

Braun Northwest, Inc.

**DETAILED SPECIFICATIONS
FOR
JACKSON HOLE FIRE/EMS
JACKSON, WYOMING**

1 CHASSIS

1.01 OEM CHASSIS

- 2015 Ford F-450, 4 x 4, Super Cab, meeting all the specifications of Section 1.01.
 - Ambulance Prep. Package
 - 3 year/36,000 mile "Bumper to Bumper" warranty
 - Dual Rear Wheels
 - Provided by Braun Northwest, Inc.

1.01.01 SPECIFIC RATINGS

- Drive – 4 x 4
- G.V.W.R. – 16,500 lbs.
- Front Axle – 7,000 lbs.
- Rear Axle – 12,000 lbs.
- Wheelbase – 186"
- Cab to Axle – 84"
- Curb Weight – 11,800 lbs. Approximate
- Payload – 3,200 lbs. Approximate
- Rear Differential – 4.10 ratio, limited slip wide track rear axle
- Front Spring Capacity – 7,000 lbs.
- Rear Spring Capacity – 12,000 lbs.

1.01.02 POWER TRAIN

- Engine
 - 6.7L 4V Power Stroke V8 turbo diesel B20
 - Diesel Emission Fluid (DEF) system
 - 5 year/100,000 mile warranty
 - External oil cooler
 - Factory diesel package
 - 1,000 watt engine heater
 - Heavy duty dry type air cleaner with flow restriction indicator
- Engine Cooling System
 - Heavy duty, closed-air, free-liquid state type
 - Coolant recovery system
 - 50/50 solution Permanent type antifreeze to –40 degrees F
- Transmission
 - TorqShift 6-speed automatic overdrive transmission
 - Tow/Haul Mode with Integrated Exhaust Brake
 - External oil cooler in chassis grille area
 - Shift on the Fly

- Exhaust System
 - System complies with Federal Motor Carrier Safety Regulations, Part 393.83
 - Suspended using three (3) hangers, excluding manifold attachment
 - Discharge at right rear side of module
 - Tailpipe shall not terminate within twelve (12) inches of the vertical axis of the fuel tank filler opening.

1.01.03 STEERING

- Power assisted
- Tilt steering wheel

1.01.04 SHOCK ABSORBERS/STABILIZER BARS

- Heavy-duty shock absorbers front and rear
- OEM front and rear stabilizer bars

1.01.05 BRAKES

- Heavy duty power assisted; front and rear disc
- Front 14.53" diameter; Rear 15.35" diameter
- Four Wheel ABS

1.01.06 TIRES AND WHEELS

- Seven (7) OEM LT 225-70Rx-19.5G all-season steel belted radials
- Seven (7) OEM 19.5" steel wheels
- OEM jack and tire changing tools
- Spare tire and wheel shipped loose

1.01.07 ELECTRICAL

- Alternators – OEM Dual rated at 355 Amps total
- Batteries – OEM Dual 750 CCA
- Auto Throttle – OEM installed

1.01.08 INSTRUMENT PANEL AND CONTROLS

- Gauges
 - Tachometer
 - Coolant Temperature
 - Transmission Fluid Temperature
 - Fuel
 - Speedometer
 - Indicator lights
 - Odometer/Trip Odometer
 - Turbocharger Boost
- Controls – Cruise
- Audio – OEM AM/FM/CD
- Engine Hour Meter

1.01.09

CAB EXTERIOR

- Trim Level – XLT
- Horn – OEM dual electric
- Windows – Tinted safety glass
- Windshield wipers – Two-speed electric, washer and intermittent speed control
- Mirrors
 - Two (2) black, below eye level, manually telescoping trailer tow
 - Power, Heated glass, upper portion
 - Turn Indicators and clearance lights on outside edge
 - Lower portion convex
- Bumper – Chrome
- Tow Hooks – Two (2) Front
- Lights
 - Headlamps – Single beam jewel effect
 - Roof clearance light
 - Under hood service light
- Fuel – OEM 40 gallon tank

1.01.10

CAB INTERIOR

- Trim Level – XLT
- Seats – OEM
 - Cloth 40/20/40
 - Combination lap and shoulder harness
 - Side door armrest
- Flooring – Black Vinyl
- Climate Control – OEM
 - Heavy duty, fresh air, high capacity heater/defroster
 - Dehumidifying air conditioning system
- Airbags
 - Driver and right-front passenger front
 - Front-Seat side
 - Safety Canopy System with roll-fold side curtain airbags
- Other
 - Padded Sun Visors, Dash, and Door Panels
 - Molded cloth headliner
 - Reduced Sound Package
 - Dome light, with dual map lights
 - Auxiliary power point
 - Interior Hood Release
 - Power Door Locks & Windows
 - Adjustable Gas and Brake Pedals

1.01.11

COLORS

- Exterior – White (Z1)
- Interior – Gray

1.02 CHASSIS MODIFICATIONS

The following modifications will be made to the chassis by Braun Northwest.

- 1.02.03 SIMULATORS/VALVE STEM EXTENDERS**
Stainless steel wheel simulators shall be installed on all outer wheels, with 15” braided valve stem extenders on all four rear wheels.
- 1.02.04 EXHAUST HEAT SHIELDS**
Shall be formed from 20 ga. galvanized steel sheets with stamped reinforcements and formed edges. Access openings shall be provided for shock absorber, mounting bolts, etc. Heat shields shall be bolted to chassis frame and extend from back of cab to the frame cross member just behind the rear axle.
- 1.02.05X RUNNING BOARDS**
Custom-length running boards shall be installed on both sides of the vehicle. They shall be made of 0.125" polished aluminum grip strut. The entire assembly shall be securely mounted with stainless steel 1/4"-20 Truss head bolts.
- 1.02.09X MUD FLAPS**
Shall be installed behind each front and rear wheel.
- 1.02.10X TIRES AND WHEELS**
Six (6) pressure monitoring valve caps shall be provided and installed.
- 1.02.14X REAR SUSPENSION**
Shall be a Liquid Spring System, installed with a "kneeling" feature to activate when the rear streetside patient compartment entrance door opens. An override switch shall be installed inside the rear curbside passage door. Components shall not restrict access to the frame rail for lift. *All items removed for installation of the suspension system shall be shipped loose to the customer.*
- 1.02.35X CHASSIS KEYS**
Four (4) sets of chassis keys, with fobs, shall be provided.
- 1.02.50X CHASSIS SPECIALS**
The rear seat of the super cab shall be removed and a custom-built aluminum insert painted white with gray splatter shall be installed. The insert shall be divided into two (2) equal sections, one on the passenger side, one on the driver’s side, for mounting “*Customer Supplied*” SCBA brackets and storage of bunker gear. Design shall match prior vehicle build. All cabling to console shall be run underneath insert.
A “*Customer Supplied*” box lantern shall be installed on passenger side of insert.
- 1.02.55X MISCELLANEOUS ELECTRICAL**
The OEM “Lock/Auto-lock” function shall be disabled.
- 1.02.60 CAB CONDUIT**
A 5.5” conduit shall be installed between the cab and module located behind the driver’s seat. The driver’s console harness shall be routed through the conduit.

1.02 CHASSIS MODIFICATIONS

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1.02.04 EXHAUST HEAT SHIELDS

Shall be formed from 20 ga. galvanized steel sheets with stamped reinforcements and formed edges. Access openings shall be provided for shock absorber, mounting bolts, etc. Heat shields shall be bolted to chassis frame and extend from back of cab to the frame cross member just behind the rear axle.

1.02.05A RUNNING BOARDS

Shall be installed on both sides of the vehicle. They shall be made of 0.125" polished aluminum diamond plate. The entire assembly shall be securely mounted with stainless steel 1/4"-20 Truss head bolts.

1.02.08C TOW EYES

Two (2) rear recovery eyes, rated at 10,000 lbs. per pair, shall be installed in 6.75"W x 6.75"H x 4.375"D recessed pockets. Eyes shall be 1.8125" ID, bolted to frame. These eyes shall not be used for towing or lifting of emergency vehicle.

1.02.09A MUD FLAPS

Mud flaps with the "North Star" logo on them shall be installed behind each rear wheel.

1.02.12B MAP BOX/DRIVER'S CONSOLE

Shall be an integral part of the driver's console. (Section 6.09 related)

1.02.14X AIR SUSPENSION

Shall be a Granning Air Ride System, installed with the "air dump" feature to activate when the rear streetside patient compartment entrance door opens. A dump override switch shall be mounted on the curbside wall near the curbside rear passage door, clearly labeled "Dump Override". Compressor shall be mounted in Compartment #2 and protected with a perforated surround. There will be an automatic spitter valve as well as a manual drain valve (Haldex KN24001).

1.02.18X GRILLE GUARD

A Black Go Industries Rancher 46670 grille guard with headlight guards shall be installed on the front of the vehicle.

1.03 **MODULE-TO-CHASSIS MOUNTING SYSTEM**

1.03.01 **MODULE MOUNTING SYSTEM**

The module shall be bolted to the chassis frame in twelve (12) locations. Each mounting location shall include a hard rubber isolation pad between the chassis frame and the module lateral frame. Eight (8) 3/4" Grade 5 bolts shall extend through the lateral and sides of the frame member and bolt to the web of the chassis frame with a 3/4 Grade 5 bolt. The four (4) rearmost bolts shall be 5/8" bolts. All bolts shall be secured with locking nuts.

1.03.02 **CAB-TO-MODULE ATTACHMENT**

The module shall be attached to the cab with a flexible watertight boot to allow cab-body flex as designed by the chassis manufacturer. The chassis back shall be modified and reinforced with a welded steel framework. The rear window openings on each side of the module access shall be covered with 14 ga. steel and painted to match the body.

2 **MODULAR CONSTRUCTION**

All material utilized shall be of the correct type, alloy, and thickness to withstand the intended usage and provide protection against cracking, corrosion, or metal fatigue. All materials utilized shall be of open stock origin, commonly available through local sources, for rapid and economical repair or modification of the body. Any use of proprietary parts or materials in the construction of the body is unacceptable, due to potential delays or difficulties in future repairs or service. **NO EXCEPTIONS TO BE TAKEN IN THIS AREA.** This specification has been designed and written to fill specific needs of this agency. Where brand name, make, or model of equipment has been specified, no exceptions will be allowed. Where compartment and cabinet sizes have been specified, bidder must bid substantially (plus or minus 1") the size specified. The module shall have a transferable lifetime structural warranty.

2.01

MATERIAL

EXTRUSIONS

	<u>SIZE</u>	<u>ALLOY</u>
Structural Tubing	1" x 2" x 0.125" sq.	6063-T52
Structural Tubing	2" x 2" x 0.125" sq.	6063-T52
Cross Members	3" x 3" x 0.375"	6061-T6
Cross Members	1.5" x 3" x 0.25"	6061-T6

FORMED SHEETING

	<u>SIZE</u>	<u>ALLOY</u>
Skin/Roof/Compartments/Subfloors/Doors	0.125"	5052-H32
Interior Cabinets	0.090"	5052-H32
Diamond Plate	0.125"/0.08"	3003-H32
Stainless Steel	16 ga., 20 ga.	304 # 4B

2.02

MODULE DIMENSIONS

Overall Vehicle Dimensions: (Specifications are listed as minimums.)

Length:	25' 5"	(305")
Width:	8' 0"	(96") Excluding Mirrors
Height:	9' 1.25"	(109.25")

Exterior Module Dimensions: (Specifications are listed as minimums.)

Length:	13' 11"	(167")
Width:	8' 0"	(96")
Height:	7' 4.375"	(88.375")

Interior Dimensions: (Specifications are listed as minimums.)

Length:	Forward Wall to Rear Doors	160"
Width:	Left Wall to Right Wall	91"
Floor Width:	Left Cabinets to Squad Bench	50.25"
Height:	Floor to Ceiling	72"

Load Height:	Ground to Floor Height	33"
	Approximate with air suspension dropped	

2.03**STRUCTURAL FRAMING**

Sidewall and rear wall construction shall consist of 2" x 2" x 0.125" aluminum square tubing extensions welded together with a maximum of 14" centers. 1" x 2" x 0.125" aluminum tubing may be utilized in addition to 2" x 2" tubing to accommodate custom compartment sizes. The bottom of the wall structure shall be sealed with welded 2" x 2" tube, 2" x 2" angle, or 0.125" plate depending upon location. Wall structure shall be capped with 2" x 2" x 0.125" header upon which 2" x 2" x 0.125" roof structure is welded. This process provides a unitized roll cage structure for greater occupant safety. The front wall structure shall be constructed of a minimum of 1.250" x 3.875" x 0.125" formed aluminum channel to allow ample space for wiring raceways, heater A/C hoses, and cold air return duct.

2.05**MODULE SEAMS**

All body and compartment seams at or below floor level shall be full seam welded. The entire perimeter of the subfloor shall be completely sealed with a caulking material, creating a watertight, dust-free module environment.

2.06**EXTERIOR SKIN**

In addition to welding the exterior skin to structural framing, a Norton very high bond system shall be utilized full length on all wall and roof frame members. A polyurethane adhesive sealant shall be applied to the edges of structural tubing at the exterior wall surfaces. The module shall be constructed utilizing full size sheet construction to minimize body seams. Seams above the passage doors and cab shall be minimal. There shall be no corner or mid body seams.

2.07**MODULE ROOF**

In order to improve module strength and reduce roof seams the following roof system shall be utilized. The roof shall be seamed in the center, have a 1.500" radius at the corners, and provide a weatherproof overlap of the aluminum side sheets 5.250" below the roof line. The roof shall be supported by positive contact between sidewall framing and roof framing. All seams on the roof surface shall be full seam welded on the outside and caulked on the inside. In order to avoid the possibility of paint and/or weld cracking, no extrusions shall be used in the exterior construction of the roof or corners of the vehicle.

2.08X**MODULE EXTERIOR COMPARTMENTS**

All compartments are constructed from formed 0.125" aluminum and are securely welded to the subfloor and structural framing. A baffled drain hole shall be provided in all exterior compartment bottoms that extend below the floor line. All exterior adjustable shelves shall be mounted on heavy duty aluminum unistrut track which is securely welded to compartment interiors. Each shelf shall support at least 300 lbs. of equipment.

COMPARTMENT #1

Interior Dimensions – 25"W x 77"H x 20"D

Doorway Dimensions – 25"W x 70"H

Location – Streetside, forward

Shelving – One (1) bin style

Door(s) – Single

Light(s) – One (1) LED strip light

Additional Instructions – The 120VAC Power Box shall be installed in the forward wall (Section 6.21 related), recessed so as not to protrude into the compartment. The forward section shall provide storage for one (1) 18" x 72" backboard with runners. One (1) Velcro strap will be installed in the forward portion for backboards and one (1) Velcro strap will be installed on the stair chair boot to secure the stair chair in the aft portion. The bin shelf will be installed above the stair chair boot. The compartment shall have a relief vent installed in the lower back portion of the compartment with a check valve to prevent dust entry. A formed stainless steel gasket cover shall be installed so that backboards do not cut gasket material.

COMPARTMENT #2

Interior Dimensions – 44"W x 35"H x 20"D

Doorway Dimensions – 44"W x 35"H

Location – Streetside, forward of wheel well

Shelving – One (1) adjustable

Door(s) – Double

Light(s) – One (1) LED strip light

Additional Instructions – The inverter and the compressor for the air suspension shall be installed in the forward portion of the compartment floor. A perforated surround will be installed over the inverter and compressor. The forward wall will be louvered into compartment #1 for ventilation of the compressor and inverter. A thermostatically controlled muffin fan will be installed between compartment #1 and #2. There will be a hex-punched, stainless cover over the fan in compartment #1 and over the opening from compartment #2 to the CPR seat storage area.

COMPARTMENT #3

Interior Dimensions – 28"W x 35"H x 20"D

Doorway Dimensions – 28"W x 35"H

Location – Streetside, rear aft of wheel well

Shelving – One (1) adjustable

Door(s) – Single

Light(s) – One (1) LED strip light

Additional Instructions – None

COMPARTMENT #4

Interior Dimensions – 18.25"W x 70"H x 18"D

Doorway Dimensions – 18.25"W x 70"H

Location – Curbside, rear

Shelving – None

Door(s) – Single

Light(s) – One (1) LED strip light

Additional Instructions – Storage for a Zico power lift system shall be provided in this area for an "M" size cylinder. Install switch bracket on left wall of compartment. The compartment shall have a vent installed in the lower back portion of the compartment with a washable filter membrane behind the hex punched cover.

COMPARTMENT #5

Interior Dimensions – 16.25"W x 25"H x 20"D

Doorway Dimensions – 16.25"W x 25"H

Location – Curbside rear, aft of wheel well

Shelving – None

Door(s) – Single

Light(s) – One (1) LED strip light

Additional Instructions – None

COMPARTMENT #6

Interior Dimensions – 27.875"W x 69"H x 33"D

Doorway Dimensions – 25.5"W x 69"H

Location – Curbside, forward

Shelving – See interior cabinet #21

Door(s) – Single

Light(s) – One (1) LED strip light

Additional Instructions – This compartment shall provide inside/outside access to Cabinet #20 with a full width stainless steel threshold on the floor level shelf. There shall be storage located below the floor.

2.09

MODULE DOORS

The doors shall be box pan formed with a total thickness of 2".

2.09.01A

DOOR SEAL

Each door frame shall have a flange for the installation of an air cell hollow core, 360-degree compression door seal. This seal creates watertight, dust-free compartment integrity. Door seal shall be knock-on type. Door frames shall be bonded to the adjacent tubes such that no exterior flange is required.

2.09.02

DOOR HINGES

Shall be full length, piano type, stainless steel hinges, 2.5" wide with a 0.25" pin. The hinges shall be attached with #12 x 3/4" stainless steel truss head screws spaced 4" apart. All curbside and streetside doors shall be hinged on the forward sides. All rear doors shall be hinged on the outboard sides.

2.09.03

DOOR LATCHES

Exterior door handles shall be semi-flush, cast aluminum, Eberhard E Grabber model 21100. Passage doors shall have release handles on the inside of each door. All exterior doors shall have rotary latches and striker posts that meet FMVSS 206 requirements. Striker posts shall be adjustable and shall be secured with a nut from behind the door frame. The striker washer shall not be removed. Doors greater than 45" tall shall have double rotary latches activated by cold-rolled, threaded steel rods. Once final adjustments have been made, threads shall have Loctite or equivalent applied. All double-door compartments shall have an exterior E Grabber handle and rotary latches on each door. Doors shall latch to doorframe-mounted striker posts only and not to one another. Curbside passage and rear curbside doors shall have interior handles with dual-point, rod-actuated, rotary latch systems that are lockable inside and out. All locks shall be keyed J236.

2.09.04

COMPARTMENT DOOR CONTROL

A heavy-duty, double spring door control capable of holding the door open at approximately a 90-degree angle on any road surface shall be installed at the top of each compartment door except compartment #5 which will have a rubber bumper installed.

2.09.05

CURBSIDE DOOR CONTROL

Shall be a heavy-duty, double spring door check installed at the top of the door. This door check will hold the passage door open at approximately a 90-degree angle on any road surface.

2.09.06

REAR DOOR CONTROL

Shall be Cast Products "grabber" type hold-open devices with replaceable rubber catches.

2.09.07

COMPARTMENT DOORSKINS

Shall be 0.080" bright aluminum diamond plate and be removable to service door hardware. Red/white 1.5" conspicuity tape shall be installed on the vertical edge of each door.

2.09.08X

ENTRANCE DOORSKINS

The upper 2/3 portion shall be 0.080" bright aluminum diamond plate and be removable to service door hardware. The lower 1/3 portion will be aluminum for installation of chevrons described below. Red/white 1.5" conspicuity tape shall be installed on the top, bottom, and vertical edges of the side passage door and curbside rear door. The streetside rear door shall have tape on the top and bottom edges. The lower 1/3 shall be covered with Ruby Red/Lemon Yellow Chevrons.

2.09.09A

ENTRANCE DOORWAYS

One (1) curbside and two (2) rear module entrance doors shall be provided. The curbside doorway dimensions shall be 28"W x 73.75"H. The rear doorway dimensions shall be 49.75"W x 60"H.

2.09.10

THRESHOLDS

All compartment and module access door frames shall have full width formed stainless steel threshold plates to protect the lower edge of frame.

2.10X

MODULE INTERIOR CABINETS

Shall be formed of 0.090" aluminum and shall be securely welded or mounted to the structural framing. All interior adjustable shelves shall be mounted on 1" wide aluminum Unistrut track.

CABINET #1

Dimensions – 21.75"W x 16"H x 15.75"D

Location – Streetside, upper forward above action area

Shelving – One (1) adjustable

Door(s) – Sliding, clear 0.177" acrylic with felt lined anodized aluminum track and full extruded aluminum door pulls

Additional Instructions – None

CABINET #2

Dimensions – 20.75"W x 16"H x 15.75"D and 9"D at the angle

Location – Streetside, upper forward above action area

Shelving – One (1) adjustable

Door(s) – Sliding, clear 0.177" acrylic with felt lined anodized aluminum track and full extruded aluminum door pulls

Additional Instructions – Aft portion is angled to the CPR seat area.

CABINET #3

Dimensions – 26"W x 8"H x 9"D

Location – Streetside, over CPR seat

Shelving – None

Door(s) – Top hinged, painted aluminum with gas shock lift and simplex lock

Additional Instructions – None

CABINET #4

Dimensions – 25"W x 22"H x 9" D at the angle and 15.75"D

Location – Streetside, above cabinet #7

Shelving – One (1) adjustable

Door(s) – Sliding, clear 0.177" acrylic with felt lined anodized aluminum track and full extruded aluminum door pulls

Additional Instructions – Forward portion is angled to the CPR seat area.

CABINET #5

Dimensions – 26"W x 16"H x 20"D, upper and 9"D lower

Location – Streetside, upper rear

Shelving – One (1) Adjustable

Door(s) – Sliding, clear 0.177" acrylic with felt lined anodized aluminum track and full extruded aluminum door pulls

Additional Instructions – None

CABINET #6

Dimensions – 26"W x 28.625"H x 20"D, upper and 9"D lower

Location – Streetside, below cabinet #5

Shelving – Two (2) Adjustable

Door(s) – Sliding, clear 0.177" acrylic with felt lined anodized aluminum track and full extruded aluminum door pulls

Additional Instructions – None

CABINET #7 – Open Storage

Dimensions – 26.875"W x 23.50"H x 20"D

Location – Streetside, aft of CPR seat

Shelving – None

Door(s) – None

Additional Instructions – A full depth counter top shall be one-piece 16 gauge, 304 stainless steel with a 0.5" aluminum retaining lip. One (1) 120VAC GFI receptacle, one (1) 12VDC receptacle and one (1) oxygen receptacle shall be located on the back wall. The wall area shall be lighted utilizing a Thin-Lite Model #612 light with 12VDC dual 11" fluorescent bulbs. One (1) footman loop and aircraft cable with a clip at both ends will be installed on the back wall.

CABINET #8 – Action Area

Dimensions – 46.375"W x 29.5"H x 20"D

Location – Streetside, forward

Shelving – None

Door(s) – None

Additional Instructions – It shall contain an attendant control panel, digital thermostat, remote inverter panel, vacuum connection, suction collector, two (2) oxygen outlets, fader switch one (1) 12VDC receptacle, and one (1) 120VAC GFI receptacle. Install one (1) footman loop forward of the oxygen receptacles for occasional use of the air craft cable with two (2) clips from cabinet #7. The entire action wall area shall be lighted utilizing a Thin-Lite Model #612 light with 12VDC dual 11" fluorescent bulbs. Full depth counter top shall be located below the action wall. The counter top shall be one-piece 16 gauge, 304 stainless steel with a 0.5" aluminum retaining lip.

CABINET #9

Dimensions – 11"W x 24.25"H x 19.5"D

Location – Front, behind attendant seat

Shelving – Two (2) adjustable

Door(s) – Side Hinged Aluminum with Twist/Slam latch

Additional Instructions – An IV warmer will be installed in the bottom portion of this cabinet. An on/off switch (light switch style) will be installed forward of cabinet #9 on the wall of the walk through.

CABINET #10 – Miscellaneous Storage

Dimensions – 11"W x 25"H x 19.5"D

Location – Front, behind attendant seat

Shelving – Two (2) adjustable

Door(s) – None

Additional Instructions – Open storage for map books and miscellaneous.

CABINET #11 – Attendant Seat Cabinet

Dimensions – 26"W x 8"H x 19.5"D

Location – Center forward bottom

Shelving – None

Door(s) – Painted aluminum, bottom hinged with twist/slam latch

Additional Instructions – This cabinet shall open to the aisle side.

CABINET #12 – CPR Seat with Storage

Dimensions – Bench: 27.25"W x 18.75"H x 20"D

Storage: 27.25"W x 8.125"H x 20"D

Location – Streetside

Shelving – None

Door(s) – Hinged aluminum bench lid, with high-density foam padding covered with seamless vinyl shall provide access to the storage area. It shall have a 1.5" overhang, and an automatic hold-open device. The pad shall be removable.

Additional Instructions – The back pad shall flip down with a stainless steel back to extend the action area. The back pad shall be held up with a barrel bolt latch. The back pad shall have high density foam padding covered with seamless vinyl. One (1) set of seatbelts shall be installed on the seat. The CPR seat base to be formed from aluminum and securely anchored to sub-floor. The bottom and unfinished sides of the storage area shall be sprayed with gray, textured polyurethane and painted white with gray splatter.

CABINET #13

Dimensions – 24.875"W x 15.5"H x 20"D

Location – Streetside, below cabinet #7

Shelving – One (1) adjustable

Door(s) – Sliding, clear 0.177" acrylic with felt lined anodized aluminum track and full extruded aluminum door pulls

Additional Instructions – None

CABINET #14

Dimensions – 40.25"W x 12"H x 9"D

Location – Curbside, upper rear

Shelving – None

Door(s) – Sliding, clear 0.177" acrylic with felt lined anodized aluminum track and full extruded aluminum door pulls

Additional Instructions – None

CABINET #15

Dimensions – 40.25"W x 12"H x 9"D

Location – Curbside, upper forward

Shelving – None

Door(s) – Sliding, clear 0.177" acrylic with felt lined anodized aluminum track and full extruded aluminum door pulls

Additional Instructions – None

CABINET #16

Dimensions – 26.625”W x 6.75”H

Location – Curbside, Above Passage Door

Shelving – None

Door(s) – Bottom hinged, aluminum with twist/slam latch

Additional Instructions – This cabinet will be set up for the storage of two (2) boxes of gloves stored horizontally.

CABINET #17 – Squad Bench with Storage

Dimensions – Bench: 72.625”W x 18.75”H x 20”D

Storage: 13”W x 16”H x 20”D (Fore)

40.5”W x 8.125”H x 20”D (Aft)

Location – Curbside

Shelving – None

Door(s) – Hinged aluminum bench lid, with high-density foam padding covered with seamless vinyl shall provide access to the storage area. The lid to be split and the aft lid will be fixed. It shall have a 1.5” overhang, an automatic hold-open device, and stainless steel paddle latch. The pad shall be removable.

Additional Instructions – The squad bench back and/or head pads shall have high density foam padding covered with seamless vinyl. Three (3) sets of seatbelts shall be installed on the bench and set up for use with sit-up or stretcher patients. The squad bench base to be formed from aluminum and securely anchored to sub-floor. The bottom and unfinished sides of the storage area shall be sprayed with gray textured polyurethane and painted white with gray splatter.

A sharps and waste space (sized for a Becton-Dickinson 8.2 Qt. sharps container and a 7 Qt. waste) shall be located at the forward end of the bench and accessible thru a streetside hinged acrylic door and accessible for changing thru a removable panel on top of the area.

An oxygen outlet and fifteen-minute timer shall be installed on the curbside wall over the bench. A 120VAC GFI receptacle shall be installed at the aft end of the squad bench below the back pad. A fixed window shall be installed over the bench. A two-piece, white painted aluminum window cover shall be installed over the curbside module window. The two pieces will slide behind a pad when not in use.

An oxygen window will be installed on the wall at the aft end of the curbside squad bench.

CABINET #18 – HVAC

Dimensions – 35.75”W x 16.5”H x 27.75”D

Location – Front, right upper

Shelving – None

Door(s) – None

Additional Instructions – This cabinet shall house the heater/AC unit and the suction pump.

CABINET #19 – Electrical Cabinet

Dimensions – 30.75"W x 15.125"H x 13"D

Location – Front center, above the walk-thru area

Shelving – None

Door(s) – Aluminum, hinged, swing up door with a hold-open device, a non-keyed quarter turn slotted latch, and an automatic compartment light.

Additional Instructions – This cabinet shall house the electrical module. An atomic clock shall be installed on the door.

CABINET #20 – Inside/Outside Access

Location – Right, Front

Dimensions – 33"W x 55.5"H x 27.75"D

Shelving – Two (2) adjustable with 1" x 1" lip down on the outside

Door(s) – None

Additional Instructions – This cabinet shall be accessible from the outside via exterior Compartment #6. One (1) 120VAC GFI receptacle and one (1) 12VDC cigar style receptacle shall be installed in the back wall, to the left at center height.

2.11A SIDE DOORSTEP

A recessed curbside side doorstep shall be provided which is 11.5" deep x 28" wide. There shall be a drain hole and an open grate step plate which is removable for cleaning purposes. Polished aluminum diamond plate kick panel will be installed on the sides and face of doorstep.

2.13A CAB TO MODULE PASSAGE

Shall be a walk-thru measuring 15.75"W x 36"H.

2.14A WHEELWELL LINERS

Shall be installed in the wheel wells over the rear wheels. The liners shall be formed aluminum.

3 COATINGS AND FINISHES

3.01 MODULE FINISH PREPARATION

The module shall be seam sealed and all imperfections on aluminum surfaces of module shall be sanded smooth. The entire exterior shall be mechanically etched and washed with wax and grease remover to ensure proper primer and paint adhesion.

3.02 MODULE PRIMER

Module shall be primed with urethane primer prior to applying the finish coat of acrylic urethane paint.

3.03 PAINT TYPE

Shall be "Sherwin Williams" acrylic urethane.

3.04X COLOR SCHEME

Base color: White (G8-33631 ALT 2)

Stripe #1	Color:	Ruby Red
	Width:	8"
	Style:	Beltline
	Material:	Scotchlite
	Location:	Sides, rear and front of module, sides of chassis
	Reference:	Drawings 1, 2, 3

Stripe #2	Color:	Imitation Gold Leaf
	Width:	0.5"
	Style:	Pinstripe
	Material:	Vinyl
	Location:	Above and Below Stripe #1

3.06A COMPARTMENT FINISH

All compartments shall be sanded, etched, washed, primed, and sprayed with gray textured polyurethane and painted white with gray splatter paint. (#G8-33631 Alt 2/#G8-51748)

3.07A INTERIOR CABINETS FINISH

All interior cabinetry shall be sanded, etched, washed, primed, sprayed with gray textured polyurethane and painted white with gray splatter paint. (#G8-33631 Alt 2/#G8-51748)

3.08 MODULE UPHOLSTERY

Shall be Spradling Perform 60 vinyl, Dove Gray, and be seamless.

3.09**MODULE FLOORING MATERIAL**

Shall be Genome (#TFM2702) Altro Transflor Meta Slip-Retardant Sheet flooring providing durability, ease of maintenance, and stain resistance. It shall contain a high concentration of microscopic aluminum oxide particles and colored quartz crystals suspended throughout the thickness with silicon carbide grains in the entire wear surface for slip-retardant performance. It shall have a bacteriostat incorporated to give flooring excellent anti-bacterial activity and an overall thickness of 0.11" nominal. Flooring shall be manufactured for Wear Resistance to meet ASTM C 501, indentation resistance in accordance with ASTM F 1303 and ASTM F 970, Grade 1 standards, shall meet ASTM D 2047 Slip Retardant, ASTM F 970 Static Load, ASTM E648, CMVSS, FMVSS 302, CAN ULC S102.2 Fire Data Tests. It shall be seamless and cove up the street side wall a minimum of 5" and to the top of the curbside squad bench as a seal.

An insulated floor shall be installed over the subfloor. It shall be constructed with square tubing (0.75" x 0.75" x 0.063"), filled with 0.75" thick polyiso foam insulation, and covered with 0.125" aluminum sheet. (Section 2.04 related)

3.10**COMPARTMENT LINING**

Compartment floors shall be lined with light gray Mate'flex material and all shelves with easy sweep mat.

3.11**CABINET LINING**

Interior cabinet shelves shall be lined with easy sweep mats which are removable for ease of cleaning.

3.12**SURFACES AND FINISHES**

All surfaces and finishes shall be impervious to soap, disinfectants, and water, to permit washing and sanitizing.

3.13**AUTOMOTIVE UNDERCOATING SEAL**

The entire chassis and module underbody (excluding drive shafts, wheels, exhaust system, and lubrication fittings, per manufacturer's specifications) shall be sprayed with undercoating for reduced corrosion and added sound deadening.

4 **MODULE EXTERIOR**

4.01X STEP/BUMPER

Shall be a welded construction of 3" x 3" x 0.375" aluminum angle and 2" x 0.250" plate and shall be covered by 0.125" bright aluminum diamond plate. The center section, below the doors, shall have plasma cut open flow design to prevent accumulation of water and snow and provide a 7" step. The outermost 12" of each end shall be angled to prevent dragging of corners in high angle of approach/departure areas. Diamond plate shall be formed on front and rear edges for channel type strength and a formed 0.090" aluminum close out shall be welded to the underside of the step/bumper. The bumper shall be bolted directly to the chassis frame using high strength Grade 5 bolts. Bumper shall be easily removable and replaceable in case of damage. Step/bumper to be designed to accommodate a "one-person style" cot.

4.02 RUB RAILS

Shall be bright finished extruded aluminum of a double channel design and 0.125" wall thickness for maximum strength. Rub rails shall be 2.5" high x 0.75" wide and run along the lower edge of body, interrupted only by wheel well opening. A red/white conspicuity reflective tape shall be installed in the insert area of the rub rail.

4.03 FENDER RINGS

Shall be installed on the module. They shall be bright polished aluminum with a rounded outer edge following the full contour of the wheel well opening.

4.04 DRIP RAILS

Shall be extruded, anodized aluminum running full length of module at top of sides, front, rear and over each exterior compartment. Drip rails shall be installed with bonding tape that will withstand exposure to the elements. They shall be installed to allow easy replacement without the use of mechanical type fasteners, and finished with 45 degree angled ends to avoid hooking materials which brush against the vehicle causing damage.

4.05 ROCK GUARDS

Made of bright aluminum diamond plate shall cover front module corners 24" up from bottom of body, 2.5" down the side of body, and 15" across the front of the body.

4.06X REAR KICK PANEL

Made of bright aluminum diamond plate shall extend from top of rear step to the bottom of rear doors, full width formed around corners, and 2.5" forward on each side. A recessed license plate shall be installed.

4.07 FUEL FILL

Shall be on the streetside of the module and have polished cast aluminum fill well and be properly vented. All fuel filler hoses will be protected with a 0.125" aluminum protection plate. Fuel fills shall be installed in accordance with "Body Builder's" recommendation.

A fill shall be provided for the DEF tank.

4.08A**MODULE WINDOWS**

Shall have black anodized aluminum frames, rubber gaskets, and be attached with screws for ease of replacement. All module windows to be dark tinted. The side door window shall be 18.75" x 18.75" with sliding glass, a positive catch, and a screen. The rear door windows shall be 18.75" x 18.75" fixed glass to prevent exhaust from entering the module. The curbside module window shall be a fixed window, 18.75" x 37.5". A two-piece, white painted aluminum window cover shall be installed over this window. It shall be installed above the curbside bench seat.

4.09A**FUEL SPLASH GUARD**

Shall be made of stainless steel and shall be installed below the fuel fill.

4.16A**LICENSE PLATE HOLDER**

A recessed license plate holder with dual lights shall be installed below rear doors.

5

MODULE INTERIOR

All interior hangers, supports, fasteners, latches, and hinges shall be of a near flush type design when not in use. The patient compartment shall be free of sharp projections. Exposed edges and corners shall be broken with a radius, chamfer, or covered with aluminum trim, plastic molding, or rubber edging.

5.01 UPPER WALL COVERING

Shall be covered with light gray heavy grade 0.125" ABS vinyl. All panels shall be attached with a Norton very high bond system.

5.02 HEADLINER

Shall be fiberglass reinforced 0.090" "Glasboard" with textured white surface.

5.03 HEAD PADS/CUSHIONS

Head pads located over all module access openings and seat backs shall be 1" high-density foam covered with heavy-duty vinyl matching upholstery.

Seat cushions shall be 3" high-density foam covered with heavy-duty vinyl matching upholstery. (Section 3.08 related)

5.04 LOWER WALL COVERING

The squad bench sides and lower portion of the streetside wall shall be nonporous, color-coordinated material.

5.05 GRAB RAIL

One (1) 75" L x 1.250" D stainless steel grab rail with three (3) support brackets shall be securely mounted to roof structural framing running down the curbside of the cot.

5.06 ACCESS DOOR GRAB RAILS

Each module access door shall have a 1.250" "L" style stainless steel grab handle which may also be used as an entry assist rail.

5.07 IV HANGERS

Two (2) retractable dual IV hangers with stabilizers shall be near flush mounted in the ceiling over the primary cot, one (1) streetside and one (1) curbside.

5.08B COT MOUNT

A Stryker Model 6370 center mount cot fastener shall be installed for a "*Customer Supplied and Installed*" Stryker cot. A cot safety hook will be installed.

5.09A COT PLATES

Two (2) bright finish stainless steel 7" wide cot plates, which shall run from the rear door to the forward wheel position. The cot plates shall be attached with a polyurethane adhesive sealant system.

5.10A ATTENDANT SEAT

A rear facing high-back bucket seat, upholstered with heavy grade vinyl, shall be located at the head of the cot position and provide easy access to all action wall controls and outlets, and to the patient. Seat shall be securely anchored to an aluminum storage cabinet.

5.11X

OXYGEN SYSTEM

The entire oxygen system to be assembled with certified Oxygen hose (1000 PSI burst strength) with brass fittings, pressure tested, and certified. Ohio type outlets shall be installed in the following locations: two (2) in action area, one (1) in cabinet #7 (open storage), and one (1) in the curbside wall above the squad bench. A 50 PSI regulator and one (1) OXYGEN tank wrench shall be included.

A Zico Oxygen lift system Model QR-OTS-ML-HHS, with corded remote control switch box installed on the left wall of the compartment.

5.12

SUCTION PUMP

The unit shall have an electric pump as the source of suction. Control shall be on the Attendant Panel. Suction pump shall be vented to the outside of the vehicle under the module body.

5.13X

SUCTION COLLECTOR

A Rico Model RS4X-1001B suction collector with Bemis disposable canister shall be installed in the Action Area with a direct vacuum connection.

5.14

SEATBELTS

Shall be DOT certified and shall be installed with all passenger seating. Three (3) sets shall be installed on the squad bench and set up for use with sit-up or stretcher patients. The attendant seat and the CPR seat shall each have a single seat belt.

5.16X

INSULATION

The module sides, ends, roof, doors, and floor shall be insulated to enhance the interior environment and to restrict heat, cold, and external noise from entering the module. To obtain the highest possible R-value, the insulation shall be a non-settling polyisocyanurate foam plank material of 2", 1.5", or 0.75" thickness depending upon location and available space.

In addition, a closed-cell polyurethane tape with ultra-high-bond acrylic adhesive shall be utilized on the sidewalls and roof to provide a thermal and noise break between the outside skin and structural members. A 3" wide, 60-mil tape shall be used as a thermal break on the inside surface of the roof and wall tubes.

To further enhance thermal and acoustic insulating properties of the floor system, a Mascoat Marine-DTM composite ceramic insulating coating shall be applied to the entire bottom surface of the module, including wheel well liners.

Heater and air conditioner hoses between the engine and module shall be insulated with closed cell foam insulation.

5.17X

MODULE CLIMATE CONTROL SYSTEM

Shall incorporate a combination heating/air conditioning unit with 36,000 BTU heating and 32,000 BTU cooling. The unit shall have a 580CFM fan and have controls independent of the cab system. The module system shall be controllable by a digital thermostat located on the action wall.

A 12VDC water pump shall be installed to increase the heating capacity and efficiency of the system.

- 5.18 EXTERNAL AIR INTAKE**
To supplement heated or cooled air with fresh air, an external air intake shall be provided on the side of the module. The intake shall consist of a vent forward of the side curb side passage door.
- 5.19 AIR RETURN**
Designed into the front right bulkhead wall shall be an air return which runs from the floor level to the heater A/C unit. The air return vent shall have formed louvers.
- 5.20 EXHAUST VENT**
A motor-powered exhaust vent shall be located in the curbside rear corner of the module.
- 5.21 NO SMOKING/FASTEN SEAT BELTS SIGNS**
Two (2) "No Smoking/Fasten Seat Belt" signs shall be installed - one (1) each for driver's area and module.
- 5.24A CLOCK**
An Atomic controlled clock shall be installed on the electrical cabinet door. The clock shall be LCD display and show hours (12/24 selectable), minutes, seconds, date, day, and temperature. Clock shall be powered by one (1) "AA" alkaline battery.
- 5.26A SHARPS/HAZARDOUS WASTE CONTAINERS**
One (1) Becton Dickinson 8.2 Qt. sharps container and one (1) 7 Qt. waste container shall be installed at the forward end of the squad bench.
- 5.29A OXYGEN WINDOW**
Shall be a clear, 6" x 10", acrylic window. The window shall have a knob and be mounted with self-closing hinges.
- 5.32X GLOVE BUTLERS**
Four (4) Glove Butlers shall be provided and installed on the lower portion of the curbside passage door. Glove butlers to be installed upon final inspection.
A cabinet will be installed over the curbside passage door, have a bottom hinged door with twist/slam latch and will be set up to hold two (2) boxes of gloves horizontally.

6 **ELECTRICAL**

All added body and chassis electrical equipment shall be served by circuits separate and distinct from the vehicle chassis circuits. All vehicle wiring shall be copper and conform to all SAE J1128 requirements. The wiring shall be colored, numbered, and function coded every 3" for permanent identification and correspond with the vehicle schematics. Solderless, insulated connectors shall be used. Wiring panduit shall be used in power component module to ensure air circulation throughout power component wiring. The wiring shall be routed in conduit or looms and wiring shall be secured to the underbody or frame with insulated metal cable straps. All power distribution cabling shall be covered with a protective split loom. Where wiring passes over the exhaust, a heat shield shall be installed. The power component module shall be equipped with positive locking plugs to provide easy disconnect for remount or repair of body. All wiring devices, switches, outlets, etc., except circuit breakers, shall be rated to carry 125% of the maximum ampere load for which the circuit is protected.

6.01 OVERLOAD PROTECTION DEVICES

Body electrical wiring shall utilize overload protective devices of the automatic reset, circuit breaker type. In addition, one (1) single pole, 20 amp circuit breaker shall be provided for future use. The circuit breakers, relays, and other electrical items shall be located in the enclosed power component module.

6.02 VOLTMETER/AMMETER

Shall be a single digital display, located in the driver's console, which displays voltage and battery current when the ignition is on. Display includes audible and visual alarms for high and low voltage.

6.04 IGNITION CONTROL

Chassis electrical circuits will be controlled by ignition switch as provided by the OEM chassis manufacturer. The auxiliary chassis related functions shall be powered by one (1) 100 amp continuous duty solenoid (rear heater/air conditioner, siren, spot light, etc.).

6.05X MODULE POWER

A 200-amp power disconnect switch (CDR-357) shall provide module power. An ignition interlock will disconnect module power fifteen (15) minutes after vehicle's ignition is turned off. The interlock will also allow module power to be activated independently for fifteen (15) minutes without engaging ignition.

6.06 WIRING ACCESS

All cabinets at ceiling level shall have removable backs which are screwed in place for access to harnesses. Stack cabinets shall have removable panels for wiring and hose access.

6.07 BACK-UP ALARM

Shall be installed and have a momentary disable switch in the driver's console. If disabled while in reverse, backup alarm shall automatically reset when shifted out of reverse. The alarm shall have a sound output level of 97dB.

6.08

SERVICE LOOP

A 6" service loop of wire or harness shall be provided at all electrical components, terminals, and connection points.

6.09

DRIVER'S CONSOLE

Installed between the seats and made of formed aluminum, with black powder coating. It shall have a switch panel with the following layout, cup holders, and a map holder with six (6) dividers that are mill finished aluminum. The switch panel will have four (4) rows with three (3) switches in each row on the left side and will have two (2) "customer supplied and installed" radios on the right (both are Tait TM9155 but one is a 700 MHz and one (1) is a VHF). Do NOT cut access holes for radios. The siren will be installed above the cup holders and the digital ammeter/voltmeter will be installed on the side of the console facing the driver's side. Four (4) 12VDC receptacles will be installed on the forward bottom portion of the console. (Section 1.02.12 Related)

SWITCHES

ROW 1

- 1. Emergency Master
- 2. Back-Up Alarm
- 3. Module Disconnect

ROW 2

- 4. Front Flashers
- 5. Flashers
- 6. Wig Wag

ROW 3

- 7. Left Scene
- 8. Right Scene
- 9. Rear Scene

ROW 4

- 10. Fog Lights
- 11. Passage Door Open (Red)
- 12. Compt. Door Open (Amber)

OTHER:

Voltmeter/Ammeter

Siren

Four (4) 12VDC Receptacles – forward bottom area of console

6.10

SWITCHES

Shall be lighted rocker type and permanently marked by function.

6.12A

DOOR AJAR WARNING LIGHT

Shall be installed on the driver's console. A red flashing light shall warn the driver of open passenger access doors and an amber flashing light shall warn the driver of open exterior compartment doors. These lights will be flush mounted and will be installed in Row 4 of switches on the console.

6.13X

ATTENDANT CONTROL PANEL

Shall be located in the action area. Panel shall include one (1) row of switches, as follows:

- 1. Dome Hi/Off/Lo
- 2. Dome Hi/Off/Lo
- 3. Aspirator
- 4. Vent
- 5. Oxygen Lt
- 6. Blank

A digital thermostat shall be located adjacent to the attendant control panel.

6.14 ACTION WALL AREA LIGHTING

The entire action wall area and the open storage area (#7) shall be lighted utilizing a Thin-Lite Model #612 light with 12VDC dual 11" fluorescent bulbs.

6.15 STEPLIGHTS

The side access door step well shall have a light installed.

6.16X MODULE INTERIOR LIGHTING

Shall be designed to keep vehicle height to a minimum without interfering with the structural integrity of the roof. Module interior lighting shall consist of eight (8) Whelen #80COEHCR dual intensity LED recessed lights - one (1) bank of four (4) lights shall be positioned toward streetside and four (4) lights toward curbside. There shall be a switch for each bank of lights on the action wall for Hi/Lo or Off. The four (4) lights on the curbside shall be automatically activated when the rear or side doors are opened.

There shall be a timer switch installed on the curbside wall near the curbside passage door and tied to the curbside dome lights. The timer switch shall be wired to continuous battery power.

6.17X BASIC EXTERIOR LIGHTING

Shall include headlights, parking lights, directional signal lights, tail and stop lights, license plate light, back-up lights, side marker lights, hazard and warning lights, and clearance lights as required by FMVSS 108. Side marker lights shall be "Truck-Lite" LED Model 18. Red and Amber module clearance lights shall be "Truck-Lite" LED Model 18. Truck Lite LED stop/tail, amber turn and back up lights will be installed on the kick panel.

Two (2) LED Whelen #60R00BRR stop/tail lights, two (2) LED Whelen #60A00TAR turn arrows, and two (2) Whelen #60J000CR back-up lights shall be installed on the rear of the module, one (1) set each on each side of the vehicle. Lights shall be installed with flanges.

6.19 ANTENNA MOUNTS AND CABLES

Two (2) NMO universal antenna mounts with KHFD cables and Larsen HyPer master universal connectors and mini-UHF adapters shall be installed on the module. Antenna base access shall be through the dome light openings, and the cables shall terminate in the driver's console.

6.20 BLOCK HEATER

A block heater, with On/Off switch in 120VAC power box, shall be wired to the 120VAC shorepower system and shall be circuit protected (Section 1.01.02 related).

6.21 120VAC/SHORELINE CIRCUIT BOX

Utility power shall be furnished with 120VAC shorepower via a Kussmaul 20 amp Super Auto-Eject located on driver's side of vehicle and distributed via a formed 0.125" aluminum power box recessed into the streetside front compartment. Power box shall be flush mounted so as to maximize compartment size. Box shall have easily removable cover.

The box shall contain three (3) 120VAC outlets for power supply to:

- Interior/exterior 120VAC power (outlets, IV warmer, etc.), GFI protected
- Block heater
- Battery charger

Two (2) breakers shall be installed, one for protection of the block heater receptacle, the other for protection of the other 120VAC receptacles.

Four GFI (4) interior 120VAC duplex grounded receptacles:

- One (1) in the action area
- One (1) in cabinet #7
- One (1) at the aft end of the squad bench
- One (1) in cabinet #20

6.22 BATTERY GROUNDS

In addition to OEM grounds, the following ground circuits shall be added: 4 ga. ground cable from module power component panel to frame, two (2) braided ground straps from the module body to the chassis to reduce RF interference.

6.23C BATTERY CHARGER

A 50 amp battery charger shall be provided as part of Magnum Pure Sine 1000 inverter system. (Section 6.31 related)

6.25X 12VDC RECEPTACLES

Seven (7) 12VDC, 20 amp cigar type receptacles shall be provided: one (1) in the Action Area, one in cabinet #7, one in cabinet #20 and four (4) in the bottom forward portion of the map box/driver's console. Receptacles shall be powered continuously.

6.26 COMPARTMENT LIGHTING

An LED strip light shall be installed in all outside compartments and shall be activated by a door switch. The oxygen compartment will have an on/off switch in the action area.

6.27 EXTERIOR DOOR SWITCHES

Shall be 1/2" door switches. All door switch terminals shall have Heatshrink installed.

6.30 **EMERGENCY WARNING SYSTEMS**

6.30.03X **FLASHERS**

Fifteen (15) Red lens Red Super LED flashers shall be mounted two (2) on each side of module in upper corners, two (2) on the upper rear corners, two (2) on the rear at window height, and seven (7) on the front of the module below the drip rail. Lights shall be Whelen #90RR5FRR.

One (1) Amber lens Amber Super LED flasher shall be mounted on the rear of the vehicle centered above the door. Lights shall be Whelen #90AA5FAR.

The "Front Flasher" switch will be tied to all front flashers. The "Flasher" switch to be tied to all side and rear flashers.

6.30.04A **SCENELIGHTS**

Six (6) parabolic scenelights shall be installed - two (2) on each side and two (2) on the rear of the module. The scenelights shall be flush mounted and have internal optics to deflect the light down at 8-32 degree angles. The lights shall be Whelen Model #90E000ZR Opti-Scene lights. The side door shall activate the curbside scenelights, the rear doors or when vehicle is placed in "Reverse" shall activate the rear scenelights.

6.30.06X **INTERSECTION LIGHTS**

Two (2) Intersection lights shall be installed, one (1) on each fender. These shall be Whelen TIR6 #50R03ZRR Red lens Red LED flashers with 5TSMAC flange. The intersection lights will be tied to the "Front Flasher" switch.

6.30.07 **FLASHING HEADLIGHTS**

OEM headlight flashers will be used and tied to the "Wig Wag" switch in the driver's console.

6.30.08X **GRILLE LIGHTS**

Shall be four (4) Red lens Red LED flashers, Whelen TIR6 #50R03ZRR with 5TSMAC flanges. The grille lights will be tied to the "Front Flasher" switch.

6.30.09 **SIREN**

Shall be a Whelen 295HFSC9, 200 watt. Siren options to include radio, horn, manual, wail, yelp, and phaser.

6.30.10A **SIREN SPEAKERS**

Shall be a Cast Products 3807 "In-the-Bumper" Mount System with two 100 watt speaker drivers.

6.30.11 **SEQUENTIAL SWITCHING SYSTEM**

A Kussmaul sequential switching system shall be installed to control emergency lighting.

6.31 **INVERTER**

Shall be a Magnum Pure Sine 1000, 1000 watt inverter with a 50 amp battery charger installed in Compartment #2. A remote inverter panel shall be installed in the action area. The inverter shall be ignition controlled.

6.32A

FOG LIGHTS

Shall be PIAA 2190XT clear fog lights. The fog lights shall be controlled with a switch in the driver's console.

6.35A

FLUID WARMER

A 12VDC/120VAC dual voltage fluid warmer shall be installed in cabinet #9. An On/Off switch (light switch style) will be installed forward of cabinet #9 on the wall of the walk through. The warmer will be thermostatically controlled at 95 to 105 degrees F. Space for ten (10) one-liter bags of fluids shall be provided.

6.38B

MODULE SPEAKERS

Install two (2) speakers in the module and connected for use with the cab radio. A fader switch shall be installed at the action area.

7 SUPPORTING DOCUMENTATION

7.01 OWNERS MANUAL

Shall be provided with vehicle and consists of the following items:

1. Chassis owner information packet.
2. Extra set of keys.
3. Lifetime module warranty.
4. Factory warranty on Chassis.
5. 7 Year/75,000 miles limited electrical warranty.
6. 2 Year/30,000 mile Conversion Warranty.
7. 7 Year Paint Warranty.
8. Module remount engineering check list.
9. Climate control information and warranty.
10. Main schematic.
11. Electrical Load Test.
12. Wire coding list.
13. Schematics for standard system: (As Built)
 - Driver switch console
 - Attendant switch console
 - Climate control system
 - Dual battery system
 - Module harness routing
 - Interior and exterior lights
14. Operations manual
15. Schematics for individual options.
16. Warranty and parts list for light bar, etc.

8 MISCELLANEOUS EQUIPMENT

8.01 LOOSE EQUIPMENT

The following equipment shall be shipped loose with the vehicle:

1. Touch up Paint
2. Cord End for Shoreline 20 Amp
3. Oxygen cylinder Wrench
5. Antenna Coax Ends
6. Spare Tire & Wheel

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