter solenoid(s) shall be connected directly to the battery positive buss bar. An interlock shall be provided to prevent the operator from engaging the starter when the engine is running.

BATTERY GROUND BUSS AND SINGLE POINT GROUND SYSTEM

All negative (ground) cables from the batteries shall be connected directly to a battery negative buss bar located as close to the batteries as practical. Appropriately sized ground feeder cables shall be utilized to provide a low impedance ground path to the negative buss bar for all electrical devices on the apparatus.

APPARATUS GROUND BONDING

The battery negative buss bar shall be connected to the chassis frame. The cab, pump enclosure (if furnished), and body structure shall be electrically bonded to the vehicle frame with braided copper grounding straps.

One (1)
22-00-0120

EMI/RFI Protection

Y__N__

EMI/RFI PROTECTION

The apparatus electrical system and related devices shall have the ability to function in the severe electromagnetic environment typical of fire ground operations.

EMI/RFI EMISSIONS

State-of-the-art electrical system design and components shall be utilized to ensure the suppression of radiated and conducted EMI (electromagnetic interference) and RFI (radio frequency interference) emissions that may cause communication and navigation radio-reception interference. The electrical system and related components shall comply with the applicable sections of J551/1 *Performance Levels and Methods of Measurement of Electromagnetic Compatibility of Vehicles, Boats (up to 15 m), and Machines (16.6 Hz*

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to 18 GHz)

EMI/RFI SUSCEPTIBILITY

The apparatus electrical system shall incorporate immune circuit designs, filtering, shielding and twisted-pair wiring to control EMI/RFI susceptibility. Particular attention shall be given to harness and cable routing to minimize the potential for conducted and radiated signal susceptibility.

Electrical / electronic equipment on the apparatus shall not be susceptible to radiated and conducted EMI/RFI emissions from on-board radio transmitter(s) and shall comply with the requirements of SAE J551-12 *Vehicle Electromagnetic Immunity--On-Board Transmitter Simulation*.

One (1)
22-00-0130

Low Voltage Electrical System Performance Testing

Y__N__

ELECTRICAL SYSTEM PERFORMANCE TESTING

An operational test shall be conducted to ensure that all installed electrical equipment is properly connected and is in working order. The apparatus alternator shall be tested with the total continuous electrical load applied and engine running up to the engine manufacturer's governed speed for a minimum of 2 hours. Additionally, all warning lights shall be run continuously during the three (3) hour NFPA pump certification test (or at another time for not less than three (3) hours). Activation of the load management system (if furnished) shall be permitted during this test. An alarm sounded by excessive battery discharge, as detected by the low voltage warning system, or a system voltage of less than 11.8 V dc at the battery for more than 120 seconds, shall be considered a test failure.

One (1)
22-00-014A

Cab Dash & Instruments

Y__N__

CAB DASH AND INSTRUMENTS FOR 2013 EMISSIONS ENGINE

A non-glare instrument panel, custom designed to accommodate the appropriate functions, shall be provided. Illumination shall be provided for controls, switches, instruction plates, gauges, and instruments necessary for the operation of the apparatus. The cab dash shall be forward slanted, and constructed of aluminum. Rocker switches that have integral lights shall be as follows when applicable: red indicator lights shall be provided for warning light and engine/mechanical functions, green indicator lights shall be provided for scene and auxiliary lighting and general functions; selection shall be at the manufacturer's discretion.

A system shall be provided that interacts with the engine electronics and eliminates redundant senders and switches. The electronic engine gauges shall receive information on the SAE J1939 data link to improve reliability and gauge accuracy. Connectors shall be utilized for ease of service. The dial face shall be black with white lettering. The

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primary letters shall be in Imperial with the secondary, smaller letters in metric. The dial shall have international non-language symbols for the gauge function (except speedometer). Gauges shall have illumination with a monochrome LCD display located on the speedometer gauge. They shall also have a 250 degree dial sweep for greater definition of scale. SAE J1939 Faults and Warnings shall be displayed on the LED display.

DRIVER'S INSTRUMENTATION

The following individually mounted gauges shall be provided: (all inclusive gauge clusters not allowed, no exceptions)

Main Gauges

3" Speedometer:	0-85 mph with built-in LCD display
Speedometer Mode Switch:	Allows operator to select menu items in the display screen
Speedometer Up Switch:	Allows operator to scroll up through display menu items
Speedometer Down Switch:	Allows operator to scroll down through display menu items
3" Tachometer:	0-4000 rpm

Satellite Gauges

2" Fuel Level:	Empty – full with low level warning indicator
2" Voltmeter:	10-16 VDC
2" Coolant Temperature:	100-240 Degrees Fahrenheit
2: Engine Oil Pressure:	0-80 psi
2" Transmission Oil Temp:	100-320 Degrees Fahrenheit
2" Front Air Pressure:	0-150 psi
2" Rear Air Pressure:	0-150 psi
2" DEF Level:	Empty – full with low level warning indicator

DRIVER'S INDICATOR LIGHT MODULE

The following indicators shall be mounted in a removable modular panel in front of the steering column. The indicators shall be identified with universal ISO 2575 symbols where applicable and visible to the driver while seated. All applicable indicators in the modular panel shall automatically illuminate for 1 second upon activation of the ignition switch to verify operation:

- Battery Switch "On" green indicator light
- Ignition Switch "On" indicator (Seagrave Flame Logo)
- Check Transmission amber indicator light

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- Check Engine amber indicator light
- Stop Engine (Engine Warning) red indicator light
- High Exhaust Temperature (HEST) amber indicator light (if applicable)
- Diesel Particulate Filter Regeneration (DPF) amber indicator light (if applicable)
- Wait-to-Start amber indicator light (if applicable)
- Malfunction Indicator Light (MIL) amber indicator light (if applicable)
- ABS warning amber indicator light
- ATC/ESC activated amber indicator light
- Spring (Parking) Brake "On" red indicator light
- High Beam "On" blue indicator light
- Low air pressure red indicator light
- Left Turn signal green indicator light
- Right Turn signal green indicator light
- General Warning red indicator light (if applicable)
- DEF Level Indicator Light

AUDIBLE CAB ALARMS

Audible alarms shall be provided in the cab to alert the operator of conditions that require attention. The alarm device(s) shall be audible in the driving compartment and feature an adjustable volume control.

An intermittent audible tone shall sound when the following conditions are present and the parking brake is disengaged:

- Active Hazard Warning –
(Do Not Move Apparatus; Door Open, Tower Raised, Ladder Rack Down,
etc.)
- Seat Belt Warning

A steady audible tone shall sound when the following conditions are present:

- Stop Engine (includes High Engine Temperature and Low Engine Oil Pressure)
- Low Voltage
- Engine Air Filter Restriction
- Jackknife Warning (if applicable)
- Tiller Cab Operator Not in Position (if applicable)

DRIVER'S AND OFFICER'S CONTROLS

The following rocker style control switches shall be identified and accessible to the driver while seated. Switches shall include integral indicator lights (where applicable) to advise that the switch has been energized and identification labels shall be illuminated for night driving.

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Ignition switch with green indicator light
Engine Start switch
Headlight / Tail-Marker-ID light switch
Instrument Panel Dimmer control rheostat

The following controls shall be stalk mounted on the steering column and identified and visible to the driver while seated:

Turn Signal Control and 4-Way Hazard Warning switch
High-beam headlight switch
Windshield wiper control switch
Windshield washer control switch

The following controls shall be identified and accessible to the driver while seated:

Parking (Spring) Brake Control
High Idle control switch
Other controls (as defined elsewhere in this specification)

The following controls shall be identified and accessible to both the driver and officer while seated. Controls shall be identified and illuminated for night driving.

HVAC control panel

Other controls (as defined elsewhere in this specification)

One (1)
22-00-015D

Emergency & Work Light Switch Panel - Driver

Y___N___

EMERGENCY & WORK LIGHT SWITCH PANEL - DRIVER'S SIDE

All emergency light and work area lighting control switches shall be mounted in a removable panel located in the overhead position on the driver's side of the cab. The light switches shall be "rocker" type with an internal indicator light (where applicable) to show when the switch is energized. All switches shall be properly identified by an illuminated label for night driving.

A master warning light switch shall be provided for emergency lighting.

A momentary clear warning light switch shall be provided for clear emergency lighting control that shall default on.

One (1)

Door Ajar/Hazard Warning Indicator - LED

Y___N___

(Proposal)

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22-00-0160

DOOR AJAR/HAZARD INDICATOR LIGHT (DO NOT MOVE APPARATUS)

A Whelen "T0" series 2" round red flashing LED light with chrome flange shall illuminate automatically whenever the apparatus parking brake is not fully engaged and any of the following conditions exist:

Any passenger or equipment compartment door is open.

Any ladder or equipment rack is not in the stowed position.

Stabilizer system is not in its stowed position.

Powered light tower is extended.

Any other device permanently attached to the apparatus is open, extended, or deployed in a manner that is likely to cause damage to the apparatus if the apparatus is moved.

The hazard warning light shall be identified with a label that reads: "Do Not Move Apparatus When Light Is On." The light shall be located on the ceiling between the driver and the officer.

One (1)
22-00-017B

Digital Clock - 24 Hour

Y___N___

DIGITAL CLOCK

A 24 hour real-time digital clock shall be identified and visible to the driver while seated..

One (1)
22-00-030A

Electrical Wiring - 12V INTELEX™ PLUS, Attacker/Capitol

Y___N___

ELECTRICAL WIRING REQUIREMENTS - INTELEX™ PLUS

The apparatus shall be equipped with an INTELEX™ PLUS management system for control of the electrical system devices, where applicable.

CIRCUIT PROTECTION

Circuit protection devices shall be utilized to protect each electrical circuit. All circuit protection devices shall be sized according to 125% of the anticipated load to prevent wire and component damage when subjected to extreme current overload.

SOLID STATE CIRCUIT PROTECTION

Intex power distribution modules shall utilize solid state output channels and feature fully protected high-side drivers (+12V) to protect wiring. High-side drivers shall provide overload protection, current limitation, transient protection, and replicate the function of an automatic reset circuit breaker. If output current exceeds the rated amperage, the output shall automatically turn off. After 30 seconds, the module shall attempt to

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re-energize the load. If the output is still overloaded, it shall remain off until the power is cycled. In the event of a communications loss with the vehicle's control module, all outputs not controlling a moving device, such as a ladder rack, shall remain in their previous state until communication is restored or the power is cycled.

NON-SOLID STATE CIRCUIT PROTECTION

Circuit breakers shall be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258 unless operational requirements and/or safety concerns dictate Type-III manual reset type conforming to SAE J1625. Automotive-type fuses conforming to SAE J554, J1284, J1888 or J2077 shall be utilized when required to protect electronic equipment.

POWER CONTROL RELAYS AND SOLENOIDS

Power control relays and solenoids shall have a direct current (dc) rating of 125 percent of the anticipated current load.

BUSSMANN MVEC RELAYS AND CIRCUIT PROTECTION

Manufactured as a hardened and weather tight module, the mVEC is rated at 200 Amps. The mVEC is configured to provide various OEM circuit protection and switching functions, using industry standard fuses, relays and breakers, with the status and control of each circuit accessible through J1939 CAN open messages. Each mVEC is rated at 200 Amps, with individual outputs rated up to 30 Amps. Waterproof to high pressure spraying (IP66 equivalent). The mVEC is designed and manufactured with robust features such as heavy-duty housing, silicon and Gortex gaskets, and protective conformal coated electronics, to operate in demanding vehicle environments such as those found in fire apparatus.

One (1)
22-00-0310

Information Center II - INTELEX™ PLUS

Y__N__

INFORMATION CENTER II

A 5" color display capable of displaying graphical images as well as text messages shall be located on the cab dash. The main display page shall include the date, time and ambient air temperature in Fahrenheit. Additional information pages shall be provided for the warning indications, not stowed indications, and open doors. The display shall be dimmable with a Rheostat control on the dash and shall have an override button on the control to dim to ten (10) percent.

APPARATUS STATUS INDICATORS AND AUDIBLE ALARMS

If a monitored "Not Stowed" or "Warning" condition is active, the corresponding status indicator shall flash. In addition to visual indicators, audible alarms shall sound when designated conditions activate the "Not Stowed" and "Warning" status indicators.

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WARNING INDICATOR

A flashing red triangle symbol shall alert the vehicle occupants of an active "WARNING" condition. This is defined as a situation or status on the vehicle that is of high priority or "mission critical" nature. The flashing red triangle shall be displayed on the Information Center and dash gauge panel in front of the driver. The following are typical "Warning" (high priority) conditions:

HYDRAULIC FILTER	LOAD MANAGE	LOW AIR PSI
CAB NOT LOCKED	LOW VOLTAGE	JACK KNIFE
AIR RESTRICTION	ABS FAULT	TRAILER ABS

NOT STOWED INDICATOR

A flashing Not Stowed indicator shall alert the vehicle occupants of an active "Not Stowed" condition. This is defined as a situation or status on the vehicle that is not of high priority or "mission critical" nature, but requires attention before the vehicle is put in motion. The following are typical "Not Stowed" (not high priority) conditions:

AERIAL RAISED EXTENDED	DECK GUN RAISED	JACKS
---------------------------	-----------------	-------

The following items are considered Not Stowed only when the parking brake is released.

LADDER UP	JACKS EXTENDED	Q2B TILTED
LIGHT TOWER UP	DECK GUN RAISED	DS TELE
LIGHT UP		
OUTRIGGERS	STEP DOWN	PS TELE
LIGHT UP		
DS HATCH OPEN	PS HATCH OPEN	

AUDIBLE ALARMS

The following conditions shall cause the audible alarm to sound "steady" (not an intermittent beep); signifying a "mission critical" condition exists that requires immediate attention.

STOP ENGINE	CAB NOT LATCHED	LOW VOLT
LOW AIR	ABS FAULT	
LOW COOLANT	LOW OIL PRESSURE	

Corresponding "Low Air", "Stop Engine" visual indicators shall be located in the dash gauge panel in front of the driver.

The following conditions shall cause a chime alarm to sound "intermittently" (i.e., beep),

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once the parking brake is released, signifying a condition exists that may become “mission critical” if not quickly addressed.

ANY LIGHT NOT STOWED
ANY BODY DOOR OPEN
ANY CAB OR CREW CAB DOOR OPEN

An audible alarm shall sound if any of the seat belts are not properly closed and the vehicle is going 5 mph or greater. The sound shall be different from all other audible alarms in the cab.

OPEN DOORS / DEPLOYED EQUIPMENT RACKS / EXTENDED STEPS

When a cab or compartment door is open, a step is extended, or equipment (i.e., ladder) rack is deployed, the “DOORS” indicator shall flash. Pressing the corresponding button shall display an overhead graphical representation of the apparatus. This image depicts the open cab door(s), open compartment door(s), deployed equipment rack(s), and/or extended step(s). The chime alarm shall also sound when the parking brake is released.

One (1)
22-00-031A

Customer Information on Display - Customer Name & City

Y__N__

The customer's name and city shall display on the information display screen.

One (1)
22-00-0320

Load Management System - INTELEX™ PLUS

Y__N__

AUTOMATED ELECTRICAL LOAD MANAGEMENT SYSTEM

The apparatus shall be equipped with an automated load management system. The load management system shall monitor battery voltage and activate the engine high idle system (provided NFPA interlocks have been established) before disabling any electrical loads. If engine high idle is not available or activation does not result in sufficient battery system voltage, individual electrical loads shall be automatically and sequentially deactivated until voltage returns to an acceptable level. Loads shall be sequentially reactivated to avoid a sudden large voltage demand on the system. Electrical loads defined in NFPA 1901 as “minimum continuous” shall not be subject to automatic load management. Load prioritization shall be independently field programmable by authorized users.

If the load management system becomes active, the “LOAD MANAGE” indicator shall illuminate on the "Warnings" page of the INTELEX™ PLUS cab mounted display.

One (1)
22-00-0330

Load Sequencer - INTELEX™ PLUS

Y__N__

LOAD SEQUENCER

A sequential switching device shall automatically energize the specified optical warning

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devices to minimize potentially damaging voltage fluctuations due to the sudden addition or removal of large current demands on the electrical system. Upon activation of the “EMERGENCY MASTER” warning switch and provided the individual optical warning device switches are also activated, the following loads shall be activated (or deactivated) in 0.5 second intervals:

Front Light Bar
Side Light Bar (if applicable)
Front and Rear Flashing Lights
Side Warning
Rear Beacons
High Beam Headlight Flash

One (1)
22-00-0344

Vehicle Data Recorder & Seat Monitor - FRC #SBA200, INTELEX™ PLUS

Y ___ N ___

VEHICLE DATA RECORDER AND SEAT MONITOR DISPLAY

Fire Research series **SBA200-A00** seat monitor display and vehicle data recorder kit shall be installed. The kit shall include a seat monitor display module, a vehicle data recorder, and cables.

The seat monitor display shall be programmable for up to thirteen (13) seats and have a seatbelt icon for each. An alarm silence button and LED indicators for power and data link status shall be located on the front of the seat monitor display.

The data recorder case shall be waterproof. It shall have inputs for monitored information from the vehicle J1939 CAN bus, independent sensors, seatbelt and seat occupied switches, outputs for audible alarms, and two-way FRC data link connectors.

The vehicle data recorder shall record the following data once per second and store it in a 48 hour loop:

- Vehicle Speed
- Acceleration
- Deceleration
- Engine Speed
- Engine Throttle Position
- ABS Event
- Seat Occupied Status
- Seat Belt Status
- Master Optical Warning Device Switch
- Time
- Date

The vehicle data recorder shall record the following data once per minute and have memory to store it for 100 engine hours:

- Maximum Vehicle Speed
- Maximum Acceleration

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- Maximum Deceleration
- Maximum Engine Speed
- Maximum Engine Throttle Position
- ABS Event
- Seat Occupied with Seat Belt Unbuckled
- Master Optical Warning Device Switch
- Time
- Date

The oldest data shall be erased first when memory capacity is reached. All data shall be password protected and up loadable from the vehicle data recorder to a computer running FRC HAWK data management software. The HAWK software shall store, manage, provide graphic displays and produce formatted reports of the vehicle data recorder data.

An audible alarm shall sound if any of the seat belts are not properly closed and the vehicle is going 5 mph or greater. The sound shall be different from all other audible alarms in the cab.

One (1)
22-00-0350

Electrical System Diagnostics - INTELEX™ PLUS

Y__N__

ELECTRICAL SYSTEM DIAGNOSTICS

The apparatus shall feature on-board electrical system diagnostics and provision for off-board diagnostic service equipment.

ON-BOARD DIAGNOSTICS

On-board diagnostic indicators shall be provided to support rapid troubleshooting of the INTELEX™ PLUS based electrical power and signal system. The input and output status of each INTELEX™ PLUS system module shall be easily determined through easy to use display pages.

Switches shall be provided in the cab to allow the operator or service personnel to obtain On-Board diagnostic information from the ABS system and Engine Controller.

A troubleshooting guide shall be provided with the vehicle to assist with interpretation of the diagnostic signals.

OFF-BOARD DIAGNOSTIC PROVISION

An interface port shall be provided for service access to the INTELEX™ PLUS data bus. The diagnostic port shall be mounted inside the cab on the driver side in a location that is accessible from the ground.

One (1)
22-00-0510

Power Studs - Overhead Switch Panel, (4) Stud Switched

Y__N__

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POWER STUDS (OVERHEAD SWITCH PANEL)

Four (4) studs shall be provided in the overhead switch panel to provide a 12 volt feed. The studs shall consist of a 12 volt direct stud, switched battery stud, switched ignition stud and grounding stud.

One (1)
22-00-0520

Power Studs - Cab Dash Area, (4) Stud Switched

Y__N__

POWER STUDS (CAB DASH)

Four (4) studs shall be provided in the cab dash area to provide a 12 volt feed. The studs shall consist of a 12 volt direct stud, switched battery stud, switched ignition stud and grounding stud.

One (1)
22-00-0530

Buss Bar - Under Officer's Seat, (4) Stud Switched

Y__N__

BUSS BAR (UNDER OFFICER'S SEAT)

A four (4) stud 30 Amp buss bar with protective cover shall be provided under the officer's seat to provide a 12 volt feed. The studs shall consist of a 12 volt direct stud, switched battery stud, switched ignition stud and grounding stud.

One (1)
22-00-06CP

Dash Layout Drawing - Attacker, Split Tilt Cabs & Capital Full Tilt Cabs

Y__N__

DASH LAYOUT

The Manufacturer shall furnish a dash layout drawing to the Fire Department for their review and approval. The drawing shall detail the locations for installation of radios, sirens, light switches, gauges, etc. Due to the cab dash configuration and electrical wiring design, the components shall have designated locations that each will fit. The Fire Department shall review and approve the layout during the Engineering Conference.

One (1)
22-03-1400

12V Power Point - User Defined Location (Ea)

Y__N__

12 VOLT PLUG(S) AND RECEPTACLE(S)

One (1) 12 volt power plug receptacle(s) and cover(s) shall be provided and shall be wired battery direct, with a fused circuit. The plug and receptacle are made from corrosion resistant marine grade materials. The plug locks into the receptacle providing a positive moisture proof connection.

Location of the 12V Power Point(s) shall be: dash zone #19

One (1)
22-03-14SD

Outlet Box - on Engine Tunnel, with Black LINE-X Finish

Y__N__

OUTLET BOX

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A fabricated 0.090" aluminum enclosed box that follows the contour of the engine tunnel shall be provided aft of the officer's seat on the side of the engine tunnel. It shall be covered with black LINE-X to match the color of the engine tunnel. This outlet box shall be capable of holding two (2) 12 volt power points and one (1) 120 volt receptacle. (The power points and receptacle are not included in this cost.)



Two (2)
22-03-1400

12V Power Point - User Defined Location (Ea)

Y__N__

12 VOLT PLUG(S) AND RECEPTACLE(S)

Two (2) 12 volt power plug receptacle(s) and cover(s) shall be provided and shall be wired battery direct, with a fused circuit. The plug and receptacle are made from corrosion resistant marine grade materials. The plug locks into the receptacle providing a positive moisture proof connection.

Location of the 12V Power Point(s) shall be: in outlet box aft of officer's seat

One (1)
70-05-1920

Receptacle - 120V, 20 Amp for Cab Interior, Shoreline Powered (Ea)

Y__N__

120 VOLT SHORELINE POWERED RECEPTACLE(S) IN CAB INTERIOR

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One (1) 120-volt, 20 amp, 3-wire receptacle(s) shall be provided in the cab interior in accordance with NFPA guidelines. A brushed stainless steel cover plate shall be provided to protect the receptacle. The receptacle shall be powered by the shorepower inlet and labeled accordingly.

The receptacle(s) shall be located: in outlet box aft of officer's seat

One (1)
70-05-2530

NEMA Rating - 5-20R (20 Amp) Non-Twist-Lock, Single

Y__N__

NEMA Rating: 5-20R (20 Amp) Non-Twist-Lock, Single.

One (1)
70-05-2720

Receptacle Cover - Stainless Steel Wallplate (Interior Use Only) (Ea)

Y__N__

One (1) stainless steel wallplate(s) shall be installed.

One (1)
22-03-14US

USB Charger Port - Kussmaul Dual Port #091-219-5 (Ea)

Y__N__

USB CHARGER PORT

One (1) Kussmaul Electronics **model 091-219-5 USB 2.4 Amp Dual Charger Ports** shall be wired battery direct with a fused circuit and shall be located on the dash as follows:

Location of USB charger ports shall be:

**One (1) shall be located on the dash near the driver's side,
One (1) shall be located on the dash near the officer's side,
One (1) located on the rear of the engine tunnel to the officer's side**

Four (4)
22-0A-5120

Two-Way Radio Antenna Mount - Universal w/ Cable (Ea)

Y__N__

TWO-WAY RADIO ANTENNA MOUNT(S)

Four (4) **Four (4) radio antennas supplied by the fire department shall be mounted on the cab roof. The antenna mounting base shall be NMO type mounts designed for use with the thickness of the material used for the roof of the apparatus (Model MATM).**

Four (4)
22-0A-515B

Antenna Lead - Terminates in the Center Lower Dash

Y__N__

The antenna lead shall terminate in the center lower dash. Any excess cable shall be secured in an accessible location.

Four (4)

Antenna Location Shall be as Specified

Y__N__

Lexington Fire Department

22-0A-516B

The antenna location shall be:

Two (2) on cab roof driver's side aft of the front lightbar in a line running rearward with a minimum of 18" in between them

Two (2) on cab roof driver's side aft of the front lightbar in a line running rearward with a minimum of 18" in between them

Two (2)
22-0A-516X

Dash Cutout (s)

Y__N__

DASH CUT OUT

The cab dash shall be manufactured with cutouts and mounting ears for two (2) fire department provided and installed after delivery radios. The radio brands and radio model numbers, as well as their locations in the dash, shall be determined at the pre-construction conference.

One (1)
22-0B-0015

Headset Intercom System - Firecom 5100D Digital, Single Radio

Y__N__

INTERCOM SYSTEM

A Firecom digital 5100D intercom system shall be provided and installed on the apparatus. This system shall provide for in cab and on-scene communications for the crew. The system shall have a touch pad with digital logic control and LED indicators. It shall be compatible with a single mobile radio. The system shall have a total power input requirement for each system not to exceed two amps. It shall have independent transmit and receive level adjustments. The system shall have the capacity for up to six (6) headsets without reduction or fluctuation of sound level, regardless of the number of attached headsets. It shall have a separate 3.5 mm auxiliary input and output jack.

The base unit shall measure 6.6" L x 6.1" W x 2" H with mounting bracket.

The intercom shall be located: _____

One (1)
22-0B-0400

Radio Interface Cable - Firecom, Single Radio

Y__N__

RADIO INTERFACE CABLE

The intercom shall interface with the mobile radio utilizing a mobile radio interface cable. The cable shall be a minimum of 4 feet long. The cable shall have a 9-pin connector at the intercom and a connector meeting the requirements of the mobile radio to be supplied and installed on the apparatus.

The make and model of the mobile radio is: _____

Two (2)
22-0B-04A3

Wireless Base Station - Firecom WB505R, for Radio Transmit

Y__N__

Lexington Fire Department

WIRELESS BASE(S)

Two (2) Firecom WB505R wireless base(s) shall be installed for radio/ intercom communication. The base shall connect up to five Firecom 50- or 500- series wireless headsets. The base(s) shall be connected to the 5X00D series intercom.

One (1) **Headset - Driver, Firecom UHW505, Wireless Under Helmet, Radio Transmit** Y__N__

22-0B-055U

DRIVER'S HEADSET

One (1) Firecom model #UHW-505 under helmet style wireless headset shall be provided for the driver's location. This headset shall have DECT7 wireless technology and radio transmit capability. This location shall have one (1) yellow NFPA-compliant headset hanger hook located above the seat position over the inside shoulder.

The microphone shall always be live for intercom communications.

The headset comes with a mic muff, a leather ear muff on the head, a leatherette ear muff for inside use and a screw driver for use in changing the battery.

One (1) **Headset Ruggedizer Color - Black, for Wireless Only** Y__N__

22-0B-09CA

The wireless headset ruggedizers shall be black in color.

One (1) **Headset - Officer, Firecom UHW505, Wireless Under Helmet, Radio Transmit** Y__N__

22-0B-065U

OFFICER'S HEADSET

One (1) Firecom model #UHW-505 under helmet style wireless headset shall be provided for the officer's location. This headset shall have DECT7 wireless technology and radio transmit capability. This location shall have one (1) yellow NFPA-compliant headset hanger hook located above the seat position over the inside shoulder.

The microphone shall always be live for intercom communications.

The headset comes with a mic muff, a leather ear muff on the head, a leatherette ear muff for inside use and a screw driver for use in changing the battery.

One (1) **Headset Ruggedizer Color - Black, for Wireless Only** Y__N__

22-0B-09CA

The wireless headset ruggedizers shall be black in color.

Three (3) **Headset - Crew, Firecom UHW503, Wireless Under Helmet, Intercom Only** Y__N__

(Proposal)

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22-0B-0765

CREW HEADSET(S)

One (1) Firecom model #UHW-503 under helmet style wireless headset with DECT7 wireless technology shall be provided for each crew seat location. Each crew location shall have one (1) yellow NFPA-compliant headset hanger hook located above the seat position over the inside shoulder.

The headset comes with a mic muff, a leather ear muff on the head, a leatherette ear muff for inside use and a screw driver for use in changing the battery.

The following crew locations shall receive the UHW-503 headset:

Three (3)
22-0B-09CA

Headset Ruggedizer Color - Black, for Wireless Only

Y__N__

The wireless headset ruggedizers shall be black in color.

One (1)
91-75-3000

Warranty - Firecom Intercoms

Y__N__

FIRECOM INTERCOM WARRANTY

The Firecom intercom system shall have a minimum 2-year warranty on the intercom control head and all other system components. The warranty shall cover material and workmanship defects in the product only.

One (1)
22-0C-3310

Camera System - (3) Rosco #STSK7165, 7" LCD, Rear, RS & LS

Y__N__

REAR VIEW CAMERA SYSTEM

A Rosco rear view color camera system, model STSK7165, shall be provided and installed. The system shall consist of the following items:

- One (1) STSM205 7" LCD monitor, 7.2" wide x 4.8" high x 1.1" deep, with remote control.
- One (1) STSC101 color camera with microphone, 120 degree lens and 18 infrared LEDs.
- Two (2) STSC109B side color cameras with microphone, 150 degree lens and infrared night vision.
- One (1) 65 foot cable
- One (1) STSH301 Harness
- Two (2) STSH304 Harnesses
- Mounting brackets and hardware

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One camera shall be mounted on the rear upper bulkhead near center to provide a rear view. The other cameras shall be mounted on the each side of the cab to provide side blind spot viewing.

One (1)
22-0C-3910

Camera Monitor Shall be Hung from the Overhead Console, Zone 9

Y__N__

The camera monitor shall be hung from the overhead console **to the left of the drop down panel**

One (1)
22-10-0700

Batteries - (6) 12V, 950 CCA

Y__N__

BATTERIES

Six (6) 12V Group 31 950 CCA batteries shall be installed three each side of the cab under the rear entrance way.

Heavy-duty battery cables shall be provided to maximize power available to the electrical system.

One (1)
22-10-5200

Jumper Cable Studs - Under Driver's Side Battery Box

Y__N__

JUMPER CABLE STUDS

A pair of jumper cable studs with color coded covers shall be provided under the driver's side battery storage area.

One (1)
22-11-060S

Battery/Electrical Component Storage Areas - S/S, Cab (Attacker/Capitol)

Y__N__

BATTERY AND ELECTRICAL COMPONENT STORAGE AREAS

Battery and electrical component storage areas shall be constructed of stainless steel with structural steel tubes at the corner mounting points and shall be located one (1) each side mounted on the vehicle frame. They shall be well ventilated and enclosed to protect against road splash and debris. Suitable provisions shall be provided for drainage.

The batteries shall be held firmly in place by providing a full frame type top clamp which encloses the battery set on all four (4) upper corner sides. The one piece clamp shall be fabricated of 3/4" angles and be held in place by a minimum of two (2) "J" shaped clamping bolts retained within the battery box to prevent retrieval from underside the apparatus. Battery inspection shall be provided through latched drop down doors in the lower step area of the crew cab. Battery replacement shall be possible without tilting the cab (No Exceptions).

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One (1) **Battery Mats - Turtle Tile, Non-Corrosive** Y__N__
22-11-5100

BATTERY MATS

The batteries shall be installed on a non-corrosive Turtle Tile mat.

One (1) **Battery Disconnect Switch - Blue Sea 350 Amp** Y__N__
22-15-1400

DISCONNECT SWITCH - BLUE SEA 9003

A master load disconnect switch shall be provided between the battery positive buss bar and the remainder of the switched battery electrical loads on the apparatus. A green "battery on" pilot light that is visible from the driver's position shall be provided.

One (1) single battery system switch mounted near the driver's side front entrance in a location so it may be turned off by a person standing on the ground outside the vehicle. It shall have the capacity to handle 350 amps of continuous power.

One (1) **Additional Battery Disconnect Switch** Y__N__
22-15-140X

ADDITIONAL BATTERY DISCONNECT SWITCH

An additional master disconnect switch shall be provided between the batteries and the battery positive buss bar to facilitate ease of maintenance. This disconnect shall be located near the batteries and shall be accessible when the cab is tilted.

One (1) **Battery Charger - Kussmaul #091-187-12-REMOTE, Auto Charge 1200** Y__N__
22-15-3750

BATTERY CHARGER

There shall be one (1) Kussmaul model #091-187-12-REMOTE "Auto Charge 1200" single battery charger system installed in the vehicle's electrical system. The charger shall be fully automatic and shall maintain the truck batteries at a full charge level when connected to a 120 VAC source. Remote voltage sensing shall be provided to compensate the charger output for the voltage drop in the charging wires. A remote mounted indicator shall be provided which shall contain one bar graph to display the condition of the batteries. It shall be mounted in the cab overhead console.

One (1) **Location - Wall Adjacent to Side Window on Driver's Side** Y__N__
22-15-4LDW

It shall be located on the driver's side wall adjacent to the side window.

One (1) **Battery Charger/Air Compressor Cover** Y__N__
22-15-5000

BATTERY CHARGER/AIR COMPRESSOR COVER

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A smooth aluminum cover shall be provided over the battery charger/air compressor. The outside finish shall match the cab interior finish.

One (1) **Receptacle w/Plug & Cord - 120V, 20 Amp for Cab Interior, Shoreline Powered (Ea)** Y__N__

70-05-1925

120 VOLT SHORELINE POWERED RECEPTACLE(S) IN CAB INTERIOR

One (1) 120-volt, 20 amp, 3-wire receptacle(s) shall be provided in the cab interior in accordance with NFPA guidelines. A brushed stainless steel cover plate shall be provided to protect the receptacle. The receptacle shall be powered by the shorepower inlet and labeled accordingly.

A plug and cable assembly shall be installed, connecting the battery charger/compressor to the receptacle.

The receptacle(s) shall be located near the battery charger or compressor.

One (1) **NEMA Rating - 5-20R (20 Amp) Non-Twist-Lock, Single** Y__N__

70-05-2530

NEMA Rating: 5-20R (20 Amp) Non-Twist-Lock, Single.

One (1) **Receptacle Cover - Stainless Steel Wallplate (Interior Use Only) (Ea)** Y__N__

70-05-2720

One (1) stainless steel wallplate(s) shall be installed.

One (1) **Air Compressor - Kussmaul 091-9B-1, 120V** Y__N__

22-15-4100

REDUNDANT AIR COMPRESSOR

A Kussmaul model #091-9B-1 "Auto Pump AC" redundant air compressor shall be installed. The Auto Pump shall be wired to 120 VAC shoreline. Operation shall be automatic with the pressure switch sensing the system pressure and controlling the power input. The compressor shall automatically replace air lost due to leakage in the brake system without any interference to engine mounted air compressor functions.

One (1) **Location - Wall Adjacent to Side Window on Officer's Side** Y__N__

22-15-4LOW

It shall be located on the officer's side wall adjacent to the side window.

One (1) **Battery Charger/Air Compressor Cover** Y__N__

22-15-5000

BATTERY CHARGER/AIR COMPRESSOR COVER

(Proposal)

Lexington Fire Department

A smooth aluminum cover shall be provided over the battery charger/air compressor. The outside finish shall match the cab interior finish.

One (1) **Receptacle w/Plug & Cord - 120V, 20 Amp for Cab Interior, Shoreline Powered (Ea)** Y__N__

70-05-1925

120 VOLT SHORELINE POWERED RECEPTACLE(S) IN CAB INTERIOR

One (1) 120-volt, 20 amp, 3-wire receptacle(s) shall be provided in the cab interior in accordance with NFPA guidelines. A brushed stainless steel cover plate shall be provided to protect the receptacle. The receptacle shall be powered by the shorepower inlet and labeled accordingly.

A plug and cable assembly shall be installed, connecting the battery charger/compressor to the receptacle.

The receptacle(s) shall be located near the battery charger or compressor.

One (1) **NEMA Rating - 5-20R (20 Amp) Non-Twist-Lock, Single** Y__N__

70-05-2530

NEMA Rating: 5-20R (20 Amp) Non-Twist-Lock, Single.

One (1) **Receptacle Cover - Stainless Steel Wallplate (Interior Use Only) (Ea)** Y__N__

70-05-2720

One (1) stainless steel wallplate(s) shall be installed.

One (1) **"Super Auto Eject" Plug - Kussmaul 20 Amp, 120 VAC** Y__N__

22-15-5500

AUTO EJECT PLUG

A Kussmaul 20 Amp, 120 VAC "Super Auto Eject" shoreline power connector shall be provided for the battery charger. The shoreline power connector shall be provided with a spring loaded cover to prevent water from entering when the shoreline is not connected. A label shall be permanently affixed at the power inlet that indicates the line voltage in volts and the current rating in amps.

One (1) **Super Auto Eject Plug Location - in the Driver's Door Step Well** Y__N__

22-20-5820

The Kussmaul Super Auto Eject Plug shall be located in the driver's door step well.

One (1) **Super Auto Eject Cover Color - Red** Y__N__

(Proposal)

Lexington Fire Department

22-20-58RD

The Super Auto Eject Cover shall be red.

One (1)
22-90-0025

Upper Raised Bezel Surrounds, with Panels, (2)

Y__N__

UPPER RAISED BEZEL SURROUNDS, WITH PANELS

A custom raised and chrome plated bezel shall be installed on the front face of the cab, on each side of the front grille. Housed within each bezel shall be a removable panel, painted job color. The removable panel shall provide service access to the forward side, firewall mounted electrical connections and wiring harness.

One (1)
22-90-0035

Lower Raised Bezel Surrounds, with Panels, (2), AHD/CAP Only

Y__N__

LOWER RAISED BEZEL SURROUNDS, WITH PANELS

A custom raised and chrome plated bezel shall be installed on the front face of the cab, on each side of the front grille. Housed within each bezel shall be a removable panel, painted job color. The removable panel shall provide service access to the forward side, firewall mounted electrical connections and wiring harness.

One (1)
22-90-004J

Headlights - Quad, Truck-Lite LED, with Dual Light Bezels

Y__N__

HEADLIGHTS

Front headlights shall be mounted on the front cab face to the left and right of the engine cooling intake grille. The headlights shall be quad type, rectangular Truck-Lite model 27640C/27645C 12-volt LED with bright finished trim rings and bezels. The low beam headlights shall be located at the outer position.

One (1)
22-90-004X

Headlight Position - Middle

Y__N__

The headlights shall be in the middle position.

One (1)
22-90-007A

Front Directional Dual Light Bezels, (2)

Y__N__

FRONT DIRECTIONAL DUAL LIGHT BEZEL

The front directional lights shall be mounted in a chrome plated dual light bezel located on each side of the cab front face. The dual light bezel shall match the headlight housing.

One (1)
22-90-007X

Front Directional Light Bezels Position - Uppermost

Y__N__

The front directional light bezels shall be in the uppermost position.

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One (1) **Front Directional Lights - (2) Whelen M6T, LED, Amber Arrow, with Amber Lens** Y__N__
22-90-008G

FRONT DIRECTIONAL LIGHTS

There shall be one (1) Whelen M6T LED amber arrow directional signal light installed on each side of the cab front face. The light shall have an amber arrow shape with black background and shall be provided with a "flash" pattern; a "sweep" pattern shall not be allowed. Lens color shall be amber.

One (1) **Additional Front Warning Light Dual Light Bezels, (2)** Y__N__
22-90-0095

ADDITIONAL FRONT WARNING LIGHT DUAL LIGHT BEZELS

An additional pair of bright finished dual light bezels shall be provided for the optional warning lights.

One (1) **Additional Headlight Bezel Locations - Lowest** Y__N__
22-90-009A

The additional headlight bezel shall be located in the lowest position.

One (1) **Marker/ID/Clearance Lights - LED, Front Cowl Surface Mount** Y__N__
22-90-0210

LIGHTS

Exterior cab lighting shall meet or exceed Federal Department of Transportation, Federal Motor Vehicle Safety Standards and any National Fire Protection Association requirements in effect at the time of proposal.

Five (5) Weldon 9186-1500-20, amber LED type clearance and identification lights shall be surface mounted across the top leading edge of the cab roof. Scene lights and other options may affect location and mounting of the center light.

A TecNiq S34 amber LED marker light shall be recess mounted in a rubber sealing grommet placed in the lower side of the front cowl, on each side of the cab. The light body shall be urethane filled to ensure against moisture intrusion. These cowl mounted lights shall have 100,000 hour life and shall carry a manufacturers 10 year warranty.

Seven (7) TecNiq S34, red LED marker and clearance lights shall be installed at the rear of the body. The three light identification cluster shall be surface mounted on the rear step vertical flange. Two lights shall be placed at each lower rear body corner, facing the side. Two lights shall be placed in the upper rear body corners, facing the rear.

One (1) **Side Turn/Marker Lights - TL 60115Y, LED, Midship, Under Body** Y__N__
22-90-030L

TURN/MARKER LIGHTS

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One (1) Truck-Lite model 60115Y LED, amber turn/marker light shall be provided and installed forward of the rear axle on each side of the vehicle. The lights shall have black flanges and shall be installed under the body with a stainless steel bracket.

One (1)
22-90-0320

Side Marker Lights - Britax LED, Rear Corners

Y__N__

REAR MARKER LIGHTS

A Britax long stemmed "LED" dual faced #L427 marker light shall be placed at each rear corner of the body. The front lens shall be amber; the rear lens shall be red.

One (1)
22-90-0400

License Plate Bracket & LED Light

Y__N__

LICENSE PLATE LED LIGHT & BRACKET

A steel license plate bracket, painted black, shall be installed on the rear of the vehicle on the left hand side under the tailboard area. Mounted on the license plate bracket shall be a chrome light bracket containing a 12 volt LED lamp that shall illuminate the license plate.

One (1)
22-90-0500

D.O.T. Reflectors

Y__N__

D.O.T. REFLECTORS

Reflectors shall be placed on the cab and body as required by Federal standards. An amber reflector, Signal Stat, model 32ADB, shall be placed on each side of the cab. Four (4) Signal Stat model 32DB red reflectors shall be located on the rear face and sides of the body. The reflectors shall be rectangular in shape.

One (1)
23-02-9300

Cab Side Direct Lights - Double Faced, Britax, LED

Y__N__

SIDE DIRECTIONAL LIGHTS

Britax model #L428, short rubber side LED directional lights shall be provided in addition to the front turn signals. One (1) light shall be mounted just above the front fender on each side of the cab. Lamp shall have an amber plastic lens at front and a red lens facing rear.

One (1)
23-03-0010

Configuration of Brake/Turn/Backup/Warning Lights at Rear of Apparatus

Y__N__

BRAKE/TURN/BACKUP/WARNING LIGHTS CONFIGURATION

The brake, turn, backup and warning lights shall be located at the rear of the apparatus. Each light shall be mounted horizontally in a vertical configuration, one light atop the other.

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The order of lights shall be as follows:

Top: Turn Signal

Second from top: tail/stop

Third from top: back-up

Bottom: warning



One (1)
23-03-BWL1

Brake/Tail Lights- (2) Whelen, M6BTT, LED, Red Outer Lens

Y__N__

BRAKE/TAIL LIGHTS

Two (2) Whelen M6 series LED red brake/tail lights, model M6BTT, with red outer lens, shall be mounted at the rear of the apparatus, one on each side. All brakes lights shall be shall be programmed for "steady burn" operation in compliance with FMVSS No. 108.

One (1)
23-03-TWL8

Rear Turn Signals - (2) Whelen, #M6T, Amber LED, with Amber Outer Lens

Y__N__

TURN SIGNAL LIGHTS

Two (2) Whelen M6 series Super-LED amber turn lights, model M6T, with amber outer lens, shall be mounted at the rear of the apparatus, one on each side. They shall be provided with a "flash" pattern; a "sweep" pattern shall not be allowed.

One (1)
23-03-VWL8

Back Up Lights - (2) Whelen, #M6BUW, LED

Y__N__

BACK UP LIGHTS

Two (2) Whelen M6 series clear Super-LED back up lights, model M6BUW, shall be mounted at the rear of the apparatus, one on each side.

Three (3)
23-03-XWB8

Bezels (2) - Stop/Turn/Backup, Whelen, Chrome, f/ M6 series (Per Pair)

Y__N__

BEZELS

Three (3) pair of Whelen #M6FC chrome plated bezels shall be provided for the M6 series rear stop, turn, and backup lights.

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One (1)
23-03-XY08

Backup Light Switch On Body

Y__N__

BACK-UP LIGHT SWITCH ON BODY

There shall be a switch with cover located on the rear of the body that shall activate the back-up lights which can be used as scene lighting. Lights will only operate when the chassis emergency brake is engaged.

One (1)
23-05-0010

Light Activation - Step Lights

Y__N__

LIGHT ACTIVATION

The cab step lights shall be activated with the cab door open switch.

The step lights on the body shall be activated with the parking brake in conjunction with the marker lights.

One (1)
23-05-0035

Step Lights - (4) Cab, Whelen TOCACCCR, LED (Attacker/Capitol)

Y__N__

CAB STEP LIGHTS

Four (4) Whelen model TOCACCCR, LED step lights shall be provided, one (1) at each cab entrance door.

One (1)
23-05-0410

Step Lights - (16) Body, LED, Surface Mount, Aerialscope 95'

Y__N__

BODY STEP LIGHTS

There shall be one (1) TecNiq Eon LED strip light center mounted under the turntable, and one (1) centered on the back of the cab wall along the roof edge, to illuminate the top area of the forward body section.

There shall be two (2) TecNiq Eon LED strip lights on the top of the intake/gauge panels on the forward body, one each side of the body, to illuminate the panels and the step at their bases.

There shall be one (1) TecNiq Eon LED step light mounted on the pedestal to illuminate the area around the pedestal. This light shall be activated with the aerial PTO.

There shall be two (2) TecNiq Eon LED lights mounted, one on each side of the body, in the rear face of the compartment aft of the rear jacks. These lights shall illuminate the top step of each access ladder.

There shall be two (2) TecNiq Eon LED strip lights, one on each side of the body, mounted to the underside of the top step of each access ladder to illuminate the lower steps.

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There shall be two (2) TecNiq Eon LED strip lights on the boom support to illuminate the decking. The lights shall be installed near the top of the support, one facing forward, one facing rearward.

There shall be two (2) TecNiq Eon LED strip lights installed to illuminate the interior work area of the platform.

There shall be four (4) TecNiq Eon LED lights with chrome bezels installed on the outside of the platform, facing downward to illuminate the step surface. There shall be two (2) lights on each side of the platform.

One (1)
23-05-2010

Light Activation - Ground Lights

Y__N__

LIGHT ACTIVATION

The cab ground lights shall be activated with the cab door open switch.

The ground lights on the body shall be activated with the parking brake in conjunction with the marker lights.

One (1)
23-05-2111

Ground Lights - (4) Cab, TecNiq #E10 LED

Y__N__

GROUND LIGHTS

Four (4) weatherproof TecNiq #E10 LED ground lights shall be provided underneath the cab, per NFPA requirements.

One (1)
23-05-2141

Ground Lights - (4) Body, TecNiq #E10 LED, Aerialscope

Y__N__

GROUND LIGHTS

Four (4) weatherproof TecNiq #E10 LED ground lights shall be provided underneath the body, per NFPA requirements. Two (2) shall be located under the rear body access ladders, one on each side and two (2) shall be under the rear of the body.

One (1)
23-05-2171

Ground Lights - (2) Forward Body, TecNiq #E10 LED, Aerialscope

Y__N__

GROUND LIGHTS

Two (2) weatherproof TecNiq #E10 LED ground lights shall be provided underneath the body, per NFPA requirements. Two (2) shall be located under the forward body, one on each side.

Two (2)
23-05-2181

Ground Lights - Additional, TecNiq #E10 LED (Ea)

Y__N__

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GROUND LIGHTS

In addition to the standard, NFPA required ground lights, two (2) weatherproof TecNiq #E10 LED ground lights shall be provided underneath the vehicle.

Location of the additional TecNiq #E10 LED ground lights shall be: TBD at preconstruction conference

One (1)
23-05-302A

Work Lights - (2) Engine Compartment, Truck-Lite 4094SW, ATT/CAP Only

Y__N__

ENGINE COMPARTMENT WORK LIGHT

Two (2) Truck-Lite 4094SW engine compartment work lights shall be provided. The lights shall illuminate the fluid dip sticks. The lights shall activate with the cab tilt or with the integral switch.

One (1)
23-11-1010

Cab Dome Lights - (4) Weldon #8080 Series, LED, Red/Clear

Y__N__

INTERIOR CAB DOME LIGHTS

Four (4) Weldon 8080 series red/clear LED lights with push button shall be mounted in the cab ceiling. Two (2) in front (driver & officer) and two (2) in the crew cab. The red light shall be in the forward position. All lights shall be controlled by a switch by the lens and shall have a black bezel.

One (1)
23-11-1410

Door Switches - Dome Lights, Automatic

Y__N__

AUTOMATIC DOOR SWITCHES

Automatic door switches shall be provided for the cab dome lights.

One (1)
23-11-1450

White Dome Light Activates with Automatic Door Switch

Y__N__

The white dome light activates with the automatic door switch.

One (1)
23-11-2150

Map Light - Pivot/Swivel with Switch, Sunnex HS761-00

Y__N__

MAP LIGHT

A Sunnex model HS761-00 pivot and swivel map light with on/off switch, shall be located hanging from the overhead in Zone 7 within reach of the officer.

One (1)
23-11-2820

Cab Dash Courtesy Lights - (2) TecNiq Dragon D14 Red, LED

Y__N__

CAB DASH COURTESY LIGHTS

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One (1) TecNiq Dragon D14 red LED courtesy light shall be located under the cab dash on each side to illuminate foot switches. The light shall include a black flange. It shall activate with the marker light circuit.

One (1)
23-11-2870

Crew Cab Courtesy Lights - (2) TecNiq Dragon D14, Red, LED

Y__N__

CREW CAB COURTESY LIGHTS

Two (2) TecNiq Dragon D14 red LED courtesy lights shall be located at the rear of the engine tunnel, evenly spaced on the vertical flange, one each side, to illuminate the crew cab floor. The light shall include a black flange. It shall activate with the marker light circuit.

Four (4)
23-11-292M

Cab Door Lights - Whelen OSA00FCR Flashing Amber LED, Chrome Flange (Ea)

Y__N__

CAB DOOR INTERIOR LIGHTS

Four (4) Whelen model OSA00FCR flashing amber LED lights in chrome flanges shall be installed on the interior of the specified cab entrance doors, above the door seal in the lower outboard corner.

Four (4)
23-11-292Z

Cab Door Light Location - All Doors (Match Door Quantity)

Y__N__

The cab doors receiving lights shall be all the doors.

Four (4)
23-25-0130

Exterior Compartment Lights - (1) ROM LED Strip, Horizontal Mount (Ea)

Y__N__

EXTERIOR COMPARTMENT LIGHT - LED STRIP(S)

Four (4) exterior compartment(s) shall have a ROM LED lighting strip installed. The lighting strip shall be mounted horizontally on the ceiling next to the door framing in all specified body compartments. The LED lights shall be mounted in an anodized aluminum track. A switch, installed in the door frame, shall be used to activate light.

Specify which compartment(s) shall receive lighting:

**LS2, LS3
RS2, RS3**

One (1)
23-25-0140

Exterior Compartment Lights - (1) ROM LED Strip, Vertical Mount (Ea)

Y__N__

EXTERIOR COMPARTMENT LIGHT - LED STRIP(S)

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One (1) exterior compartment(s) shall have a ROM LED lighting strip installed. The full height lighting strip shall be mounted vertically along the right side of the door framing (standing outside, facing the inside of the compartment) in all specified body compartments. The LED lights shall be mounted in an anodized aluminum track. A switch, installed in the door frame, shall be used to activate light.

Specify which compartment(s) shall receive lighting:

Forward Body:

Footlocker driver's side

Eight (8) **Exterior Compartment Lights - (2) ROM LED Strips, Vertical Mount (Each Pair)** Y__N__

23-25-0150

EXTERIOR COMPARTMENT LIGHTS - (2) LED STRIP(S)

Eight (8) exterior compartment(s) shall have a ROM LED lighting strip installed on both sides of the door. The lighting strips shall be mounted vertically along both sides of the door framing in all specified body compartments. The LED lights shall be mounted in an anodized aluminum track. A switch, installed in the door frame, shall be used to activate the lights.

Specify which compartment(s) shall receive lighting:

Rear Body:

LS1, LS3, LS4, LS5

RS1, RS3, RS4, RS5

One (1) **Lightbars - (2) Whelen #F4N MINI, 21.5", LED, Side Facing** Y__N__

24-10-WFE6

MINI LIGHTBAR

Two (2) Whelen model F4N MINI Mini Freedom™ IV LED 21.5" lightbars shall be provided and installed on the cab roof, facing outward to the sides. Each lightbar consist of two (2) Linear-LED® heads with two (2) clear LED located in the center forward facing and one (1) red LED to the outside facing the side. The lightbar shall also be equipped with two (2) red corner Linear-LED® lights in the front corners.

One (1) **Side Facing Red LED Shall be Positioned Toward the Cab Rear** Y__N__

24-10-WFET

The one red LED on the side of the lightbar shall be positioned toward the cab rear.

One (1) **Mini Lightbar Locations - Centered above Crew Doors** Y__N__

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24-10-WFEX

The mini lightbars shall be located above the crew doors.

Two (2)
24-15-3020

Lightbar Mount - Whelen MKEZ7, 1.5" high, on Mini Lightbars

Y__N__

The Whelen mini lightbar shall be mounted using a 1.5" high mount, model MKEZ7.

One (1)
24-UN-LNCC

Lens Color - Clear

Y__N__

The lens color shall be clear.

One (1)
24-10-WFG4

Lightbar - Whelen #F4N Red/Clear, 72" LED

Y__N__

LIGHTBAR

A Whelen Edge® Ultra Freedom™ IV LC series LED 72" lightbar shall be provided on the cab roof. Six (6) red Linear Super-LED® lightheads and six (6) white Linear Super-LED® lightheads shall be located on the forward face and there shall be a red Linear Super-LED® light head in each of the four (4) corners. The lens shall be clear.

Configuration



One (1)
24-15-3022

Lightbar Mount - Whelen MKEZ7, 1.5" high, on Lightbars

Y__N__

The Whelen lightbar shall be mounted using a 1.5" high mount, model MKEZ7.

One (1)
24-20-WLL2

Beacons - (2) Whelen #L31H5FN, Super-LED®, Red with Clear Lens

Y__N__

UPPER REAR WARNING LIGHTS

Two (2) Whelen model L315F Super-LED® red beacons with clear lens shall be provided on the upper rear of the apparatus.

Sixteen (16)
24-30-WLM6

Perimeter - Whelen #M6RC Super-LED®, Red, with Clear Lens (Ea)

Y__N__

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WARNING LIGHTS

Sixteen (16) Whelen model M6RC red Super-LED® light(s) with chrome plated flange(s) and clear lens(es) shall be provided on the apparatus. The flash pattern of the light(s) shall be Triple Flash, also known as Comet Flash.

One (1)
24-35-0020

Cab Cowl Lights - (2) Whelen 50R03ZCR, Red LED with Clear Lens

Y__N__

CAB COWL LIGHTS

Two (2) Whelen 50R03ZCR red LED lights with clear lens and 5TSMAC chrome flange shall be provided on the cab cowl, one each side. The flash pattern of the lights shall be Triple Flash, also known as Comet Flash.

One (1)
24-35-021B

Cowl Light Location - (B) Middle, In-Line with Middle Light Cab Front

Y__N__

The cowl lights shall be located on both of the cab cowls with the lights mounted approximately in-line with the middle light position on the front of the cab, at approximately 45 degrees.

One (1)
24-3L-0300

Standard Perimeter Warning Light Locations - MII Aerialscope 95'

Y__N__

Location of each perimeter warning light shall be:

Zone A Upper:

Whelen 72" Front light bars

Zone A lower:

M6 Red Warning lights inboard of turn signals (2)

M6 Red Warning lights located:lower knock-out panel (4)

Zone B/D lower:

500 Red Warning lights on cab cowls (2)

M6 Red Warning lights on sides of bumper (2)

M6 Red Warning lights on side of cab, rear of axle center, by crew door

hinge (2)

M6 Red Warning lights on body fender aft of tandems (2)

M6 Red Warning lights on body below LS5 and RS5 compartments (2)

Zone C upper:

Whelen Rear beacons (2)

Zone C lower:

M6 Red Warning lights below the backup lights (2)

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One (1)
24-80-WLL2

Traffic Adv - Whelen #TADP8, Super-LED®, 30.36"

Y__N__

TRAFFIC ADVISOR™

A Whelen TADP8, LINZ6™ Super-LED® Dominator™ Plus series Traffic Advisor™ shall be provided. The light bar shall be 30.36" long and have eight (8) Super-LED® lamps. It shall be mounted in an extruded aluminum housing. The lights shall be controlled by a TADCTL1 controller mounted in the cab.

One (1)
24-81-CTCD

Traffic Arrow Control Head - Top Center Dash Mounted

Y__N__

The control head for the traffic arrow shall be mounted on the top center of the dash.

One (1)
24-81-CTX6

Traffic Advisor™ Wiring - Battery Switched

Y__N__

The Traffic Advisor™ shall be wired battery switched.

One (1)
24-82-IN0T

Installation - Traffic Advisor, Top of Body

Y__N__

The traffic advisor shall be mounted on top of the body, at the rear. A guard shall be provided to protect the traffic advisor.

One (1)
25-00-0100

Electric horn - Single

Y__N__

AUDIBLE WARNING DEVICES

One (1) automotive electric horn controlled by the steering wheel horn button shall be provided.

One (1)
25-01-0100

Backup Alarm - Preco #LDA-50, 97DBA

Y__N__

BACKUP ALARM

One (1) Preco Model LDA-50 backup alarm shall be provided and activated when the vehicle transmission is placed in reverse. Alarm output shall be a minimum of 97 DBA.

One (1)
26-00-003A

Air Horns - Dual, Grover, One Each Side, Aerialscope II

Y__N__

DUAL AIR HORNS

Two (2) Grover Stuttertone chrome air horns shall be furnished, one on each side. A pressure protection valve shall be installed in-line to prevent loss of all air from the vehicle air brake system. The air horns shall range from 18" to 24" in length and shall be as long as possible, dependent upon other selected options and extension length.

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One (1) **Air Horn Dual Lanyard** Y__N__
26-00-0310

AIR HORN DUAL LANYARD

The air horn(s) shall be activated by two lanyard pull cords, one for the officer and one for the driver, terminating into one control valve, located between the driver and officer.

One (1) **Air Shut-off Valve** Y__N__
26-00-0820

AIR SHUT OFF VALVE

An air shut off valve shall be provided in the feed line to the air horns, under the dash on the driver's side.

One (1) **Electronic Siren - Whelen 295SLSA1, 100/200 Watts, Hardwired Microphone** Y__N__
26-10-7410

WHELEN SIREN

A Whelen model 295SLSA1 electronic siren shall be provided in the cab dash. The siren has a selectable output of 100 or 200 Watts. The microphone shall be hard-wired.

The siren head shall be wired battery switched. Auxiliary activation switches shall only be active when the emergency master and ignition are activated.

One (1) **Mic Clip Location - Determine at Final Inspection** Y__N__
26-10-8Z80

The location of the siren mic clip shall be determined at the final inspection.

Two (2) **Siren Speaker - Federal Sig #ES100, w/Flame Grille, in Bumper (Ea) (Aerialscope)** Y__N__
26-11-FE1G

SIREN SPEAKER(S)

Two (2) Federal Signal Model ES100 compact 100 watt speaker(s) shall be provided and recess mounted in the front bumper. Opening in the bumper for the speaker shall be covered with a Seagrave "Flame" grille.

Two (2) **Two Speakers Locations - One on each Side of Bumper** Y__N__
26-11-Y02B

There shall be a speaker located one (1) each side of the bumper.

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One (1) **Mechanical Siren - Federal Signal Q2B®, Recessed in Bumper** Y__N__
26-15-4500

MECHANICAL SIREN

A Federal Signal Model Q2B® siren with chrome plated housing shall be recessed mounted in the front bumper extension with front and vane grille exposed. There shall be an electric brake control installed in the cab, at the driver's switch panel, properly labeled.

The siren activation switches shall only be active when the emergency master is activated.

One (1) **Q2B® Siren Location - Center of Bumper, Forward Section Ext Through Bumper** Y__N__
26-15-462P

The Q2B® siren shall be mounted in the center of the bumper, forward section extended through the bumper.

Two (2) **Mechanical Q2B® Foot Switch - Linemaster® #491 (Ea)** Y__N__
26-15-5980

MECHANICAL Q2B® FOOT SWITCH

Two (2) Linemaster® Model 491 momentary foot operated switch(es) to activate the mechanical Q2B® siren shall be installed on the toe board of the cab floor.

Two (2) **Foot Switch Shall Not be Deactivated When Parking Brake is Set** Y__N__
26-15-7010

The foot switch shall not be deactivated when the parking brake is set.

Two (2) **Foot Switch Locations - Driver's Side OB & Officer's Side, IB Position on Floor** Y__N__
26-15-7034

A foot switch shall be located on the driver's side, outboard of the steering column and on the officer's side floor, inboard position.

One (1) **Q2B® Siren Brake Rocker Switch, Additional, for Officer** Y__N__
26-15-6010

ADDITIONAL Q2B® BRAKE ROCKER SWITCH

An additional siren brake rocker switch shall be provided to allow easy access for the officer.

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One (1)
26-15-7130

Officer's Foot Switch Bracket - ATP Raised, Single

Y__N__

FOOT SWITCH BRACKET

An aluminum tread plate angle panel shall be installed to hold a single foot switch shall be installed on the officer's side.



One (1)
49-00-0100

Body Material & Construction - Stainless Steel 95' Tandem Axle Aerialscope

Y__N__

STAINLESS STEEL BODY CONSTRUCTION

The body and compartments shall be constructed of heavy duty 3CR12 stainless steel. The compartments shall be a "sweep out" design with the floor higher than the door sill. The compartment floors shall be a minimum of 3.5 mm 3CR12 stainless steel. All compartment seams shall be caulked with gray adhesive/sealant. Each compartment shall be rated for 500 lbs. of storage. False bulkhead panels shall be provided on the inside of the rearward wall of the compartment aft the rear wheels and rear stabilizers, and also the compartment aft of the access ladder, to cover and protect all electrical wiring and components. This also provides a clean interior for equipment mounting. These panels shall be removable. Removable service panels shall be placed within each of the false bulkhead panels. Door frames on compartments with hinged doors shall be fabricated by flanging the door opening edges inward 1.88" and bending out again .75" to form an angle.

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ALUMINUM TREAD PLATE

A bright aluminum tread plate cover shall be installed over the side compartments. The cover shall not form the compartment top but shall be an overlay. The side edge of the cover shall have a 45 degree outward bend. The forward face of the side compartments shall be covered with bright aluminum tread plate overlays. All body components covered with aluminum tread plate overlays shall be coated with an anti-corrosion compound prior to installation. All tread plate shall be secured with threaded fasteners.

One (1)
49-00-0200

Body Mounting Substructure for 95' Aerialscope

Y__N__

BODY MOUNTING SUBSTRUCURE

The body compartments shall be bolted directly to spacer brackets welded to the aerial torque box. They shall be bolted through the back wall of the compartments in 15 places (7 on Driver's side and 8 on Officer's side) along the length of the body. In addition, the compartments in front of the rear wheels, behind the rear Jack assemblies, and behind the rear access ladders shall be supported by heavy 3" x 3" x 0.38" gusseted angle L-brackets (1 under front and 2 under both rear compartments- each side). The brackets shall be bolted directly to the chassis frame. The body shall also be bolted to the chassis frame at the front and rear of the fender area through gusseted 0.38" formed steel plates (2 each side). The area inside the fender area shall be heavily reinforced to support the weight of the body and additional equipment.

The compartment sizes shall be as follows:

One (1)
49-00-029A

Body Roof - Yellow Perimeter Marking

Y__N__

YELLOW PERIMETER MARKING

In accordance with NFPA 1901 chapter 15.7.1.6, the perimeter of all horizontal walking surfaces on the top of the body shall be marked near the outside edge with a one-inch wide safety yellow line to delineate the designated standing or walking surface area.

One (1)
49-00-1015

LS Compts - Aerialscope , 95', Lo-Hi, Hinged Doors

Y__N__

LEFT SIDE COMPARTMENTS

The left hand side compartments of the main body shall be made of stainless steel. The compartmentation shall consist of one (1) compartment ahead of the rear wheels, one (1) low height upper compartment above the forward rear wheels, one (1) full height upper compartment above the aft rear wheels, one (1) full height compartment behind the rear wheels and rear stabilizer, and one (1) compartment aft of the access ladder. All compartments shall have hinged doors.

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The compartment ahead of the rear wheels and aft of the superstructure, shall have a doorframe to doorframe dimension of 35.25" wide x 40.00" high. The clear door opening shall be 31.25" wide x 36.00" high. The usable compartment space shall be 39.00" wide x 41.25" high x 16.50" deep. This compartment shall have vertically hinged double doors.

The low height upper compartment above the forward rear wheels shall have a doorframe to doorframe dimension of 55.25" wide x 13.75" high. The clear door opening shall be 51.75" wide x 10.25" high. The usable compartment space shall be 55.00" wide x 15.00" high x 23.50" deep. This compartment shall have a horizontally hinged lift-up door.

The full height upper compartment above the aft rear wheels shall have a doorframe to doorframe dimension of 51.50" wide x 28.75" high. The clear door opening shall be 47.50" wide x 24.75" high. The usable compartment space shall be 55.50" wide x 30.00" high x 23.50" deep. This compartment shall have vertically hinged double doors.

The full height compartment behind the rear wheels and the rear stabilizers shall have a doorframe to doorframe dimension of 57.50" wide x 52.00" high. The clear door opening shall be 53.50" wide x 48.00" high. The usable compartment space shall be 59.25" wide x 53.25" high x 23.50" deep. This compartment shall have vertically hinged double doors.

The compartment behind the access ladders shall have a doorframe to doorframe dimension of 37.50" wide x 32.00" high. The clear door opening shall be 33.50" wide x 28.00" high. The usable compartment space shall be 38.50" wide x 33.25" high x 23.50" deep. This compartment shall have vertically hinged double doors.

One (1)
49-00-5015

RS Compts - Aerialscope, 95', Lo-Hi, Hinged Doors

Y___N___

RIGHT SIDE COMPARTMENTS

The right hand side compartments of the main body shall be made of stainless steel. The compartmentation shall consist of one (1) compartment ahead of the rear wheels, one (1) low height upper compartment above the forward rear wheels, one (1) full height upper compartment above the aft rear wheels, one (1) full height compartment behind the rear wheels and rear stabilizer, and one (1) compartment aft of the access ladder. All compartments shall have hinged doors.

The compartment ahead of the rear wheels and aft of the superstructure, shall have a doorframe to doorframe dimension of 35.25" wide x 40.00" high. The clear door opening shall be 31.25" wide x 36.00" high. The usable compartment space shall be 39.00" wide x 41.25" high x 23.50" deep. This compartment shall have vertically hinged double doors.

The low height upper compartments above the forward rear wheels shall have a doorframe to doorframe dimension of 55.25" wide x 13.75" high. The clear door opening shall be 51.75" wide x 10.25" high. The usable compartment space shall be 55.00" wide

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x 15.00" high x 23.50" deep. This compartment shall have a single horizontally hinged lift-up door.

The full height upper compartments above the aft rear wheels shall have a doorframe to doorframe dimension of 51.50" wide x 28.75" high. The clear door opening shall be 47.50" wide x 24.75" high. The usable compartment space shall be 55.50" wide x 30.00" high x 23.50" deep. This compartment shall have vertically hinged double doors.

The full height compartment behind the rear wheels and the rear stabilizers shall have a doorframe to doorframe dimension of 57.50" wide x 52.00" high. The clear door opening shall be 53.50" wide x 48.00" high. The usable compartment space shall be 59.25" wide x 53.25" high x 23.50" deep. This compartment shall have vertically hinged double doors.

The compartment behind the access ladders shall have a doorframe to doorframe dimension of 37.50" wide x 32.00" high. The clear door opening shall be 33.50" wide x 28.00" high. The usable compartment space shall be 38.50" wide x 33.25" high x 23.50" deep. This compartment shall have vertically hinged double doors.

One (1)
50-00-0010

Inner Liners - Rear Tandem Axle, Aluminum

Y__N__

INNER LINERS

Full semi-circular inner liners shall be provided in each wheel housing. They shall be constructed of aluminum and shall be bolted in place so they may be removed if damaged. Self-tapping sheet metal screws are not acceptable. The bottom edge of liner shall be reinforced along its full length, however, it shall not have a formed reinforcement flange to avoid trapping dirt and debris.

One (1)
50-00-0045

Fenderette - Rear Tandem Axle, Rubber

Y__N__

REAR FENDERETTE

Black rubber fenderettes shall be installed on the rear wheel openings. The fenders shall be wide enough to completely cover the outside rear tire and reduce wheel splash up the sides of the body. They shall be installed with 1/4" hex head bolts, self-tapping sheet metal screws are not acceptable. There shall be a stainless steel backing strip between the rubber and the mounting flange to add support. The fenderettes shall incorporate a vertical flange to cover the area where the body side and wheel opening mounting surface meet. The fenderettes shall be a minimum of 1/4" thick, have a mold-formed outer radius and a rounded bead at the wheel opening edge.

One (1)

Fender Panel - Rear Tandem Axle, S/S, Painted, Removable

Y__N__

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50-00-0065

REAR FENDER PANELS

Painted, 3CR12, stainless steel, removable fender panels shall be provided on the outer face of each fender area. The panels shall be painted to match the job color.

One (1)

57-00-0005

Compartment Doors - Side, Hinged, S/S

Y__N__

HINGED COMPARTMENT DOORS

The side compartment doors shall be lap type, double panel construction with 14 gauge outer and 14 gauge 3CR12 stainless steel inner panels. (NO EXCEPTIONS TO THIS STATEMENT.) Outer pan edges that form the lap portion of the door shall be "hemmed" (bent over and back 180 degrees) over the inner pan edges. Inside corners, at the hem area, shall be welded and ground smooth.

The doors shall be weather stripped with an automotive bulb type extruded rubber inner seal. A second outer seal of closed cell rubber shall be placed on the lap edge of the door to prevent damage to the paint finish. Outer seal shall have corrugated surface to prevent sticking.

The doors shall be mounted on stainless steel piano hinges with a pin diameter of .25". Mounting holes shall be slotted vertically on one side of the hinge and horizontally on the other side to provide for proper adjustment of the door. The hinge pins shall have spun ends (crowns) at both ends to hold them in place and provide a finished look. Eberhard 206 latches with stainless steel "D" ring handles shall be provided on the lift, single, drop down, and lock door (double door set-up). The free door (double door set-up) shall have an (2) Eberhard latches top and bottom with a single handle located inside the door (standard location at bottom). Isolation tape shall be furnished between the door hinge and door jam. A rubber gasket shall be provided between the "D" ring handle and the door.

Vertically hinged doors shall be equipped with Hansen 5EZ or Thomas EZ spring type door checks that also hold the doors in the open and closed position. Checks shall be the two point mounting type for simplicity. Spring tension (15 lb.) shall be easily adjustable. Checks shall have black zinc mounting brackets with stainless steel springs, 11" long rods and clamps. Springs shall be polished. Horizontally hinged doors shall be held in the opened position with gas cylinder type stays. Switches for automatic compartment light operation shall be installed in the door hinge area.

Ten (10)

57-00-2000

Keyed Locks - Hinged Compartment Doors (#1250 Keys) (Ea)

Y__N__

LOCKING COMPARTMENT DOOR(S)

The stainless steel D-ring handles shall be provided with key type locks on ten (10) compartment door(s). All locks shall be keyed alike (use the same #1250 key). The tab

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containing the key lock shall point towards the hinge.

The following compartments shall be equipped with keyed locks: _____

Nineteen (19)
57-00-5200 **Liner - Interior Hinged Compartment Door, Brushed S/S (Ea)**

Y__N__

BRUSHED STAINLESS COMPARTMENT DOOR LINER(S)

Brushed stainless steel overlay shall be provided on the inside of nineteen (19) compartment door(s) to protect the painted finish and to cover inside door hardware.

One (1)
57-00-6010 **Body Door Hinges - Mill Finish**

Y__N__

BODY DOOR HINGES

All piano hinges on the main body exterior doors shall be mill finished.

Thirteen (13)
91-01-0330 **Finish - Body Side Compartment Interior, Gray Zolatone Paint (Ea Compt)**

Y__N__

FINISH – BODY SIDE COMPARTMENT INTERIOR(S)

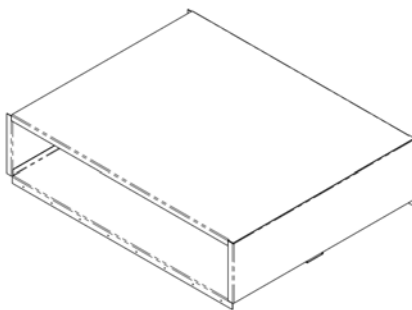
Thirteen (13) body side compartment interior(s) shall be finished with gray Zolatone type paint following the Zolatone Coat application process.

One (1)
49-00-5019 **Upper Transverse Compartments**

Y__N__

UPPER TRANSVERSE COMPARTMENTS

The compartments (LS3, LS4, RS3, and RS4) shall be transverse above the aerial torque tube.



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One (1)
50-00-0005

Vents - Body Compartment

Y__N__

VENTS

Compartment vents shall be provided to meet the requirements of NFPA 1901, current edition.

Two (2)
50-00-0210

Storage Compartment over Rear Downriggers

Y__N__

Stabilizer Storage Compartment

A storage compartment shall be installed one each side above the the rear stabilizers. The compartment shall be recessed and have a job color red painted door and locking D handle style latch. (See picture below for reference concept) There shall be unistrut and an adjustable shelf.



One (1)
50-00-0210

Cover - Rear Stabilizers, Aerialscope, S/S, Painted

Y__N__

REAR STABILIZER COVER

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The rear body stabilizer area on the left side and right side of the body, aft of the rear axles, shall be covered with 3CR12 stainless steel, bolted in place.

One (1)
50-00-0310

Platform Access Steps, Rear Side Body - (RS/LS), Al-Bustin, Aerialscope

Y__N__

ACCESS STEPS

Three (3) stationary steps shall be recessed into the right side and left side of the body to facilitate access to the platform. The steps shall be located aft of the compartment just to the rear of the rear axles. All vertical surfaces shall be covered with aluminum tread plate. The steps shall be of Bustin aluminum grating.

One (1)
50-00-0320

Steps - (1-RS, 1-LS), Swing Down Assist, Al-Bustin

Y__N__

SWING DOWN STEPS

Under the side permanent access steps shall be an additional swing down access step also made of Bustin aluminum grating. These steps shall be locked in place when swung up in the stored position

One (1)
50-00-0330

Platform Access Handrails - 2-Per Body Side, Aluminum, Knurled, Aerialscope

Y__N__

HANDRAILS

A vertically mounted "swimming pool" style handrail shall be installed on the forward side of each set of platform access steps.

One (1) 17" handrail shall be provided on the rearward side of each set of platform access steps, opposite to the swimming pool style handrail.

The handrails shall be 1-1/4" diameter extruded aluminum, knurled, with a bright anodized finish.

One (1)
50-00-0500

Rear Surface - Painted Smooth S/S, Aerialscope

Y__N__

REAR

All vertical surfaces on the rear of the body shall be smooth painted stainless steel for application of reflective chevron striping.

One (1)
56-00-STKS

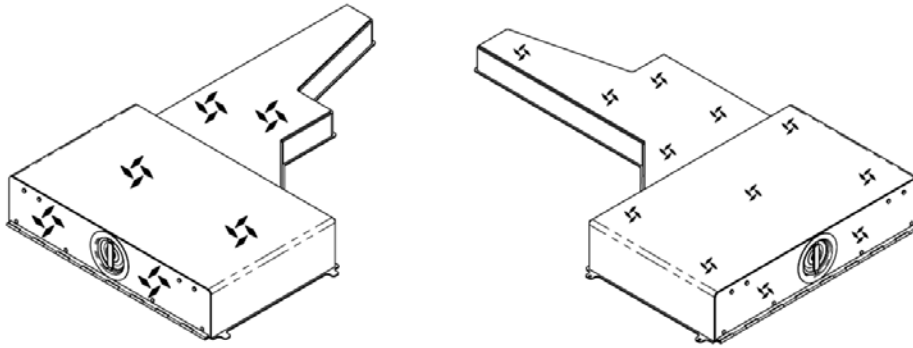
Storage Boxes For Stokes Basket Mounting Brackets

Y__N__

STORAGE BOXES FOR STOKES BASKET BRACKETS

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Two (2) 3/16 aluminum treadplate compartments shall be provided and installed on top of the body beneath the platform. The compartments shall be designed to store one platform stokes mounting bracket from each side. They shall be provided with an aluminum treadplate drop down each side .



One (1)
57-99-9997

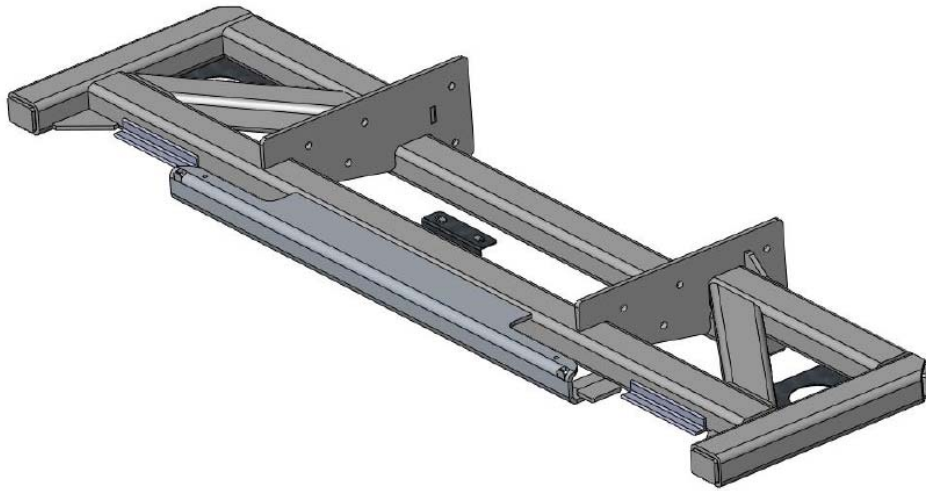
Rear Body Protection

Y__N__

REAR BODY PROTECTION

A heavy duty, fully welded, gusseted, steel tubular structure that is bolted to the rearmost portion of the frame shall be provided just beneath the rearmost portion of the body. The structure shall extend past the body on both sides so that it is in line with the rub rails. The intent of this structure is to protect the body from incidental impacts. The design shall be updated to include a center steel support that does not extend past the rear of the apparatus. This additional support includes two wire openings that have heavy duty covers for access. Reference diagram of concept.

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Thirty (30)
57-05-0100

Dri-Dek® - per Compartment / Shelf / Tray (Ea)

Y__N__

DRI-DEK®

Thirty (30) black Dri-Dek® mat(s) shall be provided and installed on body compartment floors and/or in shelves/trays as specified. Ramped edging shall not be included.

Thirty (30)
57-05-5190

Compartment Option Location - Determined at Time of Order

Y__N__

The location of the compartment option(s) shall be determined at the time of order.

Ten (10)
57-05-3010

Adjustable Shelf - 3/16" Aluminum w/Smooth Finish (Ea)

Y__N__

ADJUSTABLE SHELF OR SHELVES

Ten (10) adjustable shelf or shelves (with open corners) made from 3/16" smooth aluminum sheet metal shall be provided in the body compartment(s). Each shelf shall be supported by four (4) stainless steel angles bolted to Aluma-Strut tracks.

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Ten (10) 57-05-4900	<u>Shelf & Tray Corners - Welded Corners (Ea)</u>	Y__N__
	<u>WELDED SHELF & TRAY CORNERS</u>	
	Ten (10) shelves and/or trays shall receive welded corners.	
Ten (10) 57-05-5190	<u>Compartment Option Location - Determined at Time of Order</u>	Y__N__
	The location of the compartment option(s) shall be determined at the time of order.	
Ten (10) 91-01-5300	<u>Finish - Adjustable Shelf, DA outside Edge (Ea)</u>	Y__N__
	<u>FINISH - ADJUSTABLE SHELF (OR SHELVES)</u>	
	Ten (10) adjustable shelf (or shelves) shall have a DA finish on the outside edge of the shelf.	
Four (4) 57-05-4055	<u>Floor Mount Roll Out Tray - Base Depth, in Compartment Ea)</u>	Y__N__
	<u>ROLL OUT TRAY(S)</u>	
	Four (4) roll out tray assembly(s) shall be provided in the body compartment(s). The tray assembly shall be bolted to the compartment floor.	
Four (4) 57-05-4210	<u>Tray Construction - Aluminum, Base Depth (Ea)</u>	Y__N__
	Four (4) base depth tray(s) shall be constructed of 0.188" aluminum and shall have edges on all four sides for added strength. The corners shall be open.	
Four (4) 57-05-4900	<u>Shelf & Tray Corners - Welded Corners (Ea)</u>	Y__N__
	<u>WELDED SHELF & TRAY CORNERS</u>	
	Four (4) shelves and/or trays shall receive welded corners.	
Four (4) 91-01-6300	<u>Finish - Roll Out Tray, DA Outside Edge (Ea)</u>	Y__N__
	<u>FINISH - ROLL OUT TRAY(S)</u>	
	Four (4) roll out tray(s) shall have a DA finish applied to the outside edge of the tray.	
Four (4) 57-05-491F	<u>SlideMaster #AM2, 70% Aluminum, 500#, Floor Mount, Base Depth (Ea)</u>	Y__N__

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Four (4) SlideMaster model AM2 aluminum base depth slide mechanisms shall be bolted to the compartment floor. It shall allow the tray to extend 70% of the slide length. The tray/compartment shall be able to support a 500 pound load.

Four (4)
57-05-4992

SlideMaster IMS Lock, 2-Rail

Y__N__

The SlideMaster slide mechanism shall be secured with a SlideMaster 2-rail IMS spring lock.

Four (4)
57-05-5190

Compartment Option Location - Determined at Time of Order

Y__N__

The location of the compartment option(s) shall be determined at the time of order.

One (1)
57-10-1200

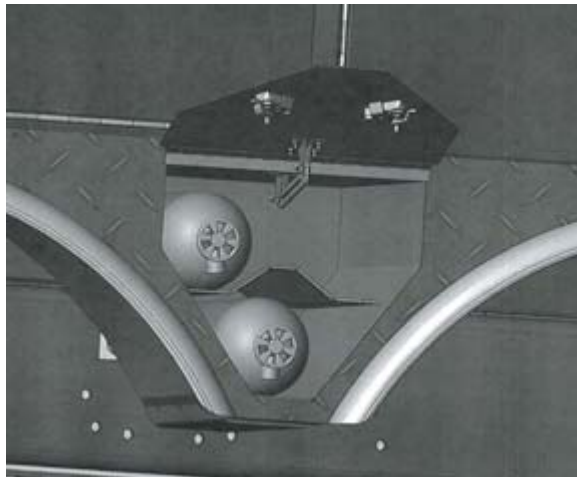
Air Bottle Compts - (6) Bottles, in Tandem Axle Fender Panels

Y__N__

AIR BOTTLE COMPARTMENTS

There shall be two (2) triple wheel well enclosures provided to accommodate six (6) air bottles. A triple air bottle compartment shall be located on each side, between the tandem rear axles. The compartments shall be fabricated of the same material as the fender and shall provide a minimum of 23.00" of usable depth. There shall be a rubber mat provided on the rear wall and on the bottom half of each compartment to prevent damage to the bottles.

Door material is ATP



Six (6)

Rub Rail, Body Sides - Black Poly

Y__N__

(Proposal)

02/04/19

Lexington Fire Department

57-30-0110

RUB RAIL - BODY SIDES

Black poly rub rails shall be provided along the lower portion of the body, beneath the compartment doors, on each side to prevent damage to the body and finish. The rub rails shall be a minimum of 2-3/8" wide x 1" deep, and shall be mounted on rubber supports. The rub rails shall have a 1" x 1" chamfer at the front and rear of the rails. The rails shall protrude a minimum of 1.75" from the face of the body.

One (1)
57-30-1110

Rub Rail, Body Rear - Black Poly, Full Width

Y___N___

RUB RAIL - BODY REAR

A full width black poly rub rail shall be provided along the lower portion of the rear of the body, to prevent damage to the body and finish. The rub rail shall be a minimum of 2-3/8" wide x 1" deep, and shall be mounted on rubber supports. The rub rail shall have a 1" x 1" chamfer at the front and rear of the rail. The rail shall protrude a minimum of 1.75" from the face of the body.

One (1)
60-00-1600

Tower Design and Performance - 95' Aerialscope

Y___N___

TOWER DESIGN AND PERFORMANCE

A 95 foot, 1000 pound tip load telescoping tower shall be mounted mid-ship of the apparatus. The boom shall have a totally enclosed box type construction and shall meet or exceed the requirements of all applicable sections of the current edition of NFPA 1901.

The boom shall be designed with a structural safety factor of two to one (2:1) based on the dead and live loads and shall meet ANSI A92.2 Standard for Vehicle Mounted Aerial Devices and NFPA 1901 which requires a static stability safety factor of one and one half to one (1.5:1) based on the rated load. These capabilities shall be established in the unsupported configuration.

The aerial device and all supporting structure shall be third party tested to confirm that the tower meets the original design criteria and the intent of the latest recommended NFPA standard for aerial devices. Such testing shall include the use of brittle lacquer stress coating to identify all stress concentrations, followed by strain gauging to verify that all nominal stresses and stress concentrations have a safety factor that is equal to or greater than 2:1 based on the dead and live load.

The tower shall be comprised of four (4) sections and extend to a nominal working height of 95 feet above the ground as measured by NFPA 1901 recommendations. The aerial shall have a rated horizontal reach of 84 feet measured in the horizontal plane at zero (0) degrees from the centerline of the turntable rotation, as defined by NFPA 1901. The aerial shall be capable of continuous operation through 360 degrees of rotation and from minus nine (-9) degrees to plus seventy-five (+75) degrees elevation.

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One (1)
60-00-2600

Tower Certified Rated Capacity (1000#) - Aerialscope

Y__N__

TOWER CERTIFIED RATED CAPACITY

The rated capacity of the platform shall be 1000 pounds while flowing 1000 GPM of water in accordance with NFPA 1901, current edition, with no restrictions regarding boom extension, boom elevation, or rotational orientation. The platform shall be capable of flowing 2000 GPM of water, provided the monitor stops are set at 45 degrees above the horizontal. There shall be no restrictions regarding the simultaneous use of all three (3) motion functions (elevation, rotation, and extension) with the rated platform capacities either at the main pedestal or in the platform. This unit shall be capable of setting up and operating on street grades of up to 5 degrees. At the maximum grade, the unit shall be capable of operating at the aforementioned manufacturer's rated capacity and platform placement with no operational restrictions. There shall be no nozzle orientation restrictions while flowing 1000 GPM of water.

All tower certifications shall be based on the platform being properly deployed in an unsupported configuration. The capacities shall be based upon 360 degree rotation, up to full extension and from -9 degrees to + 75 degrees.

One (1)
60-00-4000

Operation on Grades (Rated Capacity @ 5 Degrees Off Level)

Y__N__

OPERATION ON GRADES

The aerial is capable of being operated at full rated capacity in every position in which the aerial device can be placed when the apparatus is on a slope of 5 degrees (8.7%) in accordance with NFPA 1901 (19.21.3.1)

One (1)
60-05-0010

Superstructure Construction - Aerialscope

Y__N__

SUPERSTRUCTURE CONSTRUCTION

The superstructure shall be directly mounted to the chassis at a midship point by grade 8 fasteners and not welded directly to the rail. It shall be capable of supporting the positioning of all boom movements and capacities. The superstructure shall be constructed of structural steel solid-welded into such a fashion that the outriggers are directly integrated, providing direct radial support of boom extension off the side extension of the boom.

One (1)
60-05-5060

Tower Torque Box - 95' Aerialscope

Y__N__

TOWER TORQUE BOX

A torque box shall be provided that transmits boom loads from the superstructure to the rear jacks. The torque box also extends to the rear of the truck to provide enclosed storage for ground ladders. The sub-frame shall be constructed of .25", T-1 100,000 PSI

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yield steel plate. The torque tube shall extend from the center of rotation of the turntable to the back of the apparatus. It shall be 25.38 high by 34.00 wide. Chassis mounting plates shall be welded to the sides of the torque box and then it shall be bolted to the frame rails using SAE grade 8 bolts and nuts. The torque box shall also be secured to the superstructure. The torque box assembly shall be capable of withstanding all torsional and horizontal loading when the unit is supported by the outriggers and the aerial device is fully extended and loaded to capacity.

The torque box shall have structure for mounting the cradle and transferring the boom weight from the cradle through the torque box and into the frame rails.

One (1)
60-10-0295

Outriggers /Stabilizers - 95' Aerialscope

Y___N___

STABILIZERS

There shall be six (6) chassis stabilizers to lift the truck off the suspension creating a stable base for tower operations. There shall be two (2) swing-down outriggers mounted directly to the superstructure capable of supporting all of the side operations of the tower, in conjunction with the four (4) vertical corner jacks. A four (4) out and down stabilizer system shall not be acceptable.

FRONT AND REAR JACKS

The four (4) vertical jacks shall be mounted two (2) in front of the cab and two (2) behind the rear axle. The two in front shall tilt to allow the cab to be tilted for maintenance. The vertical jack housing shall be bolted to a 6" minimum square steel tubing mounted under the chassis frame rails thus providing maximum lifting capacity. The cylinders shall contain integral pilot operated holding valves for maintaining their position during operation of the boom and to secure the cylinder in the event of a hydraulic line failure. Each jack shall also have a U-shaped mechanical safety lock constructed of solid steel. Each safety lock shall have a locking pin on a lanyard with a chrome handle. The ground contact area shall be that which is recommended by NFPA, 1901 with the use of ground plates. An out and down stabilizer system welded to the chassis rail shall not be acceptable.

MID BODY OUTRIGGERS (Tormentors)

The two (2) outriggers, one (1) each side of the vehicle, shall be mounted directly to the turntable superstructure at two (2) pivot points. These outriggers shall swing down from their vertical storage position and lock into an A-frame type configuration. The foot pad shall swivel parallel to the longitudinal axis of the truck to match uneven terrain. Span of the outriggers is 249" from the outside edges of the foot pad. The cylinders shall contain integral pilot operated holding valves for maintaining their position during operation of the boom and in the event of failure of a hydraulic line. The outriggers shall be provided with a manually positioned safety pin. The safety pin shall be constructed of high strength steel. Each safety pin shall have a locking pin on a lanyard with a chrome handle.

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The ground contact area shall be that which is recommended by NFPA 1901 with the use of ground plates.

One (1)
60-10-1200

Stabilizer Controls - 6 Street Side, Aerialscope

Y__N__

STABILIZER CONTROLS

Six (6) joystick controls for all stabilizers shall be provided on the street side of the apparatus in the forward body compartment just aft of the cab.

The operator shall be able to raise and lower the jacks and outriggers independently while observing them during set up. A single control switch shall also be provided for the operator to raise and lower all jacks and outriggers at once while the interlock is activated. An automatic high idle switch and indicator shall be provided so that automatic engine RPM ramp up from hydraulic requests can be disabled.

Two (2) inclinometers shall be provided to aid in leveling the unit from side to side and front to rear.

The control panel shall be lit by the general compartment light chosen by the fire department.

One (1)
60-10-1T00

Outrigger Control Housing - Forward Body Section, Aerialscope

Y__N__

OUTRIGGER CONTROL HOUSING

The outrigger/stabilizer controls shall be housed in a dedicated compartment in the left side forward body section. The upper section shall be recessed back from the outside edge of the body and shall house the outrigger stabilizer controls.

One (1)
60-10-2010

Outrigger Alarm

Y__N__

OUTRIGGER ALARM

An automatic electronic warning device (horn) shall be provided to warn personnel when the outriggers leave their nested position. Alarm shall operate only when outriggers are moving.

One (1)
60-10-7050

Tower Cradle Interlocks

Y__N__

CRADLE INTERLOCKS

A cradle interlock system shall be provided which automatically prevents the operator from lifting the aerial device from the cradle unless all outriggers are placed in a load supporting configuration. The system is activated when the foot of the center outriggers

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contacts the ground and trips a limit switch. An LED indicator light on the jack control panel shall then indicate that the boom can be operated.

An additional interlock shall be provided that prevents outrigger operation when the aerial device is not fully stowed in the cradle.

One (1)
60-10-7120

Short-Jack Operations - Aerialscope

Y__N__

SHORT-JACK OPERATIONS

The aerial device shall be capable of operating in a “short-jacked” stance. The aerial device shall require two operators to lift the boom from the cradle. Once the boom is lifted from the cradle, the aerial device shall be fully operational by a single operator to the side of the apparatus with fully deployed outriggers, and shall be denied operation to the short set side. In the event both sides are short set, the operator will automatically be denied operation to both sides. Two methods of overriding the interlock are available: an electric switch, or mechanically moving the solenoid. Both are available to the single operator located at the primary operator's station.

One (1)
60-10-7230

Manual Overrides - Aerialscope

Y__N__

MANUAL OVERRIDES

The manual overrides for the aerial device (clockwise and counterclockwise rotation and boom lowering interlocks) shall be in the turntable control pedestal. Operation of the boom without the outriggers properly set requires the operation of a diverter valve and requires a second operator. The overrides for the outriggers shall be conveniently located behind the jack control panel. The outrigger overrides can be operated by one person, but requires the simultaneous activation of two separate controls to override the safety system.

One (1)
60-10-3L50

Outrigger Lighting - (6) Whelen TIR3™ LED, Aerialscope

Y__N__

OUTRIGGER LIGHTING

Six (6) Whelen TIR3™, red LED lights, with cast aluminum bezels, shall be mounted on the outrigger feet, three on each foot. On each foot, one light shall face outward, one shall face forward, and one shall face rearward, to meet NFPA requirements. The lights shall be activated by engaging the PTO.

One (1)
60-10-3L55

Outrigger Reflective Striping - White

Y__N__

REFLECTIVE STRIPING

In compliance with NFPA, there shall be a 2" white reflective stripe placed on both of the tension arms for each tormentor outrigger.

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One (1)
60-10-3M4B

Outrigger Spotlights - (2) Whelen PAR36, Black Super-LED, Cab Switch

Y___N___

OUTRIGGER SPOT LIGHTS

Two (2) Whelen PAR36 spotlights with black covers, model PFBS12S, with 12 diodes, shall be installed, one on each side of the apparatus above the outriggers, to illuminate the area for spotting the outriggers in the down position. The lights shall be wired to a switch on the cab dash and shall also automatically activate when the PTO is engaged. Each light is equipped with a switch on the light head. This switch shall be dependent on the switch on the light head.

One (1)
60-10-4280

Outrigger Pads & Brackets - (6) Aluminum, w/ (2) Rear Brackets (NA w/ Frt Compt)

Y___N___

OUTRIGGER PADS AND BRACKETS

A set of six (6) auxiliary outrigger pads shall be installed on the apparatus. The six (6) pads shall each be 27" x 27" and shall be made of 3/8" smooth aluminum with a carrying handle.

They Shall be installed:

Three (3) each side on the front face of the LS1/RS1, to the rear of the superstructure



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One (1)
60-10-6050

Tower Cradle - Aerialscope

Y__N__

CRADLE

A heavy-duty rest shall be provided to support the boom in the travel position. Re-enforcement plates shall be attached to the boom base section to protect the aerial when the unit is in the travel position. The cradle shall be located on the top of the torque box. It shall be constructed such that the weight of the boom shall be transferred through the torque box to the chassis frame rails. A limit switch mounted on the cradle shall automatically stop the lowering function of the boom at the proper position in the boom rest.

One (1)
60-20-0020

Tower Hydraulic System - Pump, Tank, Filters, Aerialscope

Y__N__

HYDRAULIC SYSTEM

All stabilizer, outrigger, and tower movements shall be accomplished by the use of hydraulic power. All functions shall be held in place by holding valves when not in motion. The hydraulic system shall incorporate a pressure relief valve to protect the system from excessive pressure. All hydraulic cylinders shall incorporate pilot operated holding valves to keep them in place or to control their movement when hydraulic pressure is applied. The hydraulic pressure lines shall have a burst pressure of at least four times the operating pressure.

The system shall incorporate two (2) filters and a remote filter condition indicator. One (1) 5 micron high pressure filter shall be placed after the pump and one (1) 10 micron return filter shall be placed in the hydraulic tank. These filters shall be sized for the system required pressure and flow.

HYDRAULIC PUMP

The system shall be powered by a pressure compensated load sensing hydraulic pump. The pump shall be sized to operate all boom functions simultaneously. The load sense feature operates any function at the optimum pressure to maximize efficiency and minimize heat build-up.

HYDRAULIC OIL TANK

The hydraulic oil tank shall have a sufficient capacity to operate the aerial while allowing the oil to cool and shall be located in the front of the torque box for a 95 foot Aerialscope II and behind the driver's side compartment forward of the tandem axles for a 75 foot Aerialscope II. Note: Certain options may dictate special tank locations. There shall be a means provided to remove the tank, if needed. The connection points to the tank shall be easily accessible, with internal baffles separating the intake and return. There shall be shut-off valves at these points to isolate the tank, if needed. A filtered breather cap and a basket strainer shall be located in the filler neck. A dip stick shall verify the oil level. There shall be a plaque mounted next to the fill cap labeled "Hydraulic Fluid Only".

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HOUR METER

An aerial hydraulics hour meter shall be provided to accumulate hours when the transmission provides pressure to engage the PTO and the aerial enable switch is engaged.

One (1)
60-20-0210

Emergency Auxiliary Hydraulic System, 12-Volt

Y___N___

EMERGENCY PUMP

The apparatus shall be equipped with an emergency hydraulic pump. The pump shall be driven by a 12 volt electric motor with power from the truck batteries. It shall be capable of providing limited hydraulic power for returning the boom and outriggers to their stowed position in the event of main power failure. A control switch for the emergency pump shall be located at the outrigger control station and at the aerial control. The control switch shall be a spring loaded momentary type to prevent prolonged operation of the emergency pump. The switch shall be located behind the pedestal interior access door and at the outrigger controls.

One (1)
60-20-0310

"Hot Shift" PTO & Drive Shaft - Aerialscope

Y___N___

HOT SHIFT POWER TAKE/OFF FOR AERIALS

The apparatus shall be equipped with a power (hot) shift PTO driven by the chassis transmission. An indicator shall be located in the cab to indicate when the PTO is engaged.

The following conditions apply for use of the PTO:

If the PTO is used to power the generator only, then the PTO can be engaged by the generator switch when the truck is in motion.

If the PTO is used to power the aerial only, then the PTO can be engaged by the aerial enable switch if the transmission is in neutral and the parking brake is set or in pump mode with the parking brake set.

If the PTO is used to power the generator and the aerial, then the generator can be used while the truck is in motion by activating the generator switch. A hydraulic valve, controlled by the aerial enable switch, shall prevent aerial operation until the transmission is in neutral and the parking brake has been set or in pump mode with the parking brake set.

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There shall be no exceptions to this interlock system since it is designed to protect and safeguard personnel and equipment.

The aerial hydraulic pump shall be mounted to the frame with a drive shaft from the PTO to the pump.

One (1)
60-20-0550

Raise/Lower System, -9/+75, 95' Aerialscope

Y__N__

HOIST SYSTEM

The boom shall be elevated or lowered by two (2) hydraulic lift cylinders. They shall be mounted one on each side of the boom using spherical bearings. The cap end of the cylinder shall be attached to the turret. The rod end shall be attached to boom ears on the side of the boom at a point located at least 140" from the turret pin to provide better boom stability.

In case of cylinder failure, one cylinder shall be capable of supporting the full load capacities of the platform.

Each lift cylinder shall have two (2) counterbalance valves that lock the cylinders in place when movement is stopped and provide smooth operation during raise and lower functions.

The range of elevation shall be -9 degrees to +75 degrees.

One (1)
60-20-1150

Extension-Retract System - Fully Hydraulic, Aerialscope

Y__N__

EXTENSION-RETRACTION SYSTEM

A full hydraulic powered boom extension and retraction system shall be provided utilizing three hydraulic cylinders synchronized by hydraulic valves. The extension/retraction cylinders shall be equipped with integral (on the cylinder) holding valves to prevent the cylinder from moving should a pressurized hydraulic line be severed at any point within the system.

Wear pads shall be provided between the telescoping sections for smooth operation. Wear pads shall be composed of high strength polymers with friction reducing additives.

One (1)
60-30-5050

Rotation Interlock System with Emergency Override - Aerialscope

Y__N__

ROTATION INTERLOCK SYSTEM

The apparatus shall be supplied with a rotation interlock system. This interlock system shall not allow the aerial to be rotated over the side of the apparatus if the stabilizers on that side are not fully deployed. The interlock system shall include a light and audible

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alarm that will activate when rotation is no longer allowed. Once rotation is stopped the interlock system shall allow the operator to rotate away from the stopping point without the use of an override. A manual override feature shall be provided that will allow the operator at the turntable the ability to override the interlock system. There shall be NO EXCEPTIONS to this interlock system since it is designed to protect and safeguard personnel and equipment.

The electrical components for the rotation interlock system box/module shall be located in the DC control panel which is positioned in the curbside forward body compartment.

One (1)
60-35-36W5

Aerial Swivel - 36 Circuit, Hydraulic with 5" Waterway

Y___N___

AERIAL SWIVEL WITH 5" WATERWAY

The aerial device shall be equipped with a swivel installed within the axial centerline of the turntable to allow 360 degree rotation of the aerial device. The swivel shall float on the turntable to prevent side loading. It shall have passages for the hydraulic lines from the hydraulic pump and oil reservoir to the aerial control valve bank, and for a 5" waterway down the center. The swivel shall also maintain electrical continuity of all necessary electrical circuits while ladder is rotating or when it is immobile. A minimum of thirty-six (36) collector rings shall be provided.

One (1)
60-40-0150

Rotation System - Dual Motor/Brake, Aerialscope

Y___N___

ROTATION SYSTEM

The turntable bearing shall be of 4-point contact ball construction. The bearing shall have a minimum of 46 mounting holes for attachment to the superstructure and turret. All fasteners shall be grade 8. The outer race of the turntable bearing shall be mounted to the top of the superstructure. The outer race shall have gear teeth to permit interaction with the rotational spur gear.

The turntable shall be bolted to the inner race which will be free to rotate 360 degrees continuously in either direction.

The turntable rotation shall be driven by two (2) rotation assemblies each consisting of a hydraulic motor, a hydraulically activated brake, and a planetary gear reducer. This system shall be capable of 360 degree continuous rotation of the fully extended boom in the direction of the platform water stream while maintaining the manufacturer's rated basket capacity. The angle of elevation shall not affect this performance. The hydraulically activated brake mechanism shall be capable of withstanding all side forces from water flow or sudden stopping of boom rotation. The rotational assembly shall be mounted on the left side of the turntable. (Assuming you are standing on the turntable looking at the boom.)

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One (1) **Turntable Rotation Motor Cover - Aerialscope** Y__N__
60-40-202A

TURNTABLE ROTATION MOTOR COVER

An aluminum tread plate cover shall be provided over the boom rotation motors on the turntable.

One (1) **Turntable - HSLA Steel with Aluminum Grating and ATP, Aerialscope** Y__N__
60-40-101A

TURNTABLE

The turntable shall be constructed of High Strength Low Alloy structural steel and bolted to the inner race of the turntable bearing using grade 8 fasteners. The bearing mounting plate shall be machined to insure a smooth and flat bearing mounting surface. The turntable ears shall support the base section of the boom. There shall be a set of mounting brackets for the lift cylinders.

The standing deck of the turntable shall have aluminum grating in front of the main operator's control pedestal (console) and aluminum tread plate on the remainder.

There shall be a 42" high slip resistant, poly-elastomer material coated stainless steel handrail on the right side of the turntable, next to the control pedestal. (Standing on the turntable, facing the boom.)

The main operator's control pedestal shall be mounted on the street side of the turntable when the boom is in the stored position.

One (1) **Turntable - Yellow Perimeter Marking** Y__N__
60-40-901A

YELLOW PERIMETER MARKING

In accordance with NFPA 1901 chapter 15.7.1.6, the perimeter of the turntable not covered with a railing shall be marked with a one-inch wide safety yellow line to delineate the designated standing or walking surface area.

One (1) **Mansaver Bar - (1) Entrance to Turntable** Y__N__
60-40-2000

MANSAVER BAR

A Fire Research "Mansaver" bar shall be provided at the entrance to the turntable.

One (1) **Hinged Aluminum Cover - Control Pedestal** Y__N__
60-41-001A

PEDESTAL COVER

A hinged aluminum tread plate cover shall be provided for the control pedestal. Two (2)

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gas springs shall hold the cover in either an open or closed position.

One (1)
60-41-0220

Pedestal Cover Light - (1) TecNiq Eon LED

Y__N__

PEDESTAL COVER LIGHT

There shall be a TecNiq Eon LED lamp installed in the pedestal cover. The light shall be activated when the PTO is engaged.

One (1)
60-41-001L

Pedestal Cover Latch - Additional

Y__N__

PEDESTAL COVER LATCH

There shall be a rubber ball type latch installed on the pedestal cover to assist in holding the cover closed.

One (1)
60-41-0110

Pedestal (Interior Service) Work Light - (1) TecNiq Eon, LED

Y__N__

CONTROL PEDESTAL INTERIOR WORKLIGHT

The interior of the turntable control pedestal shall have a TecNiq EON LED work light for control valve service visibility. It shall have a stand-alone toggle switch with label.

One (1)
60-41-1U00

Pedestal Control Station, RS - Platforms

Y__N__

TURNTABLE CONTROL PEDESTAL (CONSOLE)

The aerial control console shall be located on the right side of the turntable facing the tip. The console shall be illuminated for night operation and shall have the following items clearly identified and conveniently located on or in close proximity to the console for ease of operation:

- Emergency stop push button with on-light stops all platform controllability
- Aerial overload chart
- Emergency override rotation switch with protective cover
- Throttle switch
- Emergency pump switch with protective cover
- Intercom system - allows communication between pedestal and end of aerial
- Three directional control handles for aerial functions

The three directional control valves shall control the elevation/lowering, clockwise/counter clockwise, and extension/retraction functions for the positioning of the aerial. The controls for the three aerial functions may be operated independently or simultaneously and shall be of the "deadman" type. A foot pedal locking feature shall be incorporated to insure the controls are non-operable unless the foot pedal is engaged when the function is being performed.

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The display located in the pedestal shall include the following information:

- Low voltage (Red)
- Rung alignment (Green)
- Turntable aligned (Green)
- Aerial overload buzzer and light (Red)
- Rotation limit exceeded (Red)
- Cab avoidance (Red)
- Hydraulic system pressure
- Lower system pressure
- All warning information
- Aerial status
- Truck status
- Elevation indicator

One (1)
60-41-1XAS

Cab Avoidance

Y__N__

CAB AVOIDANCE

Cab avoidance shall be provided within the aerial electrical system that shall create an envelope around the cab to prevent the aerial from contacting the cab.

One (1)
60-41-2001

Aerial Capacity Overload Alarm, Platform and Pedestal

Y__N__

AERIAL OVERLOAD ALARM

An alarm horn and warning light shall be provided at the control pedestal and at the platform that shall sound to alert the operator should the load capacity of the aerial be exceeded. The alarm shall in no way restrict the further operation of the aerial. There shall be no exception to this safety requirement.

One (1)
60-41-2020

Push Button Switch for Air Horns - on Aerial Pedestal

Y__N__

PUSH BUTTON SWITCH F/AIR HORNS ON AERIAL PEDESTAL

A push button switch for air horns shall be provided on the aerial pedestal.

One (1)
60-41-2030

Aerial Operation - Platform Override, Foot Pedal

Y__N__

AERIAL DEVICE FOOT PEDAL

A foot pedal shall be mounted on the turntable floor at the base of the control pedestal. Depressing the foot pedal shall activate the aerial hydraulic control valve for operating

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the aerial device from the turntable pedestal. Depression of the foot pedal also allows the pedestal operator to override the platform control.

One (1)
60-41-2040

Aerial/Cradle Alignment Light

Y__N__

AERIAL ALIGNMENT LIGHT

There shall be a 4” round Truck-Lite model 4050A amber LED light recessed on the backside of the pedestal, viewable from the platform, to assist the operator’s alignment of the aerial device with the aerial cradle.

One (1)
60-45-1205

Aerial Intercom - FRC ICA900, 2-Station, Non-Headset

Y__N__

AERIAL INTERCOM SYSTEM

The intercom shall be a Fire Research Model ICA-900 2 station with ACT clear voice sound system. The master shall be a push-to-talk station with 5-LED volume indicator lights and push button, arrow-up and arrow down, controls. The master unit shall be mounted on the turntable control pedestal. The hands free voice transmission slave unit shall be installed at the aerial tip or platform control console and always in transmit mode until interrupted by transmission from the master unit. The system stations shall be interconnected with shielded cable for static free operation in normal conditions.

One (1)
60-55-0100

Boom Construction-Steel Base, 3-Section Aluminum, Box Tubes

Y__N__

BOOM CONSTRUCTION

The boom shall be constructed of steel on the main stage and aluminum on the telescoping first, second, and third stages. It shall be a totally enclosed box type welded construction design. It shall be able to withstand the stress of fully extended low angle positions combined with any positioning of full flow water stream capabilities

Teflon impregnated bearing pads shall provide a sliding surface for each section as it is extended or retracted. Wear pads shall have adjusting screws to set clearance without shims. The boom extension wear pads and boom pivot bushings shall not require grease.

One (1)
60-55-0200

Platform, Curved Front - Aluminum Alloy, 15 sq.ft

Y__N__

PLATFORM CONSTRUCTION

The platform structure shall be completely constructed of welded aluminum. Any tubular aluminum shall have a minimum diameter of 1.5” and any square aluminum shall be a minimum of 1.5” x 1.5”. It shall have a 42” high hand railing. The floor shall be non-skid extruded aluminum with a minimum area of 15 sq. feet. A 4” minimum kick plate shall surround the floor. An aluminum plate for mounting the platform air and

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intercom shall be mounted at the left rear wall. Aluminum mounting angles for the platform control box shall be mounted on the right side.

There shall be two (2) curved aluminum doors with aluminum heat shields located on the front corners of the platform. The doors shall have a self-latching lock and shall swing inward. A secondary latch shall allow the door to swing in or out.

There shall be four (4) individual tie-off rings incorporated into the platform to be used as mounting points for safety harnesses. Two (2) rings shall be on each side at the rear of the platform.

The platform shall be fastened to the third telescoping boom section by means of an "L" shaped aluminum welded assembly. The attachment point shall be at center point under the platform to provide for greatest ease in leveling the platform.

The platform shall be provided with a non-skid tread access ledge around the outside edge. The access ledge shall be a minimum width of 8".

The construction of the platform being of aluminum and not painted steel shall reduce the maintenance cost of the platform.

One (1)
60-55-0260

Platform Access Handrails - (2) Knurled Aluminum

Y__N__

PLATFORM ACCESS HANDRAILS

A 31" knurled aluminum handrail shall be provided on each side of the back of the platform to assist in accessing the platform from the access steps on the body.

One (1)
60-55-0270

Platform Skid Rests - Underside

Y__N__

SKID RESTS

A set of poly skid rests shall be located underneath the platform to protect mounted items from damage when the platform is set on the ground or a flat surface.

One (1)
60-55-0280

Platform Control Station - Right Side, Rear Corner

Y__N__

PLATFORM CONTROL STATION

A control station shall be located on the right side rear corner of the interior of the platform. The control station shall be constructed of aluminum.

One (1)
60-55-0300

Platform Control Station Lighting

Y__N__

CONTROL STATION LIGHTING

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A TecNiq clear LED light shall be installed under the platform control joystick.

One (1)
60-55-032A

Platform Controls, Joystick - IQAN, 3-Speed, Aerialscope

Y__N__

PLATFORM CONTROLS

A single joystick control shall provide simultaneous operation of all three (3) boom movements. The control shall be a self-centering handle with an integral trigger type safety interlock switch. This switch shall work in conjunction with the safety interlock system at the main pedestal. The joystick control shall send a variable signal to the hydraulic valve at the main pedestal for the desired movements. It shall be mounted on the right rear corner of the platform so as to not interfere with any activities in the platform. It shall also allow constant observation of any obstacles due to directional hand movement without looking at the control.

The control shall be activated by turning on the platform control's switch at the main pedestal. It shall be deactivated by pushing the platform control switch "off" or by depressing the safety interlock foot pedal.

The platform joystick shall have 3 colored LED's with a speed control push-button. Pressing the button one time shall give a creep speed and the LED shall turn red. Pressing the button again, gives ½ normal speed and the LED turns yellow. Pressing the button again, gives normal speed and the LED changes to green. Pressing the button again returns the speed to creep with a LED color of red. Moving the joystick to center shall slowly reduce speed to zero. All speeds can be adjusted at final inspection to meet departmental requirements.

The control panel shall have the following switches:

- Basket Spot Lights (Boom & Stream Tracking)
- Basket Flood Lights (Optional)
- Basket Work Lights (Optional)
- Basket Warning Lights (Optional)

The control panel shall have the following indicator lights:

- Boom Overload Alarm
- Cab Avoidance Active
- Boom Aligned
- Must Use Manual Leveling
- Auto High Idle Active

One (1)
60-55-0330

Platform Leveling System - Electronic w/ Battery Backup, Test Switch

Y__N__

PLATFORM LEVELING SYSTEM

The platform leveling system shall incorporate an electronic level sensing device that controls a proportional hydraulic valve. This system shall be capable of leveling the

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forward/rearward tilt of the platform regardless of the truck orientation. Leveling shall also be functional with the auxiliary back-up hydraulic system.

Hydraulic lines shall connect to a proportional control hydraulic valve. The output of an electronic level sensing device controls the proportional valve to position the leveling cylinders and maintain level of the platform. If the primary power is lost, the leveling electronics shall be powered with an auxiliary backup battery system that shall automatically engage. The auxiliary backup battery system shall have a gauge and test switch located on the control station.

The two (2) leveling cylinders shall be mounted at the rear of the platform. These cylinders shall incorporate dual pilot operated holding valves so as to hold them in place. An individual cylinder shall be capable of holding the weight of the platform, if necessary.

One (1)

Platform Waterway System, Monitor Outlet, f/ (1) 3" Gun, Underside Spray Curtain

Y___N___

60-55-0410

PLATFORM WATERWAY SYSTEM

A mounting flange for a deck gun shall be mounted in the front center of the platform structure. The waterway shall also be equipped with a manually operated 3" 150# flange "Slo-Close" worm gear shut-off valve mounted in the front center portion of the platform for a deck gun, 1500 GPM capacity.

A water curtain assembly shall be mounted beneath the platform for protection. It shall be operated by a shut-off valve.

One (1)

Platform Discharge - Single, 2.5"

Y___N___

60-55-0510

DISCHARGE

There shall be one (1) 2.5" coupling provided for one (1) 2.5" ball valve with cap in the waterline at the front center portion of the platform, under the discharge gun flange of the platform for an optional hand line set-up.

One (1)

Waterway - Telescoping, Anodized Aluminum, 95' Aerialscope

Y___N___

60-70-0900

AERIAL WATER SYSTEM

The aerial waterway shall be 5" schedule 40 aluminum pipe from the swivel to the telescopic waterway. A single aluminum telescopic waterway, which has been duranodic hard coat anodized, shall be provided and mounted to the side of the aerial boom. The telescopic waterway shall consist of a 4.75" I.D. base section tube, 4.25" I.D. second section tube and a 3.75" ID third section tube, and a 3.25" I.D. fly section tube. The waterway shall be 4" schedule 40 aluminum from the telescopic waterway to the platform

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waterway. The aerial waterway shall connect to the platform waterway with a 4" Victaulic coupling.

One (1)

Forward Body - RS/LS Waterway Inlet Panels, Brushed SS, w/ Dual Compartment

Y__N__

60-70-1210

FORWARD BODY

A forward body module shall be provided between the back of the cab and the aerial superstructure. The forward body module shall house the outrigger controls and overrides, the waterway inlets/discharges, gauges and valves, as well as the turntable access steps.

An Ashcroft 3.5" 30-0-600 pressure gauge shall be installed on each side to display the waterway intake pressure.

A waterway inlet panel constructed of 14 gauge brushed 304 stainless steel shall be located just in front of the superstructure on both sides of the apparatus. All applicable waterway inlets/discharges, drains, gauges and controls shall be located on these panels.

On the left side of the forward body module, ahead of the waterway inlet panel, shall be a set of turntable access steps and handrails. Where applicable, Grip Strut® shall be used in the construction of the stepping surfaces. There shall be two (2) compartments stacked vertically just aft of the cab. The upper compartment shall be recessed back from the outside edge of the body and shall house the outrigger stabilizer controls. The lower compartment shall extend out to approximately the width of the cab and shall have a Grip Strut® stepping surface on top. The lower compartment shall have a door frame to door frame measurement of 19.625" wide x 15.375" high, a clear door opening of 18" wide x 15.375" high and usable space of 21.875" wide x 17" high x 18.875" deep.

On the right side of the forward body module, ahead of the waterway inlet panel, there shall be **a storage area with a door**. This area, painted **gray zolatone** shall measure 30.5" high x 20.25" wide x 17.75" deep. The back corner shall be angled to give clearance for the exhaust. There shall be no access to the turntable from this area.

The right side forward body module compartment ahead of the waterway inlet panel shall be provided with a painted hinged door to enclose it.

The top of the forward body section shall be covered with 1/8" aluminum tread plate. Each compartment shall have a vertically hinged, lap type, double panel construction stainless steel door.

One (1)

Forward Body Roof - Yellow Perimeter Marking

Y__N__

60-70-1217

YELLOW PERIMETER MARKING

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In accordance with NFPA 1901 chapter 15.7.1.6, the perimeter of the roof of the forward body shall be marked with a one-inch wide safety yellow line to delineate the designated standing or walking surface area.

One (1)
60-70-1219

Water Can Storage

Y__N__

WATER CAN STORAGE

One (1) mounting tube shall be installed on the front of the super structure officer's side for a water can storage.



One (1)
60-70-1220

Waterway Inlets - 5" RS/LS Fwd Body, Man Butterfly Valves, Intake Relief Valve

Y__N__

WATERWAY INLETS

A 5" inlet shall be provided on the each side of the vehicle. All inlet piping below the swivel shall be stainless. Each inlet shall be trimmed with 14-gauge brushed stainless steel garnish rings. The inlets shall each have a 5" manually operated butterfly valve.

There shall be a 1-1/2" drain valve provided. The drain shall be recessed behind the street side panel with the control extending through the panel and located along the bottom. The drain control shall be properly labeled. The water discharged from the drain shall be routed so it drains below the chassis frame rails.

A 3/4" Auto Drain shall be provided as well to drain water after the system pressure is

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released. This drain shall remain open until the system is pressurized again.

A 2-1/2" intake relief valve shall be permanently installed in the inlet piping. It shall have minimum pressure adjustment of 75 to 250 PSIG. The surplus water shall be plumbed to the underside of the truck away from components and the operator.

One (1) **Left Side Aerialscope Waterway Inlet Fittings and Caps** Y__N__
60-70-122L

LEFT SIDE WATERWAY INLET FITTINGS AND CAPS

One (1) **Adapter - Waterway, 5"FNPT X 5" MNST** Y__N__
60-70-25AP

WATERWAY ADAPTER

A 5"FNPT X 5" MNST straight chrome plated brass rocker lug adapter shall be provided for the waterway.

One (1) **No Additional Adapters Required** Y__N__
60-70-25BZ

One (1) **Elbow - Waterway, 5" FNST X 30 Degree 4.5" MNST** Y__N__
60-70-25TA

WATERWAY ELBOW ADAPTER

A 5" FNST X 4.5" MNST straight hard anodized aluminum 30 degree elbow shall be provided for the waterway.

One (1) **Cap - Waterway, 4.5" FNST Long Handled** Y__N__
60-70-26L5

WATERWAY CAP

A 4.5" FNST long handled chrome plated brass cap shall be provided for the waterway.

One (1) **Right Side Aerialscope Waterway Inlet Fittings and Caps** Y__N__
60-70-122R

RIGHT SIDE WATERWAY INLET FITTINGS AND CAPS

One (1) **Adapter - Waterway, 5"FNPT X 5" MNST** Y__N__
60-70-25AP

WATERWAY ADAPTER

A 5"FNPT X 5" MNST straight chrome plated brass rocker lug adapter shall be provided for the waterway.

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One (1) **No Additional Adapters Required** Y__N__
60-70-25BZ

One (1) **Elbow - Waterway, 5" FNST X 30 Degree 4.5" MNST** Y__N__
60-70-25TA
WATERWAY ELBOW ADAPTER

A 5" FNST X 4.5" MNST straight hard anodized aluminum 30 degree elbow shall be provided for the waterway.

One (1) **Cap - Waterway, 4.5" FNST Long Handled** Y__N__
60-70-26L5
WATERWAY CAP

A 4.5" FNST long handled chrome plated brass cap shall be provided for the waterway.

One (1) **Flow Meter at Pedestal - Seagrave Fire Apparatus, LLC** Y__N__
60-70-123A
FLOW METER

A Seagrave Fire Apparatus, LLC flow meter utilizing a paddlewheel sensor shall be installed at the aerial operators pedestal position and read from the pedestal display.

One (1) **Monitor - Akron Apollo™ #3432** Y__N__
60-70-5P3X
MONITOR

An Akron Apollo™ model 3432, stick controlled monitor shall be located in front of the fixed center portion of the bucket between the doors. The entire water system shall be capable of delivering 1250 gallons per minute at any angle of elevation, up to full extension. The monitor can go 180 degrees horizontal and +90 degrees or -35 degrees vertical when stowed or +20 degrees to -110 degrees vertical travel when deployed.

An FDNY style storage mount shall be installed on the front of the platform.

One (1) **Akron model 5160 Master Stream Acromatic nozzle** Y__N__
60-70-6X4A
AUTOMATIC NOZZLE

An Akron model 5160 Master Stream Acromatic nozzle shall be provided. The nozzle shall be an automatic nozzle with 80 psi operating pressure and built in stream shaper. Flow rates shall be from 250 gpm to 1250 gpm.

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One (1)
60-70-6X5G

Stacked Tips - Akron #2499, Quad

Y__N__

STACKED TIPS

One set of Akron model 2499 quad stacked deluge pyrolite tips shall be provided, with standard orifices 1-3/8" x 1-1/2" x 2.

One (1)
60-70-6X6B

Discharge Pipe - Akron #3488, 2.5" F x 2.5" M, Pyrolite

Y__N__

DISCHARGE PIPE

An Akron Brass model 3488 pyrolite 2.5" F x 2.5" M discharge pipe shall be provided.

Two (2)
60-80-311H

Aerial Tracking Light - FRC SoBrite 12V Trapezoid with Black Housing (Ea)

Y__N__

AERIAL TRACKING LIGHT(S)

Two (2) FRC SoBrite model SRA-110-07C LED scene light(s) with CD-BS-2 Base Mount shall be installed on the base section of the aerial device to illuminate the aerial device in any position of operation. The lamp head shall have 22 ultra-bright white LEDs in a black housing to provide a trapezoid light beam pattern. It shall operate at 12/24 volts DC, draw 5/2.5 amps, and generate 7,000 lumens of light. The lamp head shall have a unique lens that focuses the trapezoid light beam to simultaneously provide a focused, concentrated beam and also a longer, wider beam to illuminate more of the work area. The lamp head shall be supplied with a Collins Dynamics CD-BS-2 light mounting base.

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The stainless 2" rounded-square base has four (4) pre-drilled holes for permanent attachment of an SRA-series light. Wiring shall extend from the rear of the lamp head.

Two (2) **Aerial Tracking Light Shall be Mounted on the Both Sides of the Aerial Device** Y__N__

60-80-3920

Aerial tracking lights shall be mounted on the both sides of the aerial device.

One (1) **Aerial Light - Switched at Pedestal, 12V/120V (Ea)** Y__N__

60-80-9110

One (1) aerial light(s) shall be switched at the turntable pedestal.

Two (2) **Stream Tracking Light - FRC Sobrite 12V Spot with Black Housing (Ea)** Y__N__

60-80-411B

STEAM TRACKING LIGHT(S)

Two (2) FRC SoBrite model SRA-110-07A LED spotlight(s) with CD-BS-2 Base Mount shall be installed on the forward face of the platform near the bottom so as to allow the operator to observe the effect of the stream from the monitor nozzle. The lamp head shall have 22 ultra-bright white LEDs in a black housing to provide a spot light beam pattern. It shall operate at 12/24 volts DC, draw 5/2.5 amps, and generate 7,000 lumens of light. The lamp head shall have a unique lens that focuses the spot light beam into the distance. The lamp head shall be supplied with a Collins Dynamics CD-BS-2 light mounting base. The stainless 2" rounded-square base has four (4) pre-drilled holes for permanent attachment of an SRA-series light.

Two (2) **Stream Tracking Lights Shall be Mounted on the Both Sides of the Platform** Y__N__

60-80-4920

Stream tracking lights shall be mounted on the both sides of the platform.

Two (2) **Aerial Light to Activate with Aerial Enable Switch in Cab** Y__N__

60-80-9100

This light shall be activated when the aerial ladder system is activated in the cab.

One (1) **Under Platform Lights - (2) Whelen PPlus™ PFP2AC, Super-LED® 120V Flood** Y__N__

60-80-573E

PLATFORM LIGHTS

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There shall be two (2) Whelen Pioneer Plus™ PFP2AC, 120 volt Super-LED®, 1.2 amp, 15,000 lumen floodlights installed under the platform facing the front using the Whelen PBA206 bail mount bracket. One light shall be on the left side of the front of the platform, the other on the right side.

One (1)
60-80-765G **Finish Light Head - Whelen, White** Y__N__

The finish of the light head shall be white.

One (1)
60-80-9160 **Aerial Light - Switched in Cab, Pedestal & Platform Controls, 120V (Ea)** Y__N__

AERIAL LIGHT SWITCH(ES)

One (1) 120 volt aerial light(s) shall be switched in the cab and at the turntable pedestal and the platform controls using momentary contact switches and a relay. This shall allow the lights to be turned on or off from either location as long as the light head on/off switch (if provided) is in the "on" position.

One (1)
60-80-7550 **120 Volt Wiring to Platform - 95' Aerialscope/ 105' Apollo** Y__N__

120 VOLT SYSTEM ON TOWER

120 volt wiring shall be provided to the platform. The wiring shall run from a junction box mounted below the turntable through the collector ring assembly.

One (1)
60-80-7910 **Platform Outlets - (2) 120 VAC 5-15R, Twist-Lock** Y__N__

PLATFORM OUTLETS

Two (2) **5-15R 15 amp straight blade** outlets shall be installed in the lower left corner of the platform (standing in platform and looking out, away from the boom). Each outlet shall be covered, labeled, and weather resistant. Each outlet shall be separately powered by a 120 VAC non-GFCI breaker.

Two (2)
70-05-2520 **NEMA Rating - 5-15R (15 Amp) Single** Y__N__

NEMA Rating: 5-15R (15 Amp) **STRAIGHT BLADE**, Single.

Two (2)
70-05-2700 **Receptacle Cover - Flip Lid, Aluminum, Single (Weatherproof) (Ea)** Y__N__

Two (2) aluminum flip lid single receptacle cover(s) shall be installed.

Two (2) **Breaker - 15 Amp, No Ground Fault Interrupter (Ea)** Y__N__

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70-05-2810

Two (2) 15 amp breaker(s) shall be installed. It shall not have a ground fault interrupter.

One (1)
60-80-817B

Platform Side Locator Lights - (4) Whelen ION™ T-Series™ LED, Blue

Y__N__

PLATFORM LOCATOR LIGHTS

Four (4) Whelen ION™ T-Series™ blue LED lights, model TLIB, with chrome flanges, shall be installed on the exterior vertical surfaces of the platform to assist in locating the platform in inclement viewing conditions. There shall be one (1) light on each side and two (2) lights installed on the front; one (1) on the left side and one (1) on the right side of the front.

One (1)
60-80-9100

Aerial Light to Activate with Aerial Enable Switch in Cab

Y__N__

This light shall be activated when the aerial ladder system is activated in the cab.

One (1)
60-80-827B

Platform Bottom Locator Lights - (2) Whelen ION™ T-Series™ LED, Blue

Y__N__

PLATFORM LOCATOR LIGHTS

There shall be two (2) Whelen ION™ T-Series™ blue LED lights, model TLIB, with chrome flanges, installed on the bottom of the platform to assist in locating the platform in inclement viewing conditions. One (1) light shall be on the left side and one (1) light shall be on the right side of the platform.

One (1)
60-80-9100

Aerial Light to Activate with Aerial Enable Switch in Cab

Y__N__

This light shall be activated when the aerial ladder system is activated in the cab.

Two (2)
60-80-86MH

Aerial Light - Whelen M6RC Super-LED®, Red with Clear Lens (Ea)

Y__N__

AERIAL LIGHT(S)

Two (2) Whelen M6RC red Super-LED® light(s) in chrome plated flange(s) shall be installed on the aerial. The lens color shall be clear.

Light location on the aerial shall be: Front of the bucket

Two (2)
60-80-9100

Aerial Light to Activate with Aerial Enable Switch in Cab

Y__N__

This light shall be activated when the aerial ladder system is activated in the cab.

One (1)
60-89-0042

Cat Track - With 120V AC Circuit, for 95' Aerialscope

Y__N__

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CAT TRACK

A Cat Track shall be provided that contains Synflex hydraulic hose for the hydraulic leveling system. There shall also be electric cables for the intercom, 12 volt DC power and 12 volt DC controls. The hoses and cables shall be continuous from the turntable to the platform with no reels. There shall be electrical connectors and hydraulic connections at the turntable and platform that allow for easy maintenance. The Cat Track shall include cable for 120 volt AC circuit(s).

One (1)
60-90-0415

Breathing Air System - (1) Cylinder, 4500 psi, for Platforms with Cat Track

Y__N__

BREATHING AIR SYSTEM

A breathing air system shall be provided. The system shall be composed of one (1) 444 cubic feet, 4500 PSI air cylinder and two (2) breathing air stations, one (1) 50 foot hose for refilling the air cylinder, and two (2) gauge panels.

The air cylinder shall be mounted to the base section of the aerial device, mounted the same side as the pedestal. The cylinder shall connect to a "T" that delivers high pressure to the gauge panel at the turntable and the panel at the platform. All hose shall meet NFPA requirements for breathing air.

The breathing air stations shall be located at the turntable pedestal and at the platform. The station on the turntable pedestal shall be equipped with a complete set of quick connect fittings for one (1) person. The station on the platform shall be equipped with a manifold and quick connect fittings for three (3) people.

There shall be two (2) gauge panels; one next to the air bottle and one on the platform. The gauge panels shall include the following: an air supply pressure gauge, a pressure regulator, a regulated pressure gauge, a low pressure alarm and indicator light when air is below 20%. The panel by the turntable pedestal shall have a system fill valve.

The air bottle shall be factory painted yellow as received from the manufacturer.

One (1)
00-05-3500

Air Quality Testing & Certification

Y__N__

AIR QUALITY TESTING & CERTIFICATION

In accordance with NFPA 1901 current edition, an air sample shall be drawn from the breathing air system after installation has been completed. The air shall be tested and certified by a third party to meet air quality standards, as defined by NFPA.

One (1)
60-90-1010

Class1 Air Minder System - Turntable Display

Y__N__

BREATHING AIR LEVEL MONITORING SYSTEM

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The apparatus shall be equipped with a Class I "Air Minder" system to give a visible indication of the air remaining in the breathing air system. The system shall also provide a visual and audible warning when the level becomes too low.

The Air Minder system shall include:

1. A weatherproof pressure transducer mounted in the air line between the air bottles and the high pressure regulator.
2. A remote display mounted on the turntable control pedestal. This display shall consist of a weatherproof housing with a black non-reflective bezel and a bright red LED readout (readable in sunlight), scaled 0 to 100, and labeled "% Air Remaining". The display shall incorporate a low pressure warning circuit, which causes the display to flash when 20% maximum air bottle capacity remains in the air system and sounds an audible alarm when the remaining air level drops to 10% of maximum air bottle capacity.
3. Appropriate wires and connectors to hook up the display to the pressure transducer and to the vehicle's 12 volt electrical system.
4. An audible horn mounted near the display.

An automatic low pressure switch mounted near the display will turn off the power to the Air Minder warning horn when the supply line pressure drops below 5 PSI.

One (1)
60-90-1050

Breathing Air Couplings Shall be Manufactured by Hansen.

Y___N___

The breathing air couplings shall be manufactured by Hansen.

One (1)
60-95-8020

Platform Lifting Eyes - (2) 500# Total Capacity

Y___N___

LIFTING EYES

Two (2) lifting eyes made of 1" aluminum rod shall be welded to the bottom of the platform "L" bracket. These eyes shall each have a capacity of 500 lb and a combined capacity of 1000 lb. A plaque shall be installed stating the lifting capacity of these eyes. Both lifting eyes must be used when carrying an item so as to evenly distribute the weight on the platform and boom section. Any weight picked up by these lifting eyes must be calculated as part of the overall platform weight capacity.

One (1)
60-95-8010

Boom Lifting Eye - 5000# Total Capacity

Y___N___

LIFTING EYE

A lifting eye shall be mounted to the bottom of the main stage boom as close to the end as feasible. A plaque shall be installed on each side of the boom stating the lifting capacity of the eye. The lifting eye shall have a capacity of 5,000 pounds. This lifting eye shall only be used when the boom is fully retracted, the waterway completely void of any water and no personnel are in the platform.

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One (1)
60-95-8050

Escape Ladder - Aerialscope

Y__N__

ESCAPE LADDER

As a means of providing emergency escape from the platform, a telescoping ladder with serrated rungs and folding hand rails shall be mounted on top of the boom. The erected hand rail height shall be 12". This ladder may be utilized for emergency transfer of manpower.

A ladder with 12" handrails shall be mounted in the rear center portion of the platform for access to the emergency escape ladder.

One (1)
60-95-8090

Folding Ladder & Pike Pole on Cat Track

Y__N__

FOLDING LADDER AND PIKE POLE

A Duo-Safety 10' folding ladder shall be mounted along with a stainless steel tube to hold an 10' pike pole on top of thr Cat Track Housing.



One (1)
60-95-8115

Tower Signs - (2) One Each Side, 15" X 144", Does Not Include Lettering

Y__N__

TOWER SIGNS

A painted sign shall be mounted to each side of the aerial device and adequately braced against vibration. Each sign shall be 15" tall and 144" long. The center of the metal

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placards shall be mounted approximately 130" from the pivot point of the aerial device. Tower mounted options may affect the location of the sign.

Color of sign shall be: _____

One (1)
60-95-8510

Platform Stokes Mounting Bracket

Y___N___

PLATFORM STOKES MOUNTING BRACKETS

The platform shall be equipped with the necessary brackets and hardware to hold a Stokes basket centered over the discharge gun. These brackets shall be removable and shall be normally stored in a compartment or on top of the truck. The brackets shall be used at the fire or emergency scene and shall not be used for carrying the Stokes basket while in transit.

One (1)
60-95-8520

Platform Hose Tray - under Deck Gun

Y___N___

PLATFORM HOSE BIN

A hose bin designed to hold approximately twenty feet (20') of 1-3/4" attack hose shall be installed on the walkway at the front of the platform centered underneath the monitor. The bin shall have a fold down door to allow for easy discharging of the hose.

One (1)
60-95-8610

Platform Toolbox - ATP with Cover

Y___N___

PLATFORM TOOLBOX

One (1) toolbox shall be provided to the rear of the platform on the right side. The box shall be constructed of aluminum tread plate and have a cover **with a LATCH**. The interior dimensions shall be approximately 15.75" x 13.00" x 24.00" deep.

One (1)
70-00-0040

Hydraulic Generators - Platforms, Aerialscope Non-Quint

Y___N___

One (1)
70-00-8100

Hydraulic Generator - Harrison 8 KW

Y___N___

HYDRAULIC GENERATOR

A Harrison 8.0 kW hydraulic generator system shall be provided and installed on the apparatus. The system shall be capable of producing the nominal output power of 8.0 kW, 120V/240V, single phase, 60 Hz. The generator shall be installed per the manufacturer recommendations and shall be capable of supplying full power during all engine speeds or operation modes.

The generator shall be placed in a tray frame assembly which affords protection to the

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components and provides a unitized mounting module containing the motor/generator, reservoir, oil cooler, filtration system, and a manifold containing a cross-port check valve plus system relief valve. The generator shall be a commercial type with a heavy-duty bearing and of brushless design to ensure low maintenance. The reservoir shall include an oil level gauge, oil temperature gauge, fill cap, fill strainer, and a boost unit to provide a positive pressure to the pump suction port. The reservoir shall be equipped with a remote drain and valve below the frame rails. The generator and hydraulic motor shall be close coupled and permanently aligned using a Morse taper with a through bolt to secure the motor to the generator.

The PTO driven hydraulic pump and motor shall be of axial piston design to provide low internal leakage and a high degree of frequency stability. The pump will match to the system with the proper orifice, pressure compensator and load sensing to provide a stable output over the rated speed range of the pump and with electrical loads from no load to full-load. The PTO ratio shall be selected to allow operation throughout the entire engine RPM range; idle to full throttle.

A display meter consisting of (4) numeric LED displays shall be used. The meter shall simultaneously display system voltage, frequency and amperage in each of the two 120V legs. The display meter shall be located in close proximity to the breaker box.

A high temperature visual indicator and audible alarm shall be provided and installed.

When properly installed, the system shall be warranted by the manufacturer for a period of not less than two years or two thousand hours, which ever should come first.

One (1)
00-05-330S

Generator/Inverter Test and Certification - Third Party

Y__N__

GENERATOR/INVERTER TEST AND CERTIFICATION

The generator/inverter shall be third party tested at the manufacturer's facility and shall conform to NFPA requirements and standards. Copies of all tests shall be provided with the delivery documentation.

One (1)
70-02-0080

Generator Control Location - Cab Dash

Y__N__

The generator enable switch shall be installed on the cab dash.

One (1)
70-05-0510

Generator Located Less Than 12 Ft from Load Center - Circuit Protection Not Req

Y__N__

One (1)
91-75-3115

Warranty - Harrison Hydraulic Generator, 6 Year

Y__N__

HARRISON HYDRAULIC GENERATOR WARRANTY

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The Harrison hydraulic generator shall have a 6 year / 1000 hour limited warranty from the manufacturer.

One (1)
70-05-0400

Load Center - Up To Twenty Circuits

Y__N__

BREAKER BOX

A twenty (20) place Square D brand, or approved equal, gray colored circuit breaker box shall be provided and installed in the front upper left hand side compartment. Manual reset circuit breakers, matching the rated output of each specific outlet or device shall be provided. All power supply assembly conductors, including neutral and grounding conductors from the line voltage power source to the circuit breaker box shall have an equivalent amperage rating and shall be sized to carry not less than 115 percent of the amperage of the nameplate current rating of the power source. Power supply conductors shall be run in nonmetallic liquid tight flexible conduit or type SO/SEO cord with a WA suffix. Conduit shall have a temperature range of -67°F (-55°C) to 221°F (105°C).

Wiring from the circuit breaker box to the individual outlets and devices shall be sized in accordance with NFPA 70, *National Electrical Code* requirements. Branch circuit wiring conductors shall be run in (1) metallic or nonmetallic liquid tight flexible conduit rated for use in a temperature range of -67°F (-55°C) to 221°F (105°C) with stranded copper wire rated for wet locations and temperatures not less than 194°F (90°C) or (2) Type SOW, SOOW, SEOW, or SEOOW flexible cord, rated at 600 volts and at temperatures not less than 194°F (90°C). A power source specification label shall be permanently attached to the apparatus near the operators control panel.

The door of the breaker box shall have a side hinge.

The load center shall be located in the forward left side compartment, up high.

One (1)
70-02-0040

Generator Shall be Located on Top of Body

Y__N__

The hydraulic generator shall be located on top of the body just forward of the transverse high side compartments in the center area beneath the aerial boom

Two (2)
70-05-1100

Receptacle - Weatherproof, 120V Twist-Lock (Each)

Y__N__

RECEPTACLE(S)

Two (2) 120 volt 3-wire twist lock receptacle(s) shall be provided and installed in weatherproof boxes with spring loaded covers.

Location of each 120V receptacle shall be: located at the pre-construction conference

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Two (2) **NEMA Rating - L5-15R (15 Amp) Twist-Lock, Single** Y__N__
70-05-2520

NEMA Rating: L5-15R (15 Amp) Twist-Lock, Single.

Two (2) **Receptacle Cover - Flip Lid, Aluminum, Single (Weatherproof) (Ea)** Y__N__
70-05-2700

Two (2) aluminum flip lid single receptacle cover(s) shall be installed.

Two (2) **Breaker - 15 Amp, No Ground Fault Interrupter (Ea)** Y__N__
70-05-2810

Two (2) 15 amp breaker(s) shall be installed. It shall not have a ground fault interrupter.

One (1) **Receptacle - 120V, 20 Amp for Cab Interior, for Auto Transfer Relay (Ea)** Y__N__
70-05-1930

120 VOLT RECEPTACLE(S) IN CAB INTERIOR FOR AUTO TRANSFER RELAY

One (1) 120-volt, 20 amp, 3-wire receptacle(s) shall be provided in the cab interior in accordance with NFPA guidelines. A brushed stainless steel cover plate shall be provided to protect the receptacle. When the generator is shut down, the load is automatically returned to the shoreline. The receptacle shall be labeled accordingly.

The receptacle(s) shall be located: _____

One (1) **NEMA Rating - 5-20R (20 Amp) Non-Twist-Lock, Single** Y__N__
70-05-2530

NEMA Rating: 5-20R (20 Amp) Non-Twist-Lock, Single.

One (1) **Receptacle Cover - Stainless Steel Wallplate (Interior Use Only) (Ea)** Y__N__
70-05-2720

One (1) stainless steel wallplate(s) shall be installed.

One (1) **Breaker - 20 Amp, No Ground Fault Interrupter (Ea)** Y__N__
70-05-2820

One (1) 20 amp breaker(s) shall be installed. It shall not have a ground fault interrupter.

One (1) **Auto Transfer Switch - Kussmaul #091-134** Y__N__
70-05-2910

KUSSMAUL AUTO TRANSFER SWITCH

A Kussmaul 091-134 Auto Interlock II switch shall be provided and installed to allow the receptacle to be fed from shorepower through the Auto Eject when the generator is not in use.

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Two (2) 70-05-31L0	<u>Cord Reel - Hannay ECR 1618-17-18, 4-Conductor (Capacity: 200 ft of 10/4) (Ea)</u>	Y__N__
	<u>CORD REEL(S)</u> Two (2) Hannay Model ECR1618-17-18 power rewind cord reel(s) for live electric cable shall be provided. The reel(s) shall be 12 volt electric rewind and be equipped with an electrical collector ring with a minimum #10 gauge, 4-conductor wiring. Capacity of each reel shall be a minimum of 200 feet 10/4 gauge electric cable.	
Two (2) 70-05-3310	<u>Cord Reel Motor Speed - 60 Seconds to Rewind 100 Ft.</u>	Y__N__
	The AN250 motor shall take 60 seconds to rewind 100 feet.	
Two (2) 70-05-332C	<u>Cord Reel Location - on the Top of the Body</u>	Y__N__
	The cord reel shall be located on top of the body. The cord reel shall be located: In Between the platform access ladders facing outwards (1) one each side	
Two (2) 70-05-4500	<u>10/4 Cord Reel Cable - Per 200 foot length</u>	Y__N__
	<u>CORD REEL CABLE(S)</u> Two (2) 200 foot length(s) of 10/4 type SO electric cable shall be provided and installed on the cord reel.	
Two (2) 70-05-45CY	<u>Cord Cable Color - Yellow</u>	Y__N__
	The color of the cord cable shall be yellow.	
Two (2) 70-05-3400	<u>Cord Roller Assembly for Option 70-05-31** (On Reel)</u>	Y__N__
	<u>HOSE ROLLER ASSEMBLY</u> Cable reel shall be equipped with a captive roller assembly mounted directly on reel frame. It shall be supplied by Hannay and have a 4-way roller assembly with stainless steel rollers mounted in a stamped steel housing.	
Two (2) 70-05-5100	<u>Cable Stop</u>	Y__N__
	<u>CABLE STOP</u>	

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A molded plastic spherical type stop shall be provided near the end of the cable. It shall prevent damage to the electrical plug or connection when the reel is rewound. Stop shall be drilled for the correct cable size. It shall be a two piece design that clamps over the cable by tightening two bolts. Bolts shall be recessed into the ball to keep them from damaging the roller assembly when it is fully retracted.

Two (2)
70-05-5110

Twist-Lock Female Plug on Cord Reel Cable (Ea)

Y__N__

TWIST-LOCK FEMALE PLUG(S) ON CORD REEL CABLE

Two (2) Hubbell model HBL2313SW 120V/20A heavy duty twist-lock female plug(s) with watertight safety-shroud and Insulgrip® connector body shall be provided. The plug(s) shall be installed on the working end of the cord reel cable(s).

Two (2)
70-05-5550

Junction Box - Akron, 2Load, (2) L5-20R/(2) 5-20R, Hardwr to Reel, w/Mtg Bx (Ea)

Y__N__

ELECTRICAL JUNCTION BOX(ES)

Two (2) Akron Brass 4-receptacle junction box(es) shall be provided for distribution of electrical power on the fire ground. Each box shall be constructed of aluminum and shall be completely powder coated gray with gray hinged protective receptacle covers and the full length carry handle. Internally lighted faceplates shall provide sufficient light to make connections and alert the crew that the box is in "power-on" status. Each junction box shall have dimensions of 9.25" long x 5.5" wide x 8.5" high. Each box shall be wired with 10 gauge/4 conductor cable so as to allow two 120 volt feeds from the truck's load center. (One L5-20R and one 5-20R on each circuit.) Each box shall be permanently wired to the cord reel.

For each total of four single receptacles shall be provided; two (2) NEMA L5-20R twist-lock and two (2) 5-20R household, straight blade. Each receptacle shall be rated for 20 amps at 125 Volts.

A mounting box, with brushed stainless finish, shall be provided for each junction box.

Two (2)
70-05-5588

Junction Box Mount Shall be Located at Time of Order

Y__N__

The junction box mount shall be located at time of order.

Two (2)
70-05-5591

Junction Box Mount Shall be Placed Horizontally

Y__N__

The junction box mount shall be placed horizontally.

One (1)

Cab 12V Frt Brow Mt Light - HiViz #FT-B-72-B, Combo, Black (Ea)

Y__N__

(Proposal)

02/04/19

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71-0V-A71B

CAB 12V FRONT BROW MOUNT LIGHT(S)

One (1) FireTech HiViz LED combination pattern model FT-B-72-B, 72.69" brow light(s) shall be mounted to the cab front brow. The light head shall have 57 LED and shall provide 30,096 raw lumen/21,067 effective lumens and draw 23.75 amps total. A combination spot, scene and flood pattern shall be provided. It shall operate at 12 volts DC.

The light head and mounting bracket shall be black.

One (1)
71-1Z-0009

Cab Front Brow Mount Location - Center

Y__N__

The mount shall be on the center of the cab front brow.

One (1)
71-Y0-0010

12V Light Switched at Cab Dash (Ea)

Y__N__

One (1) 12 volt light(s) shall be switched at the cab dash.

Two (2)
71-4F-W70C

Cab 12V Surface Mt Light - FRC SPECTRA 900 Q70 w/ SPA900 Mt, Chrome (Ea)

Y__N__

CAB 12V SURFACE MOUNT LIGHT(S)

Two (2) Fire Research Spectra 900 LED Scene Light model SPA900-Q70 surface mount light(s) shall be installed on the cab side(s). The light shall be mounted with four (4) screws to a flat surface.

The light head shall have twenty-four (24) ultra-bright white LEDs. It shall operate at 12 volts DC, draw 13.8/6.9 amps, and generate 7,000 lumens of light.

The bezel shall be chrome.

Two (2)
71-5Z-0010

Cab Surface Mt Light Location - Between Frt Cab Door & Crew Cab Side Window

Y__N__

The cab surface mounted lights(s) shall be located between the front cab door and the crew cab side window.

Two (2)
71-Y0-0010

12V Light Switched at Cab Dash (Ea)

Y__N__

Two (2) 12 volt light(s) shall be switched at the cab dash.

Two (2)
71-Y0-0410

Light Shall Not Activate with Respective Cab Door

Y__N__

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The light shall not activate when a cab door on that side opens.

Two (2)
71-8W-AP2B

Cab 12V Pedestal Mt Light - Whelen PFH2PB w/ PBAPEDD, Black (Ea)

Y__N__

CAB 12V PEDESTAL MOUNT LIGHT(S)

Two (2) Whelen Pioneer Plus™ LED PFH2PB dual panel flood light(s) shall be installed on the cab roof using the top mount fixed pedestal mount, PBAPEDD. It shall operate at 12 volts DC, draw 13 amps, and generate 17,750 lumens of light.

The light head shall be black and mounting bracket shall be chrome.

Two (2)
71-9Z-0010

Cab Pedestal Mt Light Location(s) - As Specified

Y__N__

The cab pedestal light(s) shall be located as follows: **Cab roof rearmost outboard corners**

Two (2)
71-Y0-0010

12V Light Switched at Cab Dash (Ea)

Y__N__

Two (2) 12 volt light(s) shall be switched at the cab dash.

Two (2)
71-GF-W70C

Body Side 12V Surface Mt Light - FRC SPECTRA 900 Q70 w/ SPA900 Mt, Chrome (Ea)

Y__N__

BODY SIDE 12V SURFACE MOUNT LIGHT(S)

Two (2) Fire Research Spectra 900 LED Scene Light model SPA900-Q70 surface mount light(s) shall be installed on the body side(s). The light shall be mounted with four (4) screws to a flat surface.

The light head shall have twenty-four (24) ultra-bright white LEDs. It shall operate at 12 volts DC, draw 13.8/6.9 amps, and generate 7,000 lumens of light.

The bezel shall be chrome.

If mounted on a hose bed riser, a mounting box shall be provided to protect the wiring. It shall be mounted on the exterior of the riser, painted to match the riser finish.

If mounted on the side of a roof top compartment, a box shall be provided on the interior to protect the wiring. It shall have a finish to match that of the roof top compartment interior.

Two (2)
71-HZ-0030

Body Side Surface Mt Light Location - As Specified

Y__N__

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The body side surface mounted lights shall be located as follows:**The body surface mounted lights shall be located between the leading edge of the body and the first tire of the rear tandem axle on the fender.**

Two (2) **12V Light Switched at Cab Dash (Ea)** Y__N__
71-Y0-0010

Two (2) 12 volt light(s) shall be switched at the cab dash.

Two (2) **Body Rear 12V Surface Mt Light - Whelen #M6ZC, w 8-32 Deg Optics,6x4, LED (Ea)** Y__N__
71-KW-A6ZD

BODY REAR 12V SURFACE MOUNT LIGHT(S)

Two (2) Whelen model M6ZC, 12 volts, 12 diode LED, 6.75" x 4.3125" surface mount light head(s) with 8 to 32 degree optics shall be installed on the body rear. Each light shall have a chrome plated flange.

Two (2) **Body Rear Surface Mt Light Location - Left & Right Sides** Y__N__
71-LZ-0040

The surface mounted lights shall be located as high as possible on the left side and the right side on the rear of the body. Other equipment and light selections may affect placement.

One (1) **12V Light Switched at Cab Dash (Ea)** Y__N__
71-Y0-0010

One (1) 12 volt light(s) shall be switched at the cab dash.

Two (2) **Body 120V Pedestal Mt Light - Whelen PFP2APDB, Black (Ea)** Y__N__
71-QW-BP2B

BODY 120V PEDESTAL MOUNT LIGHT(S)

Two (2) Whelen Pioneer Plus™ LED PFP2APDB dual panel flood light top mount fixed pedestal light(s) shall be installed on the body roof. It shall operate at 120 volts AC, draw 1.2 amps, and generate 15,000 lumens of light.

The light head and mounting bracket shall be black.

Two (2) **Body Pedestal Mt Light Location - As Specified** Y__N__
71-QZ-0010

The pedestal lights shall be located on the body on top of the rear most high side body compartment, one (1) each side in rear outboard corners

Two (2) **120V Light Switched at Breaker (Ea)** Y__N__
71-Y0-0105

Two (2) 120 volt light(s) shall be switched by the circuit breaker only.

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One (1)
89-99-0030

NFPA Required Equipment - Aerial

Y__N__

NFPA REQUIRED EQUIPMENT

NFPA requires that the purchasing authority supply a detailed list of furnished equipment that identifies who will be providing that equipment. The list shall be provided at the time of bid submittal to the manufacturer.

One (1)
90-00-014A

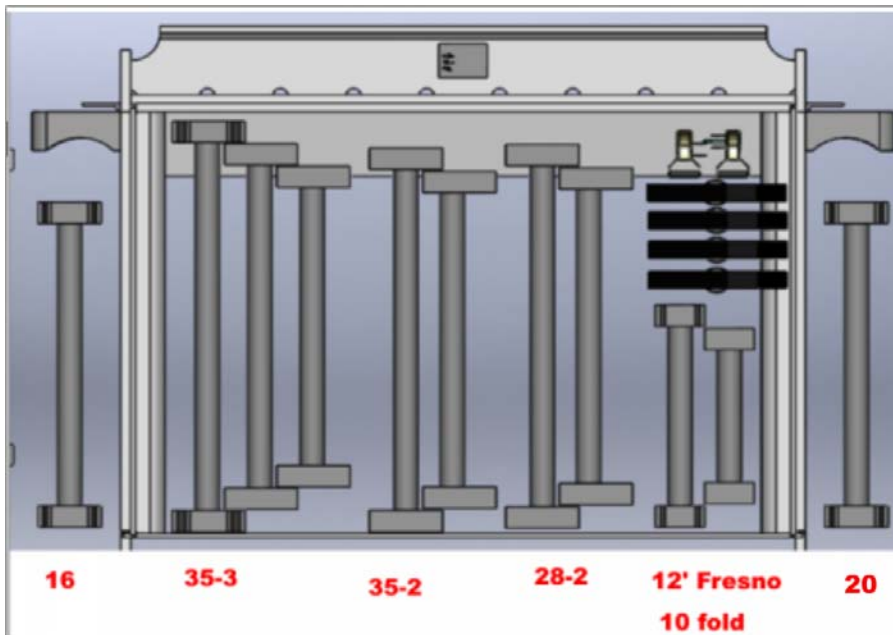
Ground Ladders - Aerialscope (SPCL)

Y__N__

GROUND LADDERS

Ladders shall be provided in full compliance with NFPA 1901 requirements for aerial trucks. Ladders shall be individually mounted under the open equipment area inside of the torque box and properly labeled. Ladders shall be provided as follows:

- 1 -35' extension (2 section) #1200A
- 1 -35' extension (3 section) #1225a
- 1-28' extension #1200a
- 1-16' roof #875a
- 1-20' roof #875a
- 1-12' fresno extension with safety shoes
- 1-10' folding attic #585A
- 4-pike pole tubes for 2-8' and 2-12' pike poles



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One (1)
90-00-0195

Additional Non-Standard Ladders Required

Y__N__

NON-STANDARD LADDERS

The following ladders shall be provided:

One (1)
90-00-94C6

Ladder - Step, Little Giant Defender M17, Aluminum (Ea)

Y__N__

LITTLE GIANT LADDER SYSTEM(S)

One (1) Little Giant Defender M17, aluminum ladder system(s) shall be provided.

Little Giant ladder shall be located at _____

One (1)
90-00-9915

Little Giant / Backboard Storage box

Y__N__

LITTLE GIANT - BACKBOARD STORAGE BOX

An aluminum tread plate storage compartment that is forward of the upper transverse compartments shall be provided to store the little giant ladder on the body. Also within this compartment shall be room to store a backboard. Ladder and backboard shall be removable from the right side of the apparatus. Compartment shall have a horizontally hinged lift up door with a mechanism

One (1)
90-01-3550

Ladder Bays - Additional for (2) Ladders

Y__N__

LADDER BAYS

Two (2) additional ladders bays shall be provided, one on each side of the torque box. The bay on the right shall be capable of holding up to a 20 foot ladder, the bay on the left shall be capable of holding up to a 16 foot ladder. Ladders stored in the side ladder bays shall be accessed through the main ladder compartment doors.

One (1)
90-01-9700

Ladder Compartment Doors - Smooth Aluminum (Aerialscope)

Y__N__

LADDER COMPARTMENT DOORS

Smooth aluminum double doors shall be provided at the rear of the ground ladder compartment. The doors shall be of double panel construction and shall be held open with a door holder and shut with a "D" ring with 2-point rod locks. The primary door shall lap the secondary door and the compartment lights shall be activated when the

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primary door opens. The door switch shall be integrated with the door ajar hazard warning system.

One (1)
90-01-9930

Ladder Bay Lights - (2) Triton #TLPC, LED

Y__N__

LADDER BAY LIGHTS

The ladder bay opening shall be illuminated by two (2) LED lights from Triton, model TLPC. Each weatherproof light shall have 15 LED bulbs and a lens that measures 1.125" in diameter. The lights shall be activated by opening the ladder bay doors. The door switch shall be integrated into the door ajar hazard warning system.

Two (2)
90-05-4600

Pike Pole - 8' Fire Hooks APH-8 with Solid Fiberglass Handle (Ea)

Y__N__

PIKE POLE(S)

Two (2) 8 ft. Fire Hooks Unlimited APH-8 pike pole(s) shall be provided. The handles shall be solid fiberglass with stainless steel wear sleeves. There shall be a gas shutoff on the end of the pole opposite the hook.

Two (2)
90-05-4800

Pike Pole - 12' Fire Hooks APH-12 with Solid Fiberglass Handle (Ea)

Y__N__

PIKE POLE(S)

Two (2) 12 ft. Fire Hooks Unlimited APH-12 pike pole(s) shall be provided. The handles shall be solid fiberglass with stainless steel wear sleeves. There shall be a gas shutoff on the end of the pole opposite the hook.

Four (4)
90-05-6250

Pike Pole Mounting - PVC Tube (Ea.)

Y__N__

PVC PIKE POLE MOUNT(S)

Four (4) PVC tube(s) shall be mounted to facilitate storage of pike poles.

The mounting tube(s) shall be located: in ladder bay

One (1)
90-05-625X

S/S Pike Tubes on Forward Body

Y__N__

PIKE TUBES ON FORWARD BODY

There shall be Two (2) stainless Steel mill finish pike poles tube sprovided on tiop of the forward body module beneath the turntable. They shall be set to hold (2) FHU RH-6 roof hooks. One hook shall deploy to each side.

One (1)
90-21-0400

Wheel Chocks - (4) Zico SAC-44-E Folding Aluminum (Aerial)

Y__N__

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ZICO FOLDING ALUMINUM WHEEL CHOCKS

Four (4) Zico folding aluminum wheel chocks Model SAC-44-E shall be furnished and shipped loose by the apparatus manufacturer. Four (4) SQCH-44-H holders shall be installed by the manufacturer, one in front of and one behind the rear wheel(s), on both sides of the apparatus.

One (1)
90-25-0210

Spare Hardware Kit - Apparatus

Y___N___

SPARE HARDWARE KIT

An assortment of nuts, bolts, capscrews, washers and other hardware used in vehicle construction shall be provided.

One (1)
90-25-0220

Spare Hardware Kit - Aerial Device

Y___N___

SPARE HARDWARE KIT

An assortment of nuts, bolts, capscrews, washers and other hardware used the in construction of the aerial device shall be provided.

One (1)
91-00-1000

Paint - Preparation, Processes & Finish

Y___N___

PROCESSES

The following processes shall be employed in the finishing of the apparatus:

Manual Surface preparation – All metal surfaces on all custom body and cabs shall be thoroughly cleaned and prepared for paint. Surfaces that shall not be painted include all chrome plated, polished stainless steel and bright aluminum tread plate. As required, weld seams and other areas shall be caulked to prevent water leaks or for appearance reasons. Each imperfection on the exterior metal surface shall be removed or filled and then sanded for a smooth flat appearance.

Chemical Cleaning and Treatment – All painted surfaces shall be washed with a chemical degreaser, cleaner and surface conditioner to allow for proper adherence of primer coat. Then they shall be washed with a neutralizer product. All products used are approved by paint supplier and applied under strict process control to meet performance requirements on corrosion prevention and chip resistance.

Primer/ Surface Coating for Top Coat application – a minimum of 2 coats of Epoxy based primer shall be applied to surfaces inside and outside of cabs and bodies and all other parts of apparatus that shall receive a Top color coat to achieve required corrosion protection. After that a minimum of 2 coats of sealer shall be applied over the primer surface. The overall thickness of the primer/sealer coat shall be between 3 to 8 mils wet. Once dried and cured all surfaces that shall receive a top coat shall be hand sanded to

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achieve a flat and smooth surface to meet gloss and other paint quality standards. All products used are approved by paint supplier and applied under strict process control to meet performance and appearance requirements according with Seagrave's Paint Quality Standard. The underside of the cab and body shall be finished with one coat of epoxy primer specifically designed for this application to prevent corrosion and provide chip resistance to typical paved road conditions.

Top Coat Application – Each Top Coat final color on the apparatus is applied using a two stage paint process. The unit shall be thoroughly hand cleaned to eliminate dust residues and to detect any imperfection in the surfaces to be painted. A fast drying 3.5 VOC polyurethane basecoat color shall be applied using a cross coat application technique. Additional coats may be applied as required until the coat thickness reaches 2.0 to 6.0 mils wet and a full hide appearance. If a second color is required, proper masking shall be applied to the unit and the basecoat application process shall be repeated for the second color. A slow drying low VOC High Build clear coat shall be applied using a cross coat application technique until a minimum of 5.0 mils wet is achieved. The unit is then properly heated to assure flash and cure of the paint before leaving the paint booth. All products used are approved by paint supplier and applied under strict process control to meet performance and appearance requirements according to Seagrave's Paint Quality Standard.

Each batch of color topcoat shall be tested for precise color match following paint supplier color matching process. A visual color match shall be checked prior to paint using customer approved paint chips.

The cab and body shall be primed and finish painted prior to installation on the chassis to ensure paint coverage in all areas including the difficult to reach places. The exterior and interior of the cab shall be finish painted before the doors are installed or any assembly is started to ensure a finish painted surface beneath all trim items.

Primer/ Surface Coating for Single Coat application – a minimum of 2 coats of Epoxy based primer shall be applied to all surfaces of the apparatus that shall receive a single color coat to achieve required corrosion protection. This is a wet coat process and it shall achieve a 3.0 to 8.0 mills wet thickness and complete coverage of all bare metal. All products used are approved by paint supplier and applied under strict process control to meet performance and appearance requirements according with Seagrave's Paint Quality Standard.

Single Coat Application – A minimum of 2 coats of direct gloss paint shall be applied over all primed surface to achieve corrosion protection and appearance in accordance with Seagrave's Paint Quality Standard. This application shall be used for Gloss Black, Job Color and Color finishes in parts of the apparatus such as frame rails, outriggers, ladders and other aerial devices, suspension and other chassis parts, etc. as defined in the sales order.

Zolatone Coat Application – All areas to receive a Zolatone coat shall be primed following the primer/surface coating for top coat application. A high pressure coat of

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Zolatone paint shall be applied in a cross pattern technique to achieve smooth finished surface. A second low pressure coat of Zolatone paint shall be applied in a single pattern to achieve a textured appearance.

Zolatone Clear Coat Application – Starting with a completed and dry Zolatone coat application 2 to 3 coats of Zolatone clear coat shall be applied until a thickness of 5.0 mills wet is achieved.

PAINTERS

All painters shall be paint supplier certified. They shall be re-certified periodically in order to keep up to current standards and procedures required by the coatings manufacturer. This certification is performed independently by the paint supplier.

FACILITY

The finishing facility shall be certified independently by the paint supplier by meeting or exceeding its extensive and stringent requirements. The paint facility shall be audited quarterly by the paint supplier to ensure proper equipment, procedures and safety regulations are being used and adhered to in addition to the controls implemented by Seagrave to assure paint quality requirements are met in every job.

QUALITY STANDARDS

The finish quality and appearance shall be in accordance with the Seagrave's Paint Quality Standards for dirt, gloss, reflectivity, clarity and depth of image. The standard is available to the customer at any time upon request.

One (1)
91-00-4400

Paint - Frame & Undercarriage Finish, Gloss Black

Y___N___

FRAME & UNDERCARRIAGE FINISH

The following items shall have an additional coat of gloss black paint applied over the primed surface as supplied by the component manufacturer. Single coat application process shall be used to apply Gloss Black direct gloss paint on the parts identified below:

- Chassis frame rails, cross members.
- Front bumper extension.
- Front & rear axles and suspension.
- Battery boxes.
- Fuel tank and fill tube.
- Air reservoir tanks.
- Pump module mounting brackets.
- Body mounting brackets.

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Steering gear box and steering link arm.
Drive shafts.
Front suction, from pump house to front swivel. (when furnished).

The following items will be furnished with the finish as provided by their respective manufacturer.

Engine, transmission and accessories.
Exhaust system.
Retarder (when furnished).
PTO & hydraulic pump (when furnished).
Cab lift cylinders & hydraulic pump.
Shock absorbers.
Fuel filter.
Air drier and air cleaner.
Electrical wiring and loom.
Air brake lines, valves and mounting brackets.

One (1)
91-00-4490

Additional Frame Paint

Y__N__

ADDITIONAL FRAME RAIL PAINT

Both the main frame rails and the innerliner frame rails to be painted with the additional coat of gloss black paint prior to being assembled together.

One (1)
91-00-5000

Paint - Cab Interior, Gray Zolatone Paint

Y__N__

PAINT INSIDE OF CAB

The inside of the cab shall be provided with gray Zolatone paint following the Zolatone Coat application process.

The following components shall be painted:
Exposed interior surfaces of the cab structure
Exposed interior surfaces of the driver/officer/crew doors
All interior "Metal" access/wire covers of the cab
Head bumper brackets
Miscellaneous brackets, if present: camera mounts, non-recessed radios, charger covers.

One (1)
91-00-5400

Paint - Cab Interior, Clear Coat (Full Tilt Cabs)

Y__N__

PAINT INSIDE OF CAB

The inside of the full tilt cab shall be clear coated following the Zolatone Clear Coat application process in the same components that received a Zolatone application.

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One (1)
91-00-5900

Paint - Cab Exterior, One Color

Y__N__

SINGLE COLOR CAB PAINT

The cab shall be painted one color. The paint shall follow the Top Coat application process for a single color.

Cab exterior paint number shall be: _____

Note: Paint prices do not allow for metallic or pearlescent paint colors.

One (1)
91-00-A110

Cab Decorative Trim Molding - 5G Radius

Y__N__

A decorative molding shall be provided around the cab. The decorative molding shall be horizontal across the front of the cab above the wipers and taper down with a radius even with the outside corners of the grille.

One (1)
91-02-1000

Paint - Body Exterior, Single Color

Y__N__

BODY PAINT, SINGLE COLOR

The body of the apparatus shall be painted to match the primary cab color. The paint shall follow the Top Coat application process for a single color.

Body exterior paint number shall be #_____

One (1)
91-02-3200

Paint - Aerialscope Forward Body Compartments

Y__N__

FORWARD BODY COMPARTMENT PAINT

The forward body compartment exterior shall be painted job color following the Top Coat application process for a single color. The interior of the compartments shall be painted gray Zolatone following the Zolatone Coat application process.

One (1)
91-02-4500

Standard Finishes for Small Parts

Y__N__

STANDARD FINISHES FOR SMALL PARTS, 2010 CUSTOM CAB

Definition: Mill Finish: as is from the manufacturer; no finish applied. It may have scratches, but it shall be shiny as a result of being cleaned through a deoxidization process. Parts with mill finish may have been cleaned in a dipping process to deoxidize the part.

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Definition: Etchfinish: The part(s) shall be cleaned and etched to a uniform bright finish.

CHASSIS

Chassis bracket: Painted same as cab exterior

CAB

Cab compartments, including cab side access compartments:

Exterior Finish: Line-X.

Interior Finish: Mill finish (Upgrade available to DA or Paint)

Cab compartment shelves:

DA (Just the outside edge of the shelf shall be DA'd. All other surfaces shall be mill finish.)

CAB – BODY

Bumper / running board hose wells:

Flange: DA

Interior & exterior walls: Mill finish

If the hose well sticks above the gravel pan: DA the edges

Inner liners: Mill finish

All steps, including pull downs & those on access ladders: DA outsides

Hat Section Bracket for Compartment, Ground or Step Lights: Mill finish. If compartment is painted, then the hat section brackets shall be painted.

Trim Rings: Mill finish

Patch plates: Brushed S/S (Upgrade available to polished or ATP) STD is No patch plates

Label backing plates: DA

Marker light guards: As purchased

Switch guards – S/S: Brushed

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OPERATOR STAND AND PLUMBING

Plumbing: Pump, intake & discharge valves, drains, all hard piping*, including pipes protruding from the pump panel: Mill finish (Upgrade available to job color)

*1. All exposed pipe (not including cut threads) at the rear of the truck or welded pre-connect assemblies at the front of the body shall be painted job color.

*2. All pipe holding brackets made of black steel shall be painted black, or job color if the whole surrounding area is painted job color.

Pump enclosure interior: Mill finish (Upgrade available to job color)

Open bin interior surfaces: Mill finish (or ATP if that is the original surface). In no cases, paint unless “specialized” by the customer.

Crosslays –

Inside surfaces – DA

Partitions - DA

Speedlays:

With pull out tray- DA

Heat Pans: Mill finish (Upgrade available to DA or paint color of underside)

Running Board w/ Floating Trough: Frame shall be painted black.

BODY

Compartment louvers: Same color as compartment interior walls,

Compartment shelves & trays:

DA (Just the outside edge of the shelf shall be DA'd. All other surfaces shall be mill finish.

Upgrades available: Paint Zolatone or job color. All surfaces shall be painted.

Compartment shelf & tray brackets: Mill finish

Brackets to hold compartment doors open: Mill finish

Compartment door auxiliary locking brackets: Brushed

Rear aluminum compartments: Mill finish (upgrade available to paint)

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Rear aluminum compartment door interiors: ATP Exterior Door: DA Finish Interior
Smooth Exterior Door: Etchfinish

Interior

Breaker box mounting brackets: Mill finish

Pegboard: Mill finish (upgrade available to DA)

Hose chutes & Ladders-Thru Compartments: Mill finish (upgrade available to paint)

Partition mounting brackets: Mill finish

Hydraulic ladder rack: Etchfinish (Upgrade to paint job color)

Ground ladder brackets: Etchfinish

Ground ladder or suction racking (fixtures, slides) within compartments: Mill finish

Pike poles tubes - Aluminum: D/A (Upgrade available to paint)

Pike poles tubes – S/S: D/A (Upgrade available to paint)

Wheel chock holders: Mill finish

AERIAL COMPONENTS

Turntable floor grating: DA sides

Turntable underside (except cut away area): Painted

Pedestal cover brackets: DA

Pedestal cover interior: DA

Pedestal compartment door interiors: Mill finish

Electrical compartment panels:

Upper connection panel – Mill finish

Lower ECM panel – Mill finish

Aerialscope forward body step: DA

Grating on top of body: DA sides

Jack control boxes:

Interior – Mill finish

Door interiors – Mill finish

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Cab avoidance switch brackets: Mill finish

Outrigger pad holder brackets: Mill finish

Outrigger pads: Mill finish

Downrigger watt pin & watt pin holder: DA

Piping – Swivel to Waterway: Mill finish

Waterway: Mill finish

Waterway brackets : Mill finish

Monitor: Mill finish

Brass elbow on cord reel on aerial: Mill finish

Cat Track holders/ boxes: Mill finish

Aerialscope Boom:

Base section and steel base collars – Painted boom color

Aluminum extendable sections and collars - DA

Aerialscope & Apollo Basket:

Control box – DA

Under basket L brackets – Mill finish

Under basket L bracket covers – Mill finish

Under basket L bracket piping – Mill finish

Under basket heat pans – Mill finish

Under basket waterway piping- Mill finish

Basket assembly parts- Etchfinish

Mounts/ brackets to hold ladders to aerial or boom: Painted same color as ladder

Mounts/brackets to hold pike poles to aerial or boom: painted same color as ladder

Mounts/brackets to hold stokes basket to ladder: painted same color as ladder
(ATP box to hold basket shall be mill finish)

One (1)
91-02-4550

Acorn Nuts - Standard Operating Procedure for Use

Y__N__

ACORN NUTS

(Proposal)

Lexington Fire Department

Acorn nuts shall be installed on all exposed screws and bolts in areas where personal injury may result and/or damage to equipment may occur. For further details, please refer to the enclosed standards document.

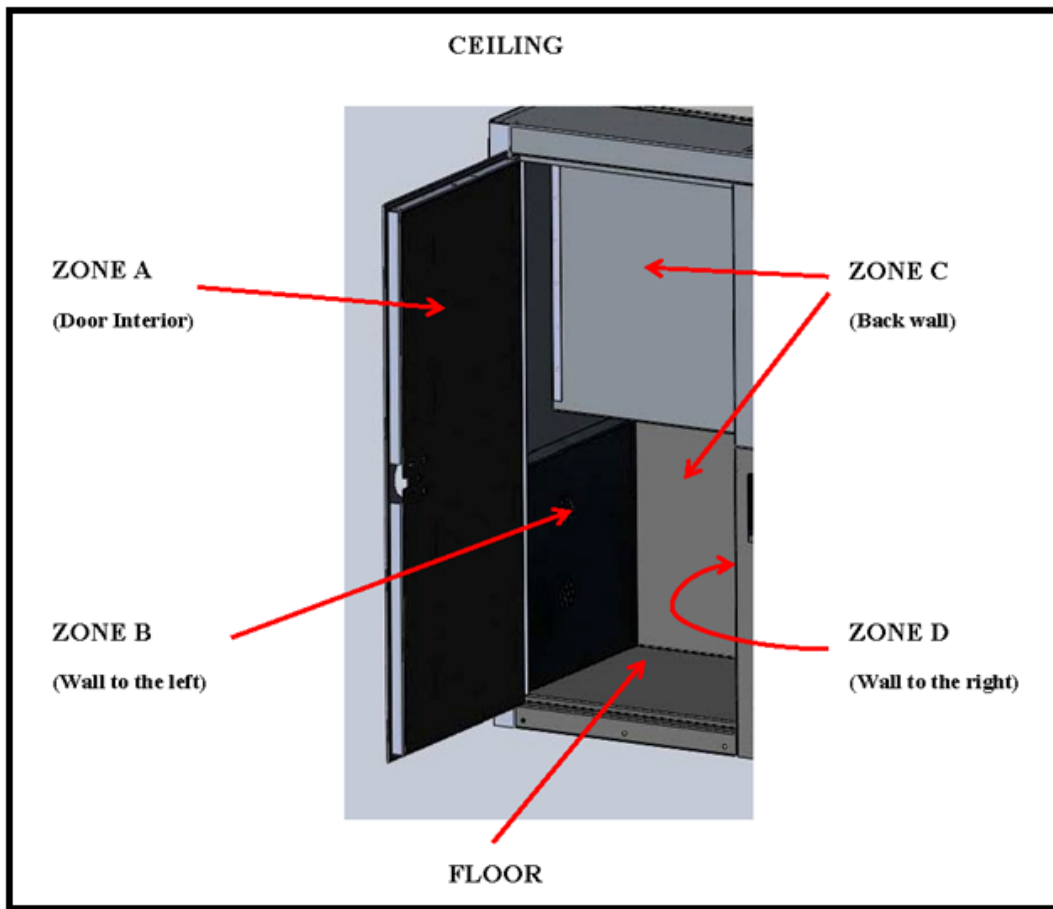
One (1)
91-02-4590

Compartment Locations - Seagrave Definition for Component Locations

Y__N__

COMPARTMENT LOCATIONS - SEAGRAVE DEFINITION FOR COMPONENT LOCATIONS

All definitions are based on facing the opening to the compartment.
These definitions apply to all compartments.



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One (1) **Paint - Stabilizers & Superstructure, Job Color** Y__N__
91-02-5110

STABILIZER & SUPERSTRUCTURE PAINT

All six (6) stabilizers and the superstructure on the apparatus shall be painted job color. Single Coat application process shall be used to apply the color selected in this order using direct gloss paint on identified parts.

Paint # _____

One (1) **Paint - Turntable & Boom, Job Color White** Y__N__
91-02-6200

TURNTABLE & BOOM PAINT

The turntable and the boom shall be painted job color white. Single Coat application process shall be used to apply the color selected in this order using direct gloss paint on identified parts.

Paint # _____

One (1) **Paint - Boom Support, Job Color** Y__N__
91-02-6210

BOOM SUPPORT PAINT

The boom support shall be painted job color. Single Coat application process shall be used to apply the color selected in this order using direct gloss paint on identified parts.

Paint # _____

One (1) **Paint - Torque Box, Matte Black** Y__N__
91-02-6220

TORQUE BOX PAINT

The interior and exterior of the torque box shall be painted matte black following the Primer/Surface Coating Process for Single Coat Application.

One (1) **Paint - Hydraulic Tank, Gloss Black** Y__N__
91-02-6260

HYDRAULIC TANK PAINT

The hydraulic tank shall be painted gloss black. Single Coat application process shall be used to apply the color selected in this order using direct gloss paint.

One (1) **Undercoating - PPG Corashield (for Aerial)** Y__N__
91-02-9030

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UNDERCOATING

The apparatus shall be properly undercoated with PPG Corashield.

The underside of the vehicle, including body and cab, shall receive a spray-on application of black Corashield which is a heavy duty, pliable, waterborne, zero-VOC product with excellent resistance to chipping, cracking and corrosion. It shall also have excellent soundproofing qualities. The material shall be sag resistant and applied to a mil thickness of 5 to 10 with a cure time of 72 hours.

The material shall be applied in the following areas:

- Body and cab, fender wheel well areas.
- Underside of body compartments and cab floor structure.
- Underside of body sub-frame.
- Exterior of body compartment rear walls, up to top of water tank.

One (1)
91-03-0600

6" Reflective Striping

Y__N__

REFLECTIVE STRIPING

A 6" reflective stripe shall be provided around the perimeter of the vehicle. At least 50 percent of the cab and body sides, at least 50 percent of the rear body width and at least 25 percent of the width of the cab front shall have reflective material affixed to it per NFPA standards.

Exact location and presentation on the apparatus where the striping shall be installed: _____

One (1)
91-03-290A

Reflective Striping Color shall be BLUE

Y__N__

The reflective striping color shall be **BLUE**

One (1)
91-03-3000

1" Border - Each Side of Reflective Stripe

Y__N__

1" REFLECTIVE STRIPING

A one inch border shall be provided just above and below the large reflective apparatus striping.

One (1)
91-03-290A

Reflective Striping Color shall be BLUE

Y__N__

The reflective striping color shall be **BLUE**

One (1)
91-03-3820

Chevron Striping - 3M™ Diamond Grade™, Front Bumper

Y__N__

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CHEVRON STRIPING

The front bumper shall be covered with 6" wide 3M™ Diamond Grade™ Reflective striping in an alternating chevron pattern with the stripes running at a 45 degree downward angle from the top center of the bumper.

One (1) **Chevron Color - Scotchlite™ Red 983-72NL & Scotchlite™ Fluor Yellow-Green 983-23** Y__N__

91-03-4830

The chevron striping shall be alternating Scotchlite™ Red 983-72NL and Scotchlite™ Fluorescent Yellow-Green 983-23.

One (1) **Chevron Striping - 3M™ Diamond, All Rear Body, w/Hng Rear Compt Door, Aerialsc** Y__N__

91-03-472D

CHEVRON STRIPING

The entire rear face of the body, including the rear compartment hinged door, shall be covered with 6" wide 3M™ Diamond™ Grade reflective striping in an alternating chevron pattern with the stripes running at a 45 degree downward angle from the top center of the vehicle.

One (1) **Chevron Color - Scotchlite™ Red 983-72NL & Scotchlite™ Fluor Yellow-Green 983-23** Y__N__

91-03-4830

The chevron striping shall be alternating Scotchlite™ Red 983-72NL and Scotchlite™ Fluorescent Yellow-Green 983-23.

Sixty (60) **Lettering - 23K Gold, Encapsulated, 3" (Ea Ltr)** Y__N__

91-04-0060

LETTERING

Sixty (60) letters in 3" encapsulated, 23k gold shall be installed on the apparatus.

Letters required, showing Upper/lower case as needed: _____

Font shall be: _____

Exact location and presentation on the apparatus where the letters are to be installed: _____

Sixty (60) **Shading/Highlighting for 2"-4" High Lettering (Ea Ltr)** Y__N__

91-04-9502

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Sixty (60) letters shall have a decorative embellishment applied. Embellishments shall include letter outlines, and / or black shadows, and / or color highlights.

Letters shall have:

☐ **Outline**

☐ **Black shadow**

☐ **Color highlight opposite shadow***

***Color of color highlight shall be: _____**

One (1)
91-04-0180

Lettering - Reflective Color, 8" (Ea Ltr)

Y__N__

LETTERING

One (1) letters in 8" reflective color shall be installed on the apparatus.

Letters required, showing Upper/lower case as needed: _____

Font shall be: _____

Exact location and presentation on the apparatus where the letters are to be installed: _____

One (1)
91-04-030W

Reflective Lettering Color - White 5000

Y__N__

The reflective lettering color shall be white 5000.

One (1)
91-04-9508

Shading/Highlighting for 8-10" High Lettering (Ea Ltr)

Y__N__

One (1) letters shall have a decorative embellishment applied. Embellishments shall include letter outlines, and / or black shadows, and / or color highlights.

Letters shall have:

☐ **Outline**

☐ **Black shadow**

☐ **Color highlight opposite shadow***

***Color of color highlight shall be: _____**

Four (4)
91-04-0220

Lettering - Reflective Color, 16" (Ea Ltr)

Y__N__

LETTERING

Four (4) letters in 16" reflective color shall be installed on the apparatus.

Letters required, showing Upper/lower case as needed: _____

Font shall be: _____

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Exact location and presentation on the apparatus where the letters are to be installed: _____

Four (4)
91-04-030W

Reflective Lettering Color - White 5000

Y__N__

The reflective lettering color shall be white 5000.

Four (4)
91-04-9512

Shading/Highlighting for 12" High Lettering (Ea Ltr)

Y__N__

Four (4) letters shall have a decorative embellishment applied. Embellishments shall include letter outlines, and / or black shadows, and / or color highlights.

Letters shall have:

☐ Outline

☐ Black shadow

☐ Color highlight opposite shadow*

*Color of color highlight shall be: _____

One (1)
91-04-9900

Apparatus Logos and Name Plaques

Y__N__

APPARATUS LOGOS AND NAME PLAQUES

Logos and name plaques shall be placed on the apparatus as identified on the attached PDF.

One (1)
91-50-012N

Seagrave Limited Warranty - 2 Years Parts & Labor, Non-Quint Aerialscope

Y__N__

MANUFACTURER'S LIMITED WARRANTY

A Seagrave limited two (2) year warranty for parts and labor shall be provided.

One (1)
91-50-020S

Seagrave Limited Warranty - Cab, Structural - 15 Years

Y__N__

CAB FIFTEEN YEAR STRUCTURAL LIMITED WARRANTY

A Seagrave cab limited fifteen (15) year structural warranty shall be provided.

One (1)
91-50-030S

Seagrave Limited Warranty - Stainless Steel Body, Structural - 15 Years

Y__N__

STAINLESS STEEL BODY FIFTEEN YEAR STRUCTURAL LIMITED WARRANTY

A Seagrave limited stainless steel body fifteen (15) year structural warranty shall be

Lexington Fire Department

provided.

One (1) **Seagrave Limited Warranty - Aerial, Structural - 20 Years** Y__N__
91-50-0400

AERIAL DEVICE TWENTY YEAR STRUCTURAL LIMITED WARRANTY

A Seagrave limited aerial twenty (20) year structural warranty shall be provided.

One (1) **Seagrave Limited Lifetime Warranty - Frame Rail & Cross Members, Structural** Y__N__
91-50-0510

CHASSIS FRAME RAIL & CROSS MEMBER STRUCTURAL LIMITED LIFETIME WARRANTY

A Seagrave limited lifetime frame rail and cross members structural warranty shall be provided.

One (1) **Seagrave Limited Warranty - Paint & Corrosion, 6 Years, Non Pro-Rated, All Model** Y__N__
91-50-0600

PAINT/CORROSION LIMITED WARRANTY

A Seagrave limited **non pro-rated paint** six (6) year warranty shall be provided.

One (1) **Weight analysis - Required if over Minimum NFPA Equipment** Y__N__
92-00-1000

WEIGHT ANALYSIS - LOOSE EQUIPMENT

It shall be the responsibility of the purchaser to specify the details of the apparatus; its required performance, including where operations at elevations above 2000 ft (610m) or on grades greater than 6 percent are required; the maximum number of fire fighters to ride within the apparatus; specific added continuous electrical loads which exceed the minimum of this standard; and any hose, ground ladders, or equipment to be carried by the apparatus that exceed the minimum requirements of this standard.

One (1) **Operation & Parts Manuals w/ Wiring Diagrams - (2) Electronic Copies (Aerial)** Y__N__
98-50-502C

ELECTRONIC OPERATOR'S & PARTS MANUAL

A binder shall be supplied that has electronic copies and paper documents as listed below.

The binder shall contain 2 duplicate electronic copies. Each electronic copy shall have:

- Operations & maintenance instructions for items on the vehicle, except all purchased

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components

- Material Safety Data Sheets.
- Electrical diagrams including charts illustrating the individual wire color, number code, and function.
- Parts manuals.
- Parts drawings and an overall vehicle layout.
- Certificates
- Warranties
- **Maintenance Manual**

Printed documents shall include:

- Operations & maintenance instructions for items on the vehicle, not including the vendor literature.
- Operations & maintenance instructions for engine.
- Certificates of independent test results.
- Warranty documents.
- Manufacturer's record of construction details and engine power curve.
- Vehicle final alignment report.
- Vendor literature provided by the manufacturer that arrives with the purchased component.

One (1) to two (2) manual electronic copies for the water pump shall be included, if there is a pump on the unit, and as provided by the pump manufacturer. Additional electronic copies and paper documents, as provided by other equipment suppliers, shall also be included.

Two (2)
98-50-503P

Operation, Maintenance Manual - Additional, OEM, Printed

Y ___ N ___

PAPER OPERATOR'S MANUAL

A binder shall be provided containing paper documents regarding operator's instructions and maintenance. The binder shall be indexed for easy access to information.

The binder shall contain:

- Operations & maintenance instructions for items on the vehicle, except all purchased components.
- Material Safety Data Sheets.
- Electrical diagrams including charts illustrating the individual wire color, number code, and function.
- Certificates
- Warranties